The Aussie Mag for Amstrad owners

THE AMSTRAD USER

Issue No. 50 $4.25
March 1989

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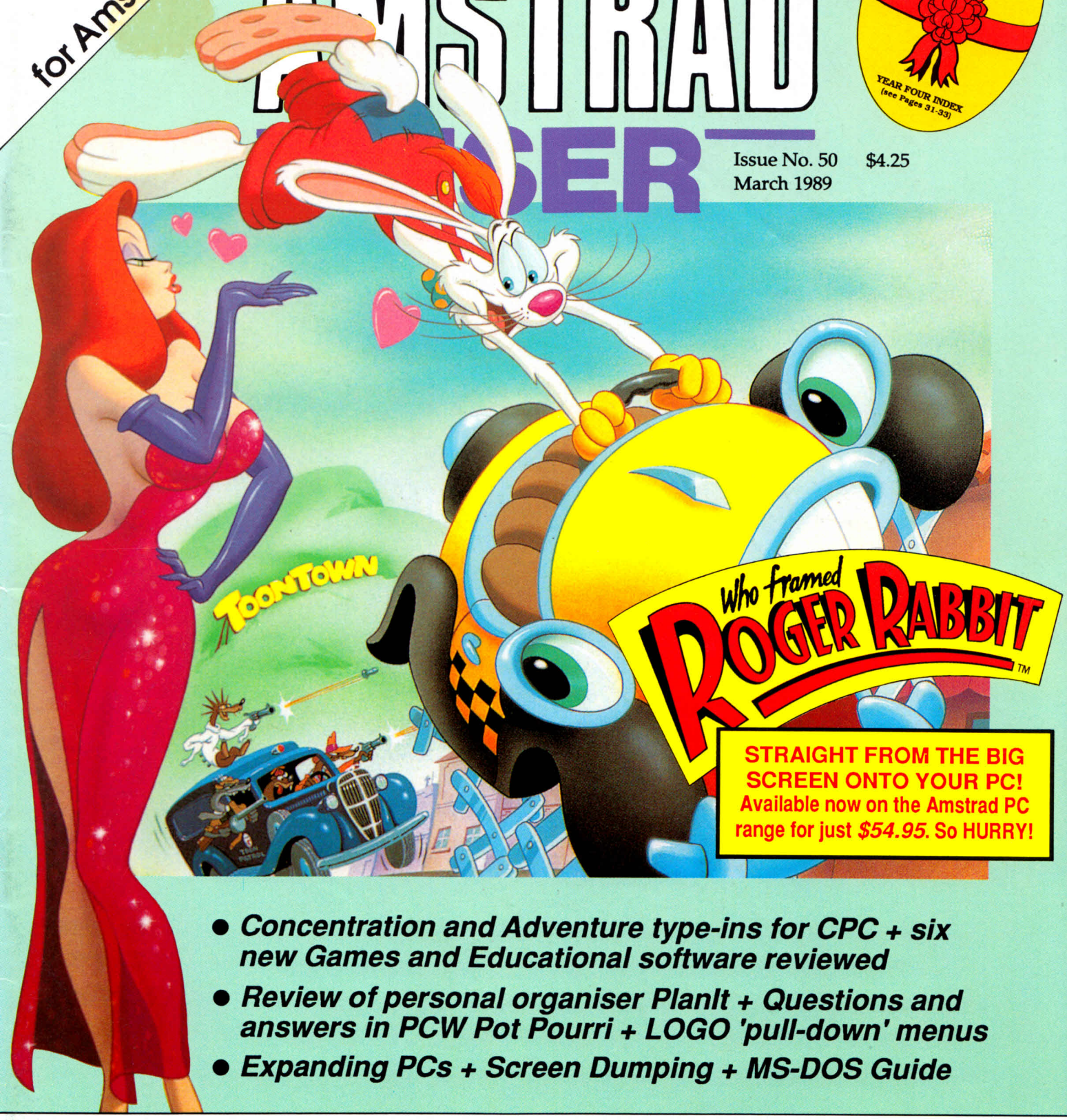
YEAR FOUR INDEX (see Pages 31-33)



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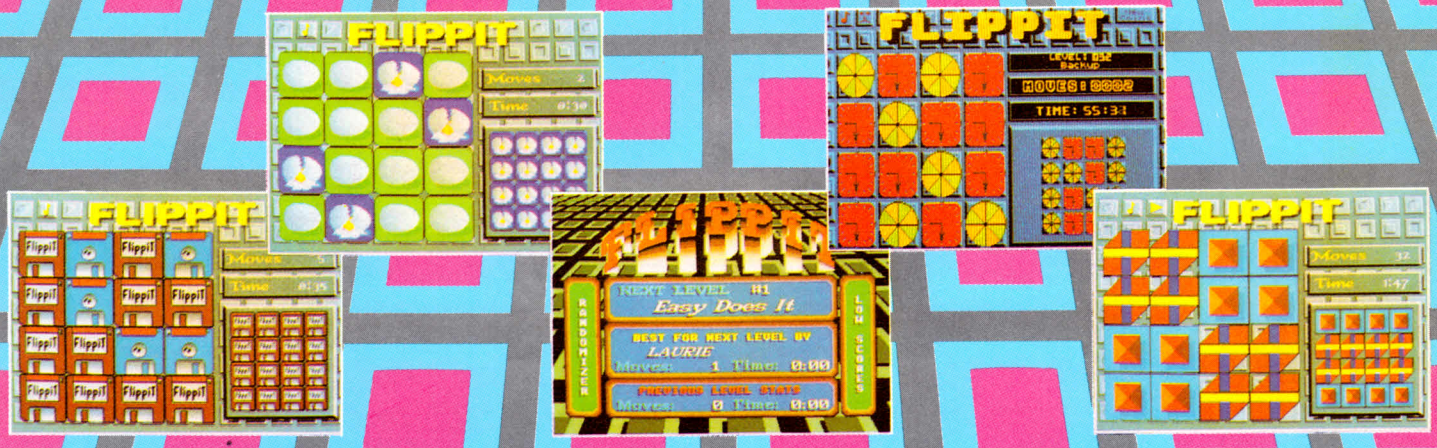

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THE AMSTRAD USER

Issue No. 50 - March 1989

For Tape Subscribers, CPC programs appearing in this month's magazine can be found at the following approximate positions:

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All enquiries and contacts concerning this Publication should be made in the first instance by writing to The Amstrad User, Suite 1, 245 Springvale Road, Glen Waverley, Victoria 3150, Australia. Urgent matters can be phoned through on (03) 233 9661.

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From time to time, some articles appearing in The Amstrad User will be reproductions from UK publications Amstrad Action, 8000 Plus and CPC Computing (formerly Computing with the Amstrad). The first two are printed under an agreement between Strategy Publications and Future Publishing Ltd, Bath, and the latter under an agreement with Database Publications.

The subscription rate (for Australia) is $42.50 for 12 issues of the magazine only, or $80.00 for 12 issues of the magazine plus tape (for CPC range only) containing programs appearing in that issue. Postage is included in the above prices. For subscriptions to New Zealand, PNG, Solomon Islands or Vanuatu please add $21 airmail. Other overseas prices available upon application.

Please note that whilst every effort is made to ensure the accuracy of all features and listings herein, we cannot accept any liability whatsoever for any mistakes or misprints. Contributions are welcome from readers or other interested parties. In most circumstances the following payments will apply to published material: Cartoons $10.00 and a rate of $15.00 per page for programs, articles etc. unless otherwise previously agreed. Contributions will not be returned unless specifically requested coupled with a suitable stamped and return addressed padded bag (for tapes or discs).

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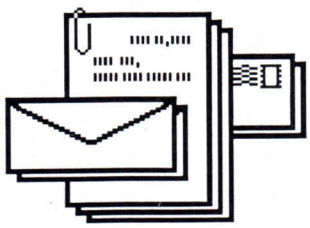
LETTERS TO THE EDITOR



A monthly selection of your comments, hints and tips, advice and news - all shared for the benefit of Australasian Amstrad users.

I cannot obtain a correct Calendar from your PCW type-in on page 44 of the December '88 issue. Your illustration shows the 1989 Calendar with January 1st being a Sunday, but the result from my type-in shows it being a Tuesday which of course is wrong.

I have been over my listing on numerous occasions, re-typed and checked the whole listing three times, and have even checked the printing on page 44 with a large magnifying glass to ensure that I have not misinterpreted any of the printing. I feel that my type-in is the same as page 44.

Kevin F. Medlen, Ashford, SA

Your error probably occurs in line 90. Make sure you have not entered 'ones' instead of 'small els'. This is a perennial problem as with a cursory glance the two characters look the same. Prospective contributors please note that if you must use an 'el' as a variable then make it a capital letter.

I have an Amstrad PCW8512. Recently I have been typing in many programs (in Basic) of varying sizes. One of the main problems I am having is to clear the screen.

I have tried many different things such as: "CLS", "CLR", "C$", "CLEAR SCREEN", "CHR$", "PRINT CLS$". Could you please either print in The Amstrad User or write back to me showing me how to clear the screen effectively?

Jeff Impey, The Basin, Vic.

If you look carefully at some of the PCW Type-ins published in The Amstrad User, you will notice that many start with the same single line namely:

```
CLEAR:PRINT CHR$(27)+"E"+
CHR$(27)+"H"
```

The "CLEAR" command clears all variables and files and the rest clears the screen and sends the cursor to the 'home' position.

I would like to make a comment on the Fun School program. From your review (Jan '89) some people might get the impression that volume 1 is more suited to 4 and 5 year olds. I bought a copy for my 25 month old and within six months he had mastered all but the 'number/word recognition' program.

He had learnt how to load and run disc and which letters corresponded to each program. It is an excellent program for teaching the basics to even pre-kinder children.

T. Falke, Templestowe, Vic.

It is always difficult to 'pigeon-hole' software to a specific age group. All children are talented - it's just a question of subject and degree. The age groups suggested on software are meant as a guide only.

In Issue 42 (August 1988) you published an article by Lisa Eveleigh of A.P. Watt Ltd. a literary agent. You should inform your readers of the following facts to save them time and money.

Since my London agent had retired, I was impressed enough to send a manuscript to her (Lisa Eveleigh) there. It took her a month to reply - "I'm sorry to say that it is not possible for us to represent authors in Australia."

There are many who do and your putative authors would be well advised to seek them out and not to waste time and postage on Ms. Eveleigh.

Norman Street, St. Lucia, Qld.

Is there another Nevada Fortran person out there who could help me or am I alone in the universe? I purchased a copy of this program for my PCW some time ago but became frustrated with the frequent obscure run-time error messages and put it aside. Recently I decided to track down the source of these apparent errors and after a series of short test programs I discovered that it appears to have difficulty accessing the built-in functions. There is also something odd about the label count. The profound program to multiply 2 by 2 and display the answer yields a label count of 9. Any suggestions on where I go from here?

Also, has anyone found a more recent compiler than a 66 version? If not a full 77 version thEn at least one which implements some of the basic features such as the character statement.

Arthur Douglas, Beacon Hill, NSW.

Some readers may be interested to learn of a Public Domain Software utility which allows the

All our Mail Order items are now in one place starting from Page 59

The following items have been added this month, bringing our range to over 1000 lines:

CPC GAMES:
500cc Grand Prix
ATF disc
Bactron
Bob Winner
Dark Fusion
Fifth Axis
Incredible Shrinking Sphere
Major Motion
Motor Massacre
Power Struggle
Pro Tennis 3D
Return of the Jedi
Savage
Space Racer
Trivial Pursuit - a new beginning
Turbo Cup

COMPILATIONS:
Supreme Challenge
Giants

OTHER CPC:
Challenger Joystick
OCP Art Studio
Print Master+
Winner Joystick

PCW:
Print Master+
24 Pin Printer Driver
9512 Keyboard Protector

PC GAMES:
4th and Inches (Grid Iron)
Action Service
Alter Ego (female version)
Annals of Rome
Apollo 18
Battle Hawks 1942
Bionic Commandos
Chase on Tom Sawyer's Island
Club Casino
Convoy
Dark Side
Def Con 5
Demon Stalkers
F-19 Stealth Fighter
Fantasy Pak
Fire Power
Freedom
Hitch Hikers Guide to the Galaxy
Kong Quest
Mach III
Matterhorn Screamer
Maze Adventures
Mystery Trilogy (3 games)
Nord & Bert couldn't...
Pawn, The
Peter Rose Pennant Fever
Pirates of the Barbary Coast
Plundered Hearts
Portal
PT-109
Rack'em (pool, billiards, etc. compilation)
Scavengers
Serve and Volley
Sorceror of Claymore Castle
Space Racer
Speedball
Sports Spectacular
Strike Force
Super Ski
Thud Ridge
Train, The
Who framed Roger Rabbit
Win, Lose or Draw
World Class Leaderboard Pack (includes set of extra courses)
Zac McKracken & the Alien Mindbenders
Zork Quest II (Infocomic)

OTHER PC:
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See pages 59-64 for a complete listing!

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transfer of files from CP/M Plus and CP/M 2.2 formatted discs to MS-DOS formatted discs, without the necessity to link computers by communication devices. ASCII text files can thus be transferred and processed by word processors operating under MS-DOS. This facility would perhaps be of interest to CPC owners who have purchased an external 5.25" drive and who wish to transfer text files to a form which can be read by an IBM compatible, either their own or at their place of work.

The package, which is run on the IBM compatible, comes as a two disc set called 22DISK and 22NICE. The former provides facilities for file transfer, the latter provides facilities to run CP/M 2.2 programs under MS-DOS, though I don't imagine there would be much call for this.

There is one important requirement for using the file transfer utility. It is necessary to modify a file called CPMDISKS.DEF on 22DISK to include information about CP/M formats employed by Amstrad. This modification can be done by using EDLIN or a word processor. I simply replaced the file supplied with the following:

(see box below - ed.)

The package can be obtained from public domain software distributor Freeware at Freepost 3, Freeware, PO Box 496, Newtown NSW 2042: telephone (02) 519-4233. The current price is $24.00 for the two disc set supplied on 5.25" discs. Adequate user documentation is provided.

Graham Aiken, Rockhampton, Qld.

CONTRIBUTIONS

We accept unsolicited articles or program contributions from readers with a view to possible publication, but in the case of programs we must insist that the coding is submitted on either tape or disc. We just do not have the time to key them all in. The tape or disc will be returned if originally accompanied with a stamped and return addressed padded bag.

DISPLAY ADVERTISING DEADLINES

Issue	Booking by	Copy by
MAY '89	13/03/89	24/03/89
JUN'89	17/04/89	28/04/89
JUL'89	15/05/89	26/05/89

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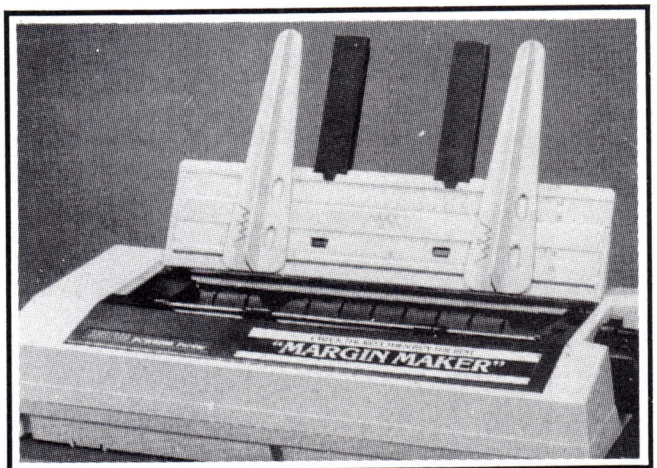
Classified ads should be phoned or sent directly to The Amstrad User.

File Transfer Utility Modifications for Amstrad PCs
Graham Aiken, Rockhampton, Qld.

```
BEGIN
    A2 Amstrad CP/M Data Format SSDD 5.25 "
DENSITY
    MFM,LOW
CYLINDERS
    40
SIDES
    1
SECTORS
    9,512
SIDE1
    0  00C1h,00C2h,00C3h,00C4h,00C5h,00C6h,
    00C7h,00C8h,00C9h
BSH 3  BLM 7  EXM 0  DSM 179
END

BEGIN
    A1 Amstrad CP/M System Format SSDD 5.25 "
DENSITY
    MFM,LOW
CYLINDERS
    40
SIDES
    1
SECTORS
    9,512
SIDE1
    0  41h,42h,43h,44h,45h,46h,47h,48h,49h
BSH 3  BLM 7  EXM 0  DSM 170
DRM 63 AL0 00C0h AL1 0 OFS 2
END
```

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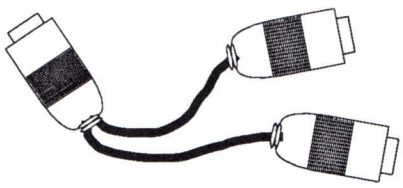

With this cable and three connectors you can use two Joysticks from the same port on your Amstrad (not simultaneously).

Available through this magazine for just $19.50 (post free). See page 64 for ordering.

CLASSIES

FOR SALE

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OOPS!

No-one's perfect, the saying goes and we don't disagree! In Steven Leslie's Hardware Project article (The Amstrad User, Feb. '89 p29) there are the following amendments:

References to the machine code address &efff excluded the third 'f', and the preceding function 'OUT'. These should therefore read (as an example):

"OUT &efff,1" or "OUT &efff,2"

(Note: the proceeding number varies.)

Also, in the parts list, the two 5.8k resistors become two 680Ω resistors.

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Classification: ❑ For Sale ❑ Wanted ❑ Services ❑ User Groups

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NEWS BREAK

Our monthly update on the gossip, news, releases and the general Amstrad scene from both home and abroad

AMSTRAD CONTINUES FLYING HIGH

Despite the "crash" in 1987, figures for the year ending 30/6/88 released by Amstrad, the parent company in the UK, show an after-tax profit increasing to over £90 million. Turnover went from £511 million to £625 million for the same period. Ending overseas distributorships (including Mitsubishi Electric-AWA in Australia) and acquiring the Fidelity brand name reduced the profit by £4 million.

The Chairman of Amstrad, Alan Sugar, stated that the company has undergone a period of "seed planting and consolidation" forming wholly owned distributors in Europe and Australia. He also went on to say that Amstrad "does not survive on new products alone" which indicates that the CPC range remains a valued member of the Amstrad range (Perhaps Amstrad Australia should take note!). Some 700,000 Amstrad home computers were sold world-wide during the period with an enormous growth of 74% in Spain attributed to PC1640 and CPC sales.

The 'Sinclair' brand name was confirmed as being adopted for the entertainment sector of the home computer products with the Amstrad name being reserved for business machines.

Alan Sugar also confirmed that a major stake (9%) investment of £45 million in an Idaho-based memory manufacturing and marketing company (Micron Technology) was to "secure long term supplies" of DRAMS, a shortage of which is causing a few production problems to many computer manufacturers. In return Micron will supply 9% of their output of DRAM chips to Amstrad for the next three years.

In the meantime, in the UK Amstrad have reduced the prices of their PC1512 and 1640 range quite considerably. The reductions range from £50 on a PC1512DDMM to £250 on a PC1640HDECD and makes a more logical price differential with the advent of the new PC2000 series. It is expected that the Australian distributors will follow suit.

AWARDS FOR BRITISH TELECOMSOFT

A number of international awards were gained by Telecomsoft recently (they have the Firebird, Rainbird and Silverbird labels). In France, a leading computer games magazine 'Generation 4' voted Rainbird Software the "Best Foreign Company of 1988" with Firebird Software in third place. In the "Game of the Year 1988" section Rainbird's **Star Gilder II** took second prize.

In the "Best Strategy Game" section, Telecomsoft swept the board with **Carrier Command** in first place, **Universal Military Simulator** in second and **Sentinel** in third. **Tracker** was runner-up. **Fish** took the top award as the "Best Foreign Adventure Game" with **Corruption** in second place. The "Best Simulation" award went to **Elite** and **Carrier Command** came second. In the "Best 3D Game" award, **Star Glider II** came first with **Virus** third. **Carrier Command** was runner-up.

A little further north in Denmark, readers of 'Soft Today" magazine voted **Bubble Bobble** the "Best Game Overall" in 1988 with **Star Glider II** coming third. **Star Glider II** also gained second places in the "Best Graphics" and "Best Action Game" sections. To top it all, the readers voted Telecomsoft the third "Best Software House" of 1988.

So what's in store for 1989? From the latest press releases comes information on **Tyger Tyger** (CPC cassette and disc) due for release in the UK in March. There are "four harrowing levels of bloody battle" against marauding aardvarks and monstrous beasts. It's an 'all-way scrolling' action adventure where, armed with your sword, you "delve into the depths of the earth to fight your way through to the mind blowing finale".

3-D Pool is also due for release around the same time, and will be in Amstrad PC and CPC (we assume) formats. The game has been endorsed by Joe Barbara "Maltese Jo", European Pool Champion. It is quite a different version from some you may have seen already in that the pool table can be manoeuvred to any angle to align your shots. It also has a trick shot designing kit, a practice mode and you can play against another player or the computer.

IT'S A SELL OUT

By the 27th January there wasn't a copy of the January 1989 issue of The Amstrad User to be found in the office, despite the fact that we printed more for that month than ever before. This is the first time we have run out of an issue and if you missed out we apologise. The shortage will remain until we manage to claim back unsold copies from news agents and bookshops which should happen around the middle of this month.

newproducts

BUSINESS:

STOCKMARKET (CPC, PCW AND PC)

STOCKMARKET is a brilliant new program designed to help you plan your investments and keep a close and careful watch on their progress. It even allows you to enter STAMP DUTY, BROKERAGE COMMISSION and TAX ON COMMISSION! You can have as many accounts as you need, and can have up to 50 shares per account. Graphs can be produced for both prices and moving averages.

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SCANNER (PC)

Make your desktop publishing stand out from the crowd. With this HS-3000 scanner, you can "grab" images from books or magazines and then save them to a file suitable for most graphics and DTP applications. Your images can be saved in GEM format suitable for any GEM program that can incorporate graphics (i.e. GEM Paint, GEM Draw, etc.)

ENTERTAINMENT:

TURBO CUP (CPC DISC AND TAPE, PC AVAILABLE SOON)

Now you can take part in the famous Porsche 944 Turbo Cup racing series. TURBO CUP features realistic 3-D graphics with amazing special effects and the most accurate driving controls of ANY driving game. There are four circuits to choose from, plus qualifying rounds to pass.

BACTRON (CPC TAPE)

BACTRON is an infernal, internal arcade adventure. You are ill, VERY, VERY ill. The only way you can heal yourself is by guiding a BACTRON around the veins and arteries of your body, searching for the healing enzymes.

FIFTH AXIS (CPC DISC)

Due to the meddlings of Professor Chronos the structure of the Earth is threatened. His time machine has fragmented across several time periods, and the Earth is starting to revolve around it's fifth axis making the present less and less probable with every passing moment. Someone need to return all the pieces to one time zone and re-assemble the time machine. That someone is you!

3-D PRO TENNIS (CPC DISC)

3-D PRO TENNIS has all the action and excitement of the international tennis circuit. You are given a realistic "behind the player" 3-D perspective, and you can play either a human opponent or you can play against the computer. PRO TENNIS - grass, clay and hard court action.

Available from: Grace Brothers, John Martins, Harris Scarfe, Myer, Harvey Norman, Computer Base (Castle Hill & Bankstown), Maxwells of Rockdale and Ettalong, B & B Computers of St. Mary's or other retailers around Australia.

FOR THE NEAREST RETAILER IN YOUR STATE CONTACT
NSW: Pactronics Pty. Ltd., 33-35 Alleyne Street, Chatswood. (02) 407 0261
VICTORIA: Pactronics Pty. Ltd., 51-55 Johnston Street, Fitzroy. (03) 417 1022
QUEENSLAND: Pactronics Pty. Ltd., 12 Stratton Street, Newstead. (07) 854 1982
SOUTH AUSTRALIA: Baringa Pty. Ltd., (08) 271 1066 ext. 6132
WESTERN AUSTRALIA: Pactronics WA, 757 Canning H'way, Ardross. (09) 332 3807
MAIL ORDER: The Amstrad User, 1/245 Springvale Rd., Glen Waverley 3150. (03) 233 9661
NEW ZEALAND: Micro Dealer, 60 Terakau Drive, Palupanga, Auckland (09) 279 9300

Pactronics

PRO-PUNTER SOFTWARE

We recently published an overview of the computerised tipster Pro-Punter. Most users have ignored the references to English courses with the PASS option. In discussions with the producers DGA Software in England, we can reveal that a special version for Australasian users is currently under development incorporating most of the main courses this side of the world. It is likely to be ready by May of this year. Current users who have purchased a copy through The Amstrad User will be offered a free upgrade.

NEW ADVENTURES FOR PCW

Topologika are fast gaining a reputation for releasing high quality adventures; Return to Doom being their current success in Australia along with Giant Killer. A further three a planned to be released shortly for the PCW - **Spycatcher, Avon and Quondam**. The plot for Quondam is currently a secret, but for Avon it is known to be loosely based on Shakespeare's tales. It starts in an enchanted land where the style of the Bard's language is used. The aim is to discover the way back to the present day.

Spycatcher (we wondered who would be the first) is inspired by Peter Wright's book of the same name, although we understand that the name may be changed.

TOMAHAWK GOES 9512

As a helicopter simulation, **Tomahawk** has proved to be one of the most popular games on the PCW 8256/8512. Digital Integration have now made the necessary changes for it to be run on the PCW9512 as well. It's a game which can be played with a joystick (and interface) if required but is just as effective through the keyboard alone.

The features include showing the landing pads, scenery, enemy tanks and field guns - all in 3-D. The player can choose either training or battle missions, each of which is completed when all the enemy forces have been destroyed and the helicopter returned safely to base.

PACTRONICS IN TOP GEAR

Some exciting new lines have been released by Pactronics, one of Australia's major importers and producers of software and peripherals. Served up for the Amstrad CPC comes **Pro Tennis 3D**, an ace in action and excitement for one or two players. A choice of play on grass, clay or hard court is provided. Three more games for the CPC are Bactron, Fifth Axis and Turbo Cup.

Bactron is the ultimate weapon against viruses and infections. It has to be guided through the network of veins and arteries in your body seeking out health-sapping nasties.

Fifth Axis is a future time into which the world has been sent following the destruction of a time machine. With each revolution around the Fifth Axis the present become more and more improbable. you will need to use all the unarmed combat skills to defeat the Cyborgs and rebuild the time machine.

Turbo Cup is based on the world famous Porsche 944 Turbo racing series in France. There are four tracks to race on, plus qualifying rounds must be completed to determine your starting position in the race. Great graphics and sound combine with awesome game play.

Coming back to earth, the Amstrad PCs have not been forgotten. As a result of extensive development work incorporating many of the user requested features of Money Manager Plus, a new version has been released for the PC called, appropriately enough, **Money Manager PC**. This enhanced version has Amstrad or MicroSoft mouse support, automatic sorting into date order, definable macros, and laser printer support. Hercules, CGA, EGA or VGA are also supported.

Two new PC budget packages Value Word and Value Calc have been released. **Value Word** is a budget word processor with extras, including a spell checker, salutations and greetings guide and templates of correct letter layouts. **Value Calc** is a simple to use but feature packed spreadsheet. It has all the mathematical functions you'll need and is supplied with three templates; Expense Recorder, Gas Mileage Calculator and Home Budget.

A more sophisticated PC word processor comes in the shape of **Top Copy** and at a very attractive price. It is a multi-document word processor with a spell checker and mail merge facility. Most functions can be accessed from drop down menus for ease of use, plus it can run as a 'pop-up' like Sidekick.

Finally, Lancelot (for the CPC, PCW and PC and reviewed this month in Adventurer's Attic) warrants a mention. It is a triumph for Level 9, the best adventure writers in England. It is an accurate recreation of the trials and tribulations of Sir Lancelot and his quest for the Holy Grail. It has stunning graphics, intriguing puzzles and intelligent parser.

CP SOFTWARE UPDATES FOR PCW

CP Software must hold the record for one of the longest titles given to a piece of software. **"All you ever wanted to know about Graphics, the Universe and Everything on the PCW8256/8512 but were afraid to ask... version 2"**. It has an extremely impressive and useful set of machine code routines originally designed for more experienced programmers to produce professional looking graphics which were both smooth and fast. The routines can be used in any language from Mallard Basic to machine code. They range from sound routines, draw lines (or erase) plot points or pixels (or erase), fill shapes, double character height and width printing through to disc drive motor control, and sprite creation.

The update (version 2) improves upon the control of the printer and includes routines such as setting margins, bold and italic print etc. which were missing from the

original version. It comes with a reasonably comprehensive manual which an experimenting novice will also find helpful. Experienced programmers will be pleased to note that the full Z80 source code is also provided. ($75.00 through The Amstrad User).

Lightning Basic (reviewed last month) also gets an update to a "Plus" version. It now contains a command to reconfigure the output ports on a PCW9512 for those lucky people who can afford two printers. ($75.00 through The Amstrad User).

FORTHCOMING UK CPC RELEASES

An interactive computer/board game called **Tank Attack** is due for release from CDS. Two to four players can take part in this game where a board with plastic pieces is set up next to the computer. (It will also be available for the PCW). Each player takes the role of a General commanding eight tanks and four armoured cars. The object is to capture the enemy headquarters or destroy the enemy.

Long ago, in a galaxy far away... Domark released Star Wars. Then came The Empire Strikes back. The final game (one assumes) in the trilogy is **Return of the Jedi**, due to hit the CPC screens now.

On the budget Players label will soon be an air-shoot-em-up called **F14 Tomcat**. It will have six levels of difficulty in destroying aircraft, ships and ground installations including tanks. They also have an improved version of **Into the Eagles Nest** where the graphics, sound and music have been altered.

dBASE BATTLE LOOMS

For some reason Ashton Tate , the inventors of dBase, have let three years elapse before deciding to take legal action against alleged clone producers. A writ was issued by the Los Angeles Federal District Court to Foxbase, producers of Fox Software as "Fox Software has deliberately mimicked and copied the unique and original forms of expression that have made dBase the industry leader" stated Edward Esber, Ashton Tate's chief executive.

The reply from Fox was equally firm with a counter-writ accusing Ashton Tate of "misappropriation of Fox proprietary, secret structures and algorithms, unfair competition, illegal monopolistic activity and fraud in obtaining copyright registration." Sadly, the only people who normally profit from these types of litigation are the lawyers.

MINI CLEANER FINDS A NICHE OR TWO

Keyboard protectors are a valuable 'stick-on' to stop drinks, dust, crumbs and so on from wrecking your keyboard. But there is little point in putting one on if there is already an amount of debris collecting around the keys. Enter the "Mini Super Cleaner.' It's a miniature battery operated vacuum cleaner/blower with various attachments, including a small brush, to remove those unwanted bits of rubbish. Its use is not confined to the keyboard either. Any piece of equipment (cameras, record players etc.) which requires a blast (or suck) to clean it up will benefit.

It sells for $27.95 (excluding two 1.5v batteries) and is now available from The Amstrad User.

AUSTRALIAN PC VIRUS

We are grateful to the Central Coast Amstrad User Club for publishing a warning in their January '89 Newsletter concerning one of those infernal and dangerous bad jokes. The virus is apparently resident in some versions of a musical Public Domain program called "Mushrooms" originally written in Australia in Turbo Pascal. The tampered version apparently destroys the FAT tables on a hard disc making recreation exceedingly difficult if not impossible. It also disables the printer drivers. To avoid any disasters the simple thing is not to touch "Mushrooms" at all.

It makes you wonder what sort of minds can find enjoyment out of destroying other peoples work or pleasure. We believe, however, that legal moves are likely and will come down on the perpetrators like a ton of bricks when the source is traced.

While on the subject, Pactronics distributes a book called "Computer Viruses - a high tech disease" written by Burger. Get a copy from your dealer or by mail order through The Amstrad User for $49.95 plus $5.00 postage.

AND THE WINNERS ARE:

What an amazing response we had to our OziSoft/Ocean sponsored competition. Our thanks to OziSoft for providing the software prizes and organising the T-Shirts, caps and keyrings from Ocean. Our thanks too to everyone who took the time to enter.

Not all the answers were correct. Many fell into the trap by choosing "After Burner" (an advert on the page prior to the competition page) as the answer to 'any Ocean game distributed by OziSoft.' Whilst distributed by OziSoft, After Burner is in fact an Activision title.

The first five correct entries drawn from the "Competition Box" and winning a current Ocean hit, T-Shirt, cap and Keyring were:

Brian Pinfold, Perth; Matthew Dooble, Launceston; Nathan Pfister, Schofields; Chris Byrnes, Cardiff and Robyn deVries, Monto.

The next ten out of the box and winning a T-Shirt and keyring were:

Ivan Mold, Swansea; Clancy Battye, Coolaroo; Julie Deegan, Tomahawk; Paul Jones, Chelsea Hts; Jason Atherinas, Brisbane; J.L. Griffin, St. Kilda; Mark Lawrie, Barmera; Judy Wightwick, Sebastopol; Andrew Monks, Baulkham Hills and Martin Clift, Gilgawdra.

The next fifty (too many to list here) will receive an Ocean keyring. Congratulations to all the winners.

BRAWN & BRAINS

Resident games critic, The Joystick Wizard, dissects another pile of new releases, revealing the innards, the outworks and the betwixt.

THE GAMES REVIEWED THIS MONTH:
TRIVIAL PURSUIT- new begin.
1943 - BATTLE OF MIDWAY
LIVE AND LET DIE
OPERATION WOLF
CYBERNOID 2 • TOTAL ECLIPSE

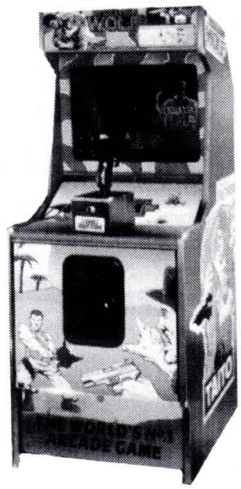
OPERATION WOLF

A brilliant arcade conversion from Ocean

CPC Tape $29.95
CPC Disc $44.95

Not many people will know that there are two arcade versions of Operation Wolf. One is an any-level-entry Japanese version, the other a progressive-level version. It is the latter which has been converted by Andrew Deakin and Ivan Horn with graphics by Jonathan Dunn for Ocean. These guys are going to make a name for themselves as they are also responsible for Rambo III.

There are six stages to deal with, each getting progressively harder, with the aim of eventually rescuing your imprisoned fellow soldiers. The action starts in the communications area where armoured cars, helicopters and attacking soldiers do their worst to stop your progress. The next scene is in the jungle with the river patrolled by heavily armed motor launches.



On the right of the screen an energy meter is displayed (along with other information concerning your current fire power) and this slowly reduces as you fight your way through the game. If you manage to complete the third level (the village) you are rewarded with an energy top-up. But beware, not all the characters you see on the screen are 'baddies'. There are nurses, passers-by and children who should not be fired upon. If you do make a mistake here, your energy meter takes a battering. Needless to say, if you run out of energy, the game is over. Occasionally, life-potions scroll past and shooting them recharges your energy as does completing a stage.

Getting through the village successfully moves you on to the munitions dump where this time the enemy appears to be wearing a bullet-proof jacket. The secret here is to aim for the head. All aiming is done by moving a cross-hair around the screen (using the keyboard or joystick) and hitting the fire button. A successful shot is indicated by a bullet hole - a miss by a spurt of ground. At the end of this level you gain additional magazines to assist in the next location. You can also pick up extra ammunition such as ammo clips and rockets as they scroll in similar fashion to the life-potions.

The enemy camp is the fifth level where the more fellow soldiers you rescue the more points you score. The enemy fire power here is awesome and you really need to keep your wits about you. The final screen shows a transport plane with a lowered rear door. Again, you have to get as many people onto the plane as possible. You will find that this is the most difficult level with the enemy pouring everything it has got at you to thwart your mission.

Operation Wolf is a very good representation of the original arcade version although the scrolling is a little faster. The graphics are excellent with well complementing sound effects. It's highly addictive, sweat inducing, tough, blood and guts action from start to finish (if you manage it!). Thoroughly recommended for excitement.

TOTAL ECLIPSE

A third great 'Freescape' game from Incentive

CPC Tape $29.95
CPC Disc $44.95

Following in the footsteps of two great games from Incentive, namely Driller and Darkside, comes Total Eclipse. Rather than taking place in a space environment, the action this time turns to Egypt in 1930. For those familiar with the previous two offering, Total Eclipse will seem bigger and better. In fact it is about 70% larger with 50 locations and faster too owing to improved programming techniques. But back to the scenario.

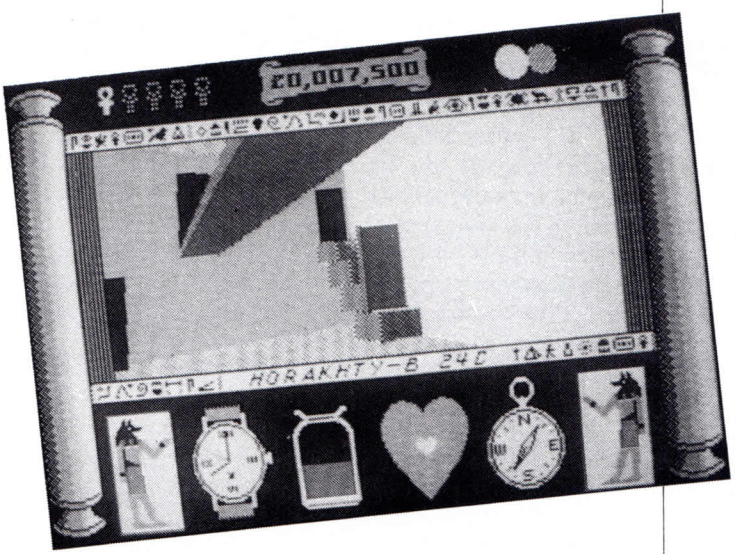
A curse was placed on the world by a Pharoah who built a pyramid and decreed that if ever the sun was blocked from shining on the pyramid (during daylight hours of course) the world would come to a calamitous end. It is now the 26th October 1930 and a total eclipse of the sun is due to take place. Your quest is to enter the pyramid before the eclipse and destroy the shrine and thus the curse.

The unique 3-D Freescape graphics provide a realistic atmosphere. At the top of the screen are shown the position of the moon in relation to the sun and 'money earned' or score so far by collecting treasures en route. At the base of the screen are various icons - a water bottle which empties as you progress through the pyramid; your heart beat which increases as you work harder; a compass and a wrist watch. There are also hieroglyphics which provide information on your direction, whether you are crawling or walking, angles and so on, but not all are going to be used. It is helpful to keep some sort of map going if you can.

Arriving at the pyramid, you will find an 'ankh' (a symbol for opening up certain parts of the pyramid) and a water trough. You can fill your water bottle here by 'touching' the trough. If you run out of water your heart rate will increase to a point where you will be forced to take a rest. But time is of the essence as you only have two hours (literally) to complete the game before the total eclipse takes place. Treasures can be found in urns and chests while in some locations you will find a sarcophagus or two with nasty mummies.

One of the difficult things to achieve in Driller and Darkside was that once you had twisted and turned to scan around, you often lost exactly which way you were facing. This has been overcome in Total Eclipse with the 'F' key which automatically faces you to the front. There are heaps of things to look at on floors, wall and ceilings - most giving you clues or presenting puzzles or traps. In the case of puzzles, there is often more than one solution, so even completing the game doesn't mean you can throw it in the cupboard.

With one eye on the sun and moon or clock, another on the water and heart beat, another on the pyramid interior, you can see that you really need three eyes to make speedy headway. As most of us have only two, the adrenaline will soon start running as the time ticks away.



As usual, the perspective is excellent and the colour with various shades provides a clear and realistic feeling and there is no problem for green screen owners. The puzzles are tough but with more than one solution make the game more playable. Total Eclipse certainly shows an improvement on its predecessors and is a must for all Freescape fans of which there are many.

LIVE AND LET DIE

Where Bond tackles a narcotic problem with vengeance

CPC Tape $29.95
CPC Disc $39.95

Although the Bond films rarely follow the original story line these days (and computer games even less so), it does give an opportunity for the special effects guys to let their imaginations run wild. The films are sheer escapism - indeed, Mr. Bond often has to escape from very tight situations aided by some special piece of equipment supplied by 'Q'. As the final battle with Mr. Big will take place in the wetlands of New Orleans, 'Q' furnishes Bond with a powerboat 'extraordinaire' armed with a cannon and missiles.

It is not expected that you will be able to match the skills of Bond straight away, so the game is split into sections - a practice mission, two exercises and the final New Orleans Mission.

The screen consists of a landscape rolling towards you with your boat in the centre. Below this are the controls of the boat, showing fuel level and speed along with your score, stage and number of missiles. The first section starts with a full fuel tank and three missiles and these can be topped up during the game by passing over the odd barrel found floating in the water. It seems that even 'M' is worried for your safety and will occasionally send in a helicopter to drop additional supplies.

The practice mission is a simple 'shoot-on-the-run' exercise where red or black objects are presented for target practice. The red objects need just a single shot while the black ones need a missile to destroy them. The game will end if you run out of fuel, and this can be avoided if you don't hit any objects with your boat.

Once you are more expert in handling the boat and fire power you will move on to the second and third stages - the North Pole exercise and the Sahara Desert exercise. Both of these provide practice on skills required in the final section. Naturally they are harder than the first and introduce many more obstacles in the shape of baddies, mines, floating logs, gun emplacements and aircraft. Most can be blasted but solid rock or icebergs have to be avoided. The Sahara exercise can be classed as an obstacle course and features a ramp (with associated noise as the boat scrapes up it) which must be used to avoid a grisly end. The North Pole exercise is more in the shoot-em-up class with special tactics needed to shoot down the planes. You'll also find that the rivers get quite narrow and you may have to skim up the bank to avoid the obstacles in the water.

If you thought that the exercises were tough, the final stage - New Orleans Mission - will change your mind. Everything which appeared in the first three stages will reappear in this final confrontation in greater numbers and will leave you both shaken and stirred. Only the most nimble fingered, hawk-eyed and fearless gamester will succeed. I will admit that I didn't reach Mr. Big's headquarters, but I will keep trying, if only to see which pretty young lady I manage to hide with while 'M' is trying to communicate his congratulations!

Overall, the game is fast and furious, the graphics well presented and colourful (no problems for green screen owners here). The scrolling is quite smooth and certainly gives a clear impression of forward movement. The boat weaves in and out of obstacles smoothly with an occasional bounce thrown in for effect. Fortunately the sound is not overdone. By this I mean that the noise of the boat is not present nor is there a tune playing throughout the game - both would have been an unnecessary assault on the ears. The explosions and siren noises are quite adequate.

If you are a James Bond fan like me, you will probably buy the game on name alone. I have made that mistake before but you can be assured that this time you will be pleasantly surprised.

1943 - BATTLE OF MIDWAY

An air to air combat arcade conversion from Capcom/US Gold

CPC Tape $29.95
CPC Disc $44.95

There have been a few 'air to air combat' type games recently, Flying Shark and 1942 to name just two. It doesn't require much thought to realise that 1943 is the sequel to one of them. Historically though, the Battle of Midway took place in 1942, so the choice of title must leave some red faces at Capcom/US Gold. Nor must it be confused with a PSS game called "Battle for Midway".

The aim of the game is to destroy the mighty Japanese battleship Yamato, but before this final confrontation can take place you have to destroy the best part of the Japanese airforce and navy. The gameplay takes place on a vertically scrolling panel (about half a screen wide) in the centre of the screen with current score, rolls remaining (no, not your lunch but tactical barrel rolls to avoid being shot) and 'energy' level displayed for each of two players either side of the play area.

Having taken off from the aircraft carrier in your American P38 warplane you, and you alone, meet head on with a multitude of enemy aircraft with guns ablazing. Naturally you must avoid the bullets at all costs and can perform up to four barrel rolls if things get a bit tough. And don't think that just because the enemy is not facing you that it cannot fire - it has a sting in its tail. They can be despatched with just one accurate shot which will send them twisting down in a ball of flame. Now and again enemy bombers appear and require more than one shot to get rid of them.

You'll also find a few maverick flyers appearing at random to add to the general mayhem. Destroying them all gives you a chance to gain extra fuel by flying over the word "Pow" which will scroll down on the screen. If you have plenty of fuel, you can choose to shoot at the word and convert the bonus to one of six types of weapons - such as multi-directional fire or allied fighters alongside your own plane.

The ground attack targets consist of the Battleship Yamato and associated support craft and an enormous plane. The ships can be destroyed by shooting at their gun turrets. The large plane is somewhat difficult to handle as it has a gun behind each of its four engines. Fortunately, the screen stops scrolling at this point to give you a chance to knock out the engines. They burst into flame when you make a successful hit.

The use of colour in 1943 is good, and the animation quite adequate. The downward scrolling is a little flickery (you get used to that) but nevertheless reasonably smooth. The sound effects are restricted to explosions, but are functional enough. Green screen owners will find some aspects a little unclear but it doesn't take long to work out the green shading and so should still be playable.

Having said all that, the game is not as difficult as it seems, and is probably more suited to a less experienced or younger gamester. It also has a two player option to make life a little more interesting.

CYBERNOID 2
A sequel to the classic from Hewson

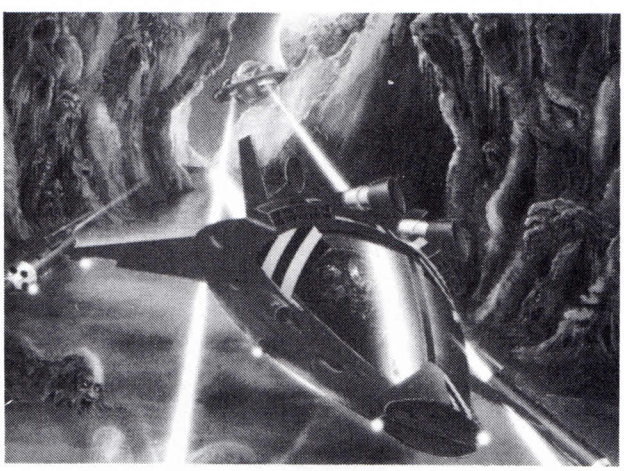
CPC Tape $29.95
CPC Disc $44.95

It is sometimes difficult to review a sequel. Should one compare it with the previous offering for the benefit of those who bought the original, or should one look at it with the first time buyer in mind? In this case I have decided to view it as a new product and owners of the original Cybernoid can make their comparisons.

The storyline tells of a band of space-pirates who have finished plundering and have retreated to their hideout with their ill-gotten gains. Your task is to recover the booty and destroy the pirates. To achieve this aim you are handed a new spaceship equipped with an awesome armoury. For a start it has a powerful continuously firing laser. Then there is a bank of seven other weapons which can be called into use by pressing a particular key on the numeric keypad.

The list is impressive: Bombs (you start with 20) to destroy missiles and gun emplacements; Time Bombs (you start with 10) which explode a few seconds after dropping them from the back of your ship; Defence Shield (one only) which provides a short period of invulnerability; Bouncing Bombs (you start with four sets) which break into four section and bounce around destroying everything they hit; Seekers (you start with five) which home in on missiles and gun batteries and never miss; Smart Bombs (one only) destroy everything on the screen and finally; Tracers (you have two at the start) which travel around the edge of the screen destroying everything in their path.

The screen consists of a play area across the flick-screen with a status panel at the top showing the number of lives left, current score (and cargo), weapons and the time. Searching out the booty while fending off the baddies is no mean task, and there are a number of those 'timing' problems to deal with. Although your weapons should be used carefully, replacements can be collected through the pirates' booty or canisters from a crashed pirate ship. However, losing a life will rid you of any 'strap-on' weapons.



As far as the baddies are concerned, they are a mean bunch and often indestructible. There are 'bouncing aliens' (the vertical and horizontal type) and caterpillars which cannot be destroyed and need careful timing to pass successfully. Missiles attached in stalactite and stalagmite fashion wait dormant until you pass above or below them when they then launch into action. There are gun batteries which cannot be destroyed unless they are shooting at you and last but not least, the pirate ships themselves, which constantly blast you or attempt to collide you out of the game.

Cybernoid 2 will leave you breathless - there is no let-up. Those familiar with the original Cybernoid will recognise much of what has been mentioned above and will also appreciate the extras. It is a high quality game with matching graphics which are flicker free and colourful. Green screen owners shouldn't have too much trouble despite the fact that some of the dark colours tend to get lost. The sound effects are good, with a nice theme tune playing through the game. Like the original, Cybernoid 2 is equally frustrating and addictive with heaps of puzzles to slow you down.

TRIVIAL PURSUIT - A new beginning

A quite different Genus II edition through space

CPC Tape $35.95
CPC Disc $42.95

TP is back, but this time he has got away from the standard 'wheel with hubs' board layout. The 'New Beginning' version is set in the 21st century where Earth is a dying planet. A new planet - Genus II - has been selected for inhabitation and from one to six pilots (players) are needed to transport the colonists. Just one of these pilots is to be the first ambassador on the new planet. That person will be the first to land on Genus II and be accepted by the elders. That's the theory, now to the gameplay.

There are some 3,000 questions available and are divided into 16 blocks (A to P). Any block can be selected once the game has loaded. The name of each player can be entered and is allocated a distinctive animated shape. The instructions were not clear enough on this point, and trial and error discovered that the space bar must be pressed before the first character of the name is entered. Returning to the main menu will provide the opportunity to amend the player list, turn on (or off) the timer, start the game or set a few other switches on/off in the Miscellaneous Menu (eg. Music, Graphics, Sound etc).

The game itself starts in the loading bay on Earth where TP will ask one question to the first player in the queue. If the question is answered correctly, he/she will trundle off screen and the appropriate rocket will be launched. Failure will put the player to the back of the queue.

Throughout the game the questions appear at the top of the screen, and it is up to the player whose turn it is to answer loudly so that the other players can hear. The answer is revealed by pressing the space bar and by toggling the left or right cursor keys the player will indicate whether the answer given was correct. OK, if you are playing by yourself you can cheat (you could with the old version too) but with other players around it gets difficult.

Once launched into space, players are presented with the control panel of the spacecraft and a galaxy ahead. The panel at the bottom of the screen has six empty 'wedge-shaped' boxes. If you've played the board game you've guessed what they are for I'll bet. A 'wedge' to fill each box can be found in the six galaxies to be explored. The galaxy ahead is the first to be checked out and contains a number of planets. Toggling the cursor keys again will select a planet onto which the player will land. He/she may be lucky in finding a planet with a special object needed to progress to the next galaxy. On the other hand it may take a few landings to succeed. Each landing is accompanied by a question which if answered correctly allows the player to continue. If a special object (wedge) is won, transportation to the next galaxy is automatic.

When all the 'wedges' have been collected, the player will land on Genus II for the final test. (This is where some players who are a little behind can catch up.) Six Elders enter of which one has the task to ask the final question, but which Elder is not known. The player has to make a calculated guess. If the wrong Elder is chosen, which invariably happens, a normal question is asked. When the correct Elder is found, the choice of subject for the final question is chosen by the other players. If the answer given is correct, that person is the winner.

The element of chance which occurs from time to time relates to the throw of a die in the original board game, or the throw of a dart in the first computer game. The questions are just as hard as the Genus I edition and perhaps a little more up to date in some categories, especially Sport. However, you may find one or two too difficult unless you are familiar with British sportsmen and women. There are some interesting audio and visual questions if you have those options switched on.

The graphics are colourful and functional and the sound quite adequate, especially when you get a music question. Green screen owners will have no problems. Overall, Trivial Pursuit - a new beginning is an interestingly different approach to a well used theme and will keep many families occupied on a rainy day.

MASTERFILE III

FOR THE AMSTRAD CPC6128
(ALSO CPC464/664 WITH DK'TRONICS 64K RAM)

FIRMLY ESTABLISHED...

MASTERFILE III is now firmly established as THE filing system for the CPC6128.

For the benefit of newcomers to the CPC machines: MASTERFILE III is a powerful and flexible data filing and retrieval system. All "database" systems require that your data is organised into fields and records. Unlike most, MASTERFILE does not commit you to field lengths or formats, since ALL data is variable-length and optional. Files are not preformatted, and only used bytes are saved to disc. Also, unlike the rest, MASTERFILE allows multiple user-defined ways of viewing/printing your data. And unique in its price range, MASTERFILE offers RELATIONAL FILE options, whereby common data can be entered just once and shared by many records. Maximum field size is 240, maximum fields per record is over 50, and maximum file size is 64K. Room for 1,000 full names and addresses, for example. Only one disc drive is required. It is menu driven throughout, and comes with detailed illustrated manual, and example files.

SO VERY VERSATILE...

Just about ANY kind of information can be handled by MASTERFILE. You can EXPORT the data to other systems (eg. PROTEXT/MERGE and TASWORD). You can even merge your own USER BASIC to MASTERFILE for customised file processing, or build new files from other computer sources. The speed of SEARCH of MASTERFILE is second to none. Records can be sorted ascending/descending, character or signed numeric, even embedded keys such as surnames. Other functions are field-to-field calculations, and several-across label printing. We simply don't have room to list all the features; give us a call if you are still in doubt of the power of MASTERFILE III.

ALL THIS POWER...

This is no toy thrown together in BASIC and half-tested, but real machine-coded computing power professionally constructed. We have had IBM and Apricot users beg us for a MASTERFILE for their machines - when they had seen the earlier CPC MASTERFILE.

MASTERCALC 128

THE MODERN CPC6128 SPREADSHEET SYSTEM

This is the sister program to the famous MASTERFILE III, and is a fast and friendly spread-sheet program with high capacity (over 7,000 cells) and impressive speed. Like MASTERFILE, it is entirely machine coded. Like MASTERFILE, it needs just one disc drive and does not use CP/M and it uses the same optimised RAM bank-switch code. "Another exceptional utility from Campbell" said Popular Computing Weekly of the original MASTERCALC. The "128" edition is more powerful.

All spread-sheet systems allow manipulation of any array of numeric data.
What sets MASTERCALC 128 apart from the rest are these features:

Full-screen or split screen windows; variable column display width; variable column formats, 0-7 decimal places; columns can be formatted individually; ultra high-precision floating point arithmetic; direct totals and sub-totals; up to 99 relocatable formulae (usually 10 is ample!); formulae up to 75 characters, and arithmetic expressions, plus conditions, relative cell references; instant highlight of computed data; store text anywhere; pop-up help menu; 40/80 column mode; auto cursor-advance; text output to printer or to disc for word processing; fast hi-res histogram of any 3 rows; Epson screen dump; detailed manual with illustrated tutorial.

For the enthusiast, there is even USER BASIC access to the cell data, so that special operations can be performed. For example, it is possible to ship data to/from MASTERFILE III.

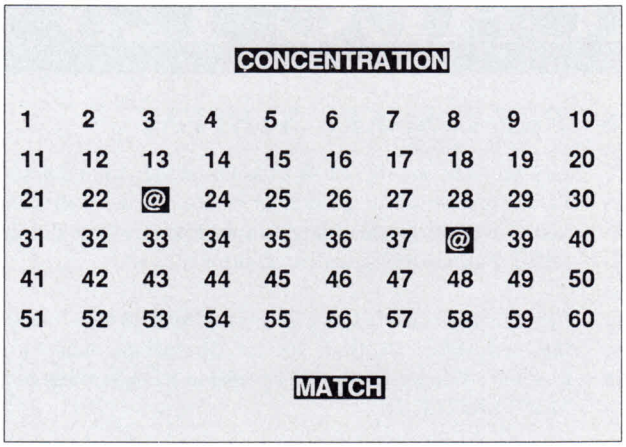
MASTERCALC 128 costs just $99.00 and MASTERFILE III costs $109.00 including postage and packing, and if you request air-mail within Australia, we'll do that at no extra charge too! (If you live outside Australia please add $4.00 for air-mail cost. Bankcard, Mastercard or Visa accepted).

Send your order now to:
THE AMSTRAD USER
Suite 1/245 Springvale Road,
Glen Waverley,
Victoria 3150. Tel: (03) 233 9661.

MEMORY MUDDLER

Jason Hood submits a type-in to drive you crazy. Yes - it's a game you could never forget!

You have probably heard of the card game called "Concentration" where a pack of cards is placed face-down and spread out in rows on a table, and a number of players compete to pick up the most number of cards possible. Cards are picked up when two flipped cards match up. A special pack of cards is used with various characters on the underside. The best player is the one who is the best, as cards are flipped and then replaced, at remembering where various cards are. The winner is the person who, when all cards have been picked up, has the most cards.



- RENDERED SCREEN IMAGE

This fun and challenging brain teaser, thanks to Jason Hood from Rockhampton, has been made into a tricky little computer game. Following the same theme faithfully, numbers from 1 to 60 are displayed in rows on the screen. It is the task of the player(s) to pick two numbers which reveal the same symbol. For people who either don't have friends or just want to play alone, the computer - 'Arnold', sits in as player number two. A word of warning here, Arnold never forgets what he's seen, so he's virtually impossible to beat.

Up to four players may play the game at once, and at the end of the game a score table is shown. The scores are determined according to the following values:

Card suits ..... 6 points.
Fruit ..... 4 points.
Animals ..... 2 points.

Worth noting: if someone out there is called Arnold, and decides to play the computer, please choose a nickname or something else for the purposes of playing this game, as the computer will take 'Arnold' to mean it's the computer's turn again and you'll never get a go.

```
1 REM        "CONCENTRATION"
2 REM         by Jason Hood
3 REM   The Amstrad User, Mar. '89
4 REM
10 RANDOMIZE TIME
20 MODE 1:DIM X(10),Y(6),CHAR(15),CARD(60),CORD(60,1),S
C(4),PL$(4),CUP(30,1)
30 PRINT"     INITIALISING. PLEASE WAIT"
40 FOR J=1 TO 15
50 READ A,B,C,D,E,F,G,H
60 SYMBOL 239+J,A,B,C,D,E,F,G,H
70 CHAR(J)=239+J
80 NEXT
90 DATA 24,82,247,255,255,126,60,24
100 DATA 4,8,8,86,171,213,106,60
110 DATA 8,8,20,20,34,99,243,96
120 DATA 44,110,231,247,247,247,102,44
130 DATA 24,82,255,255,255,255,126,36
140 DATA 255,153,231,231,231,126,42,0
150 DATA 0,224,228,74,74,74,49,0
160 DATA 137,64,20,42,21,64,21,40
170 DATA 32,127,95,127,127,91,219,27
180 DATA 35,226,162,254,190,62,18,54
190 DATA 0,153,189,90,126,126,189,129
200 DATA 0,8,28,42,127,42,8,28
210 DATA 0,16,56,124,254,254,84,16
220 DATA 0,108,254,254,124,56,16,0
230 DATA 0,16,56,124,254,124,56,16
240 FOR J=1 TO 15:FOR K=1 TO 4
250 A=INT(RND*60)+1
260 IF CARD(A)<>0 THEN 250
270 CARD(A)=CHAR(J)
280 NEXT K,J
290 A=3
300 FOR J=1 TO 60 STEP 10:FOR K=0 TO 9
310 CORD(J+K,0)=(J+K)*4-(J*4-2)
320 CORD(J+K,1)=A
330 NEXT:A=A+3:NEXT
340 CLS:INPUT"How many players (1 to 4)";PL
350 IF PL<1 OR PL>4 THEN 340
360 FOR J=1 TO PL
```

```
370 PRINT:PRINT"Type in player"J;:INPUT"name";PL$(J)
380 IF PL$(J)="" THEN 370
390 IF LEN(PL$(J))>10 THEN PRINT"10 max.":GOTO 370
400 NEXT
410 IF PL=1 THEN PRINT:PRINT"Player 2 will be Arnold.":
PL=2:PL$(PL)="Arnold"
420 PRINT:PRINT:PRINT"SCORES:  Card suits ("CHR$(251)"
"CHR$(252)" "CHR$(253)" "CHR$(254)")  - 6 pts"
430 PRINT:PRINT"         Fruits   ("CHR$(240)" "CHR$(24
1)" "CHR$(242)" "CHR$(243)" "CHR$(244)")  - 4 pts"
440 PRINT:PRINT"         Animals ("CHR$(245)" "CHR$(246
)" "CHR$(247)" "CHR$(248)" "CHR$(249)" "CHR$(250)") - 2
 pts"
450 PRINT:PRINT:PRINT:PRINT"Press any key to play...":C
ALL &BB18
460 CLS:LOCATE 13,1:PRINT CHR$(24);"CONCENTRATION";CHR$
(24):PRINT
470 FOR J=1 TO 60
480 PRINT J;:IF J<10 THEN PRINT" ";
490 IF J/10=INT(J/10) THEN PRINT:PRINT
500 NEXT
510 I=1
520 FOR J=1 TO PL
530 LOCATE 30,21:PRINT"Score:"SC(J)
540 IF PL$(J)="Arnold" THEN 730
550 LOCATE 1,21:PRINT PL$(J);:INPUT", which number";N
560 IF N<1 OR N>60 THEN 550
570 IF CARD(N)=0 THEN 550
580 Z=N:GOSUB 1210
590 LOCATE CORD(N,0),CORD(N,1):PRINT CHR$(CARD(N))" "
600 LOCATE 1,23:PRINT PL$(J);:INPUT", another number";N
1
610 IF N1=N THEN 600
620 IF N1<1 OR N1>60 THEN 600
630 IF CARD(N1)=0 THEN 600
640 Z=N1:GOSUB 1210
650 LOCATE CORD(N1,0),CORD(N1,1):PRINT CHR$(CARD(N1))"
"
660 IF CARD(N)=CARD(N1) THEN GOSUB 900:GOTO 700
670 FOR P=1 TO 1000:NEXT P
680 LOCATE CORD(N,0)-1,CORD(N,1):PRINT N
690 LOCATE CORD(N1,0)-1,CORD(N1,1):PRINT N1
700 LOCATE 1,21:PRINT STRING$(120,32)
710 IF COUNT=60 THEN 1120
720 NEXT J:GOTO 520
730 FOR K=1 TO I-1
740 FOR Q=K+1 TO I
750 IF CUP(K,1)=CUP(Q,1) THEN N=CUP(K,0):N1=CUP(Q,0):GO
TO 850
760 NEXT Q,K
770 N=INT(RND*60)+1
780 IF CARD(N)=0 THEN 770
790 FOR K=1 TO I
800 IF CUP(K,1)=CARD(N) THEN N1=CUP(K,0):IF N1=N THEN 8
20 ELSE 840
810 NEXT
820 N1=INT(RND*60)+1:IF N1=N THEN 820
830 IF CARD(N1)=0 THEN 820
840 Z=N:GOSUB 1210:Z=N1:GOSUB 1210
850 LOCATE 1,21:PRINT PL$(J)", will move";N
860 LOCATE CORD(N,0),CORD(N,1):PRINT CHR$(CARD(N))" "
870 FOR P=1 TO 1000:NEXT P
880 LOCATE 1,23:PRINT PL$(J)", will also move";N1
890 GOTO 650
900 LOCATE 1,21:PRINT STRING$(120,32)
910 FOR K=1 TO 12
920 PRINT CHR$(24)
930 LOCATE CORD(N,0),CORD(N,1):PRINT CHR$(CARD(N))
940 LOCATE CORD(N1,0),CORD(N1,1):PRINT CHR$(CARD(N1))
950 LOCATE 17,21:PRINT"MATCH!"
960 FOR P=1 TO 250:NEXT P
970 NEXT K
980 IF CARD(N)<255 THEN PTS=6
990 IF CARD(N)<251 THEN PTS=2
1000 IF CARD(N)<245 THEN PTS=4
1010 SC(J)=SC(J)+PTS:IF SC(J)>H THEN H=SC(J):L=J
1020 LOCATE CORD(N,0),CORD(N,1):PRINT"  "
1030 LOCATE CORD(N1,0),CORD(N1,1):PRINT"  "
1040 CARD(N)=0:CARD(N1)=0
1050 FOR K=1 TO I
1060 IF CUP(K,0)=N THEN F=K
1070 IF CUP(K,0)=N1 THEN F1=K
1080 NEXT
1090 IF F>F1 THEN O=F:GOSUB 1270:O=F1:GOSUB 1270
1100 IF F1>F THEN O=F1:GOSUB 1270:O=F:GOSUB 1270
1110 J=J-1:COUNT=COUNT+2:RETURN
1120 CLS
1130 FOR J=1 TO PL
1140 LOCATE 10,J*2:PRINT PL$(J)", has a score of";SC(J)
1150 NEXT
1160 LOCATE 10,15
1170 PRINT"so "PL$(L)" is the winner!"
1180 LOCATE 10,20:INPUT"Another Game (Y/N)";A$
1190 IF A$="Y" OR A$="y" THEN RUN
1200 CLS:END
1210 FOR K=1 TO I
1220 IF CUP(K,0)=Z THEN F=1:K=I
1230 NEXT
1240 IF F=1 THEN F=0:RETURN
1250 CUP(I,0)=Z:CUP(I,1)=CARD(Z)
1260 I=I+1:RETURN
1270 FOR K=O+1 TO I
1280 CUP(K-1,0)=CUP(K,0)
1290 CUP(K-1,1)=CUP(K,1)
1300 NEXT K
1310 I=I-1:RETURN
```

MAKING FUN OF EDUCATION

It has long been felt by many parents and educators that the humble personal computer provides a powerful teaching tool for young and old alike. Three titles are reviewed this month.

Parents with children around pre-school age will understand the meaning of the word demanding. If Mummy can't be available for twenty-five hours a day, eight days a week, then things just aren't up to scratch. Between roughly the ages of three and seven, children like constant attention and entertainment, so the smart parent is always looking for cheap, effective ways of entertaining the child and leaving some time for breathing and restoring equilibrium in the house. With educational computer software, not only can the parent keep the child entertained but oversee an effective education supplement as well. This month three pieces of educational software are reviewed. Two being for the 3-7 year old age bracket and the last being for children a little older.

THE THREE BEARS

The first package is from the School Software range and is a mini-adventure entitled "The Three Bears". Borrowing from a few fairytales, most notably 'Goldilocks and the Three Bears', the writers have created a simple graphics adventure that is set in some mythical land of talking cats, wizards, wicked witches and dark dungeons.

There is no manual provided; nor is one needed. Unfortunately "The Three Bears" is only available on disc for the CPC6128 and CPC664. It will not load onto the CPC464 on disc, so please don't anybody try their luck here. The program is loaded by typing RUN"BEARS and from there the program does everything itself. The user is asked if the computer is a 6128 or 664 - a wrong answer will mean the program does not run.

This program is a graphic adventure and here it receives a big plus. The graphics screens are usually in three or four colours and are well designed. It is good to see that time has been spent in this area even though the program is only for young children where often good graphics are a little compromised.

The aim of the adventure is to free Baby Bear from the clutches of the Wicked Witch who nabbed him after he had wandered off into the forest. A map shows you where you are and where you can go, and as you work your way around the map you encounter friends and foes who offer you help or demand things from you. In the style of many adult adventures these days, achieving progress in the game depends on the player performing certain tasks in a required order as he/she goes through the game. For example, if you don't take the key when you find it, you won't be able to open an important door somewhere else, thus halting any further progress. This type of game strategy is useful in developing in the child an understanding of sequence and logic, and encourages forward planning.

The keyboard work required by the child is kept mostly to a minimum. The computer accepts one-word answers for every question it asks and in the case of yes/no answers, "Y" or "N" are accepted. The child has to understand however, that every keyboard entry has to be completed by typing [RETURN]. This is not mentioned anywhere and unless the child already knows this, or is told, he will make no progress at all!

In the scenario, the child will need to visit all the places shown on the map; these include a field, the farmer's cottage, a garden, a river, a well and more. In walking around the various locations, the child will encounter a number of situations where a decision is required. The choices made will determine the outcome of the game. Most decisions are not made by a wild guess but required a calculated choice made on the basis of the information the child would already know. As the game progresses, the child acquires more information and gains a better understanding of what is going on in the game. Some decisions are difficult but others will be stabs in the dark.

The authors designed the program so that the kind, honest, humanitarian, brave, wise answers are the correct ones. For example, when the child is asked whether he wants to cross a bridge to pick up a coin, the correct answer is NO. Greed kills because on YES the bridge gives way and the character dies! The decision here was: is the coin something I need in the game or a temptation to be greedy? True - some adults would find this moral teaching a little subtle and likely to be totally lost on a four-year-old.

There were two disappointments in the game. Firstly, after three attempts at the game and having finally saved Baby Bear, I was a little saddened at the final screen. Sure, I wasn't expecting a victory fireworks display, but the last screen and the first introductory screen are

virtually identical. I thought the thrill of finishing an adventure was seeing a secret screen or something like that. There was no reward at the end or evidence to show that anything retributive happens to the Wicked Witch. An anti-climax.

Second disappointment was the text to accompany the graphics screens. I consider it a great surprise to find that a company trying to teach young children to read, spell and think cannot themselves spell words like 'does', 'something' and 'rescue'. These were spelt: dose, somthing and recue. As well as this apparent lack of concern for proof-reading, there were the following "sentences":

Be nice visit the bears.

(It would be nice to visit the bears.)

Do you want run away?

(Do you want to run away?)

I don't think I am exaggerating if I say these sorts of errors are inexcusable. It would be like reminding your children to eat correctly with a knife and fork while you bury your face in a bowl of noodles. It's sad that an otherwise good program is thus desecrated.

It's your choice whether you are going to buy an educational program that primarily teaches logic, deduction, reasoning and forethought while it bombs out in the English department. It's up to each individual, really. As for the child; he will probably remain at the keyboard until the adventure is solved, regardless of the quality of English. It is advisable that the parent helps the younger child. Frustration at not being able to make progress soon becomes boredom and disinterest - then flaws in the program don't matter either way! I found the reasoning and the challenge of cracking the adventure enjoyable, but for young children it does more that entertain - The Three Bears makes a start at developing important abilities in the young child.

CPC Disc only - $34.95

PLAY SCHOOL

Another title by School Software, Play School is a six section package designed for children aged 3-7 years. Each section develops a different skill in the child, and as such, Play School is a very useful tool for further developing your child's competence in the areas of arithmetic, using a keyboard, spatial relationships, reflexes and more.

The package is designed for use in the classroom as well as in the home, as this type of program set-up is far more intensely educational than an adventure or 'educational game'. The teacher or parent should be present to load up the program, as the level of difficulty is determined before the program commences interaction with the child. The number range can be controlled for arithmetic operations and the range of characters the child is asked to recognise can also be limited. The benefit of being able to control the level of difficulty is obvious. The program can in a sense grow with the child.

Before the child begins to work his way through the modules, he is introduced to 'Superkid', his teacher cum friend. Superkid asks for the child's name and from then on the child is addressed by name. During the modules, Superkid will either smile or frown, depending on the progress of the child. When the child has completed a round at each module, he is asked whether he wants to blow out the candles on the cake he saw at the beginning of the program. On exiting the program, Superkid shows a sad face and says bye bye.

Play School is divided into six sections, the first of which is titled 'Counting'. Here the child is presented with an large empty square which slowly fills up with a number of little pictures. The computer accompanies the placing of each of these with a pip sound. The child is then asked to state the number of these pictures there are in the window. Here the range can be limited anywhere from nine to forty pictures. If the child doesn't answer correctly he is given another chance. As is the case in most modules, the child completes three turns and then exits to another module. At the end of each module a small tune is played. Here the teacher or parent can chose to improvise and play a little game of guessing the tune or singing along.

The second module is entitled 'Find It' and involves acquainting the child with the letters of the alphabet, numbers and their position on the QWERTY keyboard. The computer throws up a number or letter shown in a box (to represent a key on the keyboard), and the child responds by finding that key and typing it. Again, the parameters here can be controlled so that if the child has only been taught the letters A-G and the numbers 1-5, then only these will be quizzed. The child has three turns and then the program continues to another module. It is worth noting here that normally it is up to the child to choose the next module, however from time to time Superkid will take the liberty of choosing one - usually one the child has not yet tried.

As well as arithmetic and counting drills there is given the child the opportunity to take time off to fool around a bit. Module three is a 'Paint Box'. By using the arrow keys, [1] and [0], the child can draw anything on the screen. The colour can be chosen and the pen can be switched from write to erase or vice versa using [1] (toggle). [0] exits the module and again a tune is played.

'Match Up' is the name of the fourth module. Here, five patterns are drawn in identical boxes, two of which are the same. The child has to identify the two which match. This helps to develop a very rudimentary understanding of design and spatial relationships. Three sets of patterns are drawn and then it's on to another module. For one thing, Play School never lets a child get bored with one particular module.

A simplified version of Pacman is presented in module five. The child guides the 'mouth' around the screen eating up randomly placed little objects, again using the arrow keys. Other than as pure entertain-

ment, this can assist in developing reflexes. Any piano player knows that co-ordinating those ten fingers is no easy task, so perhaps developing co-ordination between the four fingers on the arrow keys is a start!

Finally, the last section 'How Many' develops simple addition skills. The child has to add up the number of picture he/she sees in two boxes. The sum cannot exceed 21 however, as there simply isn't any more room available on the screen. The child is given three additions to perform, and then it's back to the menu and another module.

All up, Play School is a very useful program for young children who are fortunate enough to have a home computer. This package demonstrates what help a computer can be to extra-curricular education without the added weight of the parent needing to formulate a pile of exercises. The graphics are sufficient and colourful, the music simple but recogniseable and the Play School graduate a little more learned, knowledgeable and happy to work with a computer.

CPC Tape - $22.95
CPC Disc - $29.95

THE MAGIC SWORD

The third educational program is another adventure called "The Magic Sword" which is created in much the same style as The Three Bears, except for older children. The software is accompanied by a book which the child reads before starting the adventure. The program follows the theme of the book and together they test the child's comprehension skills and memory retention, as well as reasoning and logic. The package is aimed at children aged about 7-11 years of age.

Unlike The Three Bears, the emphasis is not as strongly on graphics but more directed at the storyline. Clearly, more time needs to be spent on theme and content development on a program designed for this older age group. The graphics are minimalist in style. The very basic image of an object is presented, allowing one would presume, the child to imagine things in more detail himself.

The synopsis is simple enough: Princess Poppy, the young girl who everybody likes, after wandering a little too far from home (the big White Castle) has been nabbed by Bad Bertha the witch, after having been discovered hiding in Bertha's oven. Bertha, considering such royalty too hot to handle, locks Poppy in a room at the top of the White Castle and on the way home discovers Prince Fred *(sic.)* about to lop her head off with a sword. Bertha turns Fred into a frog with her newly learned spell and then goes home. At this point the book ends and the child is challenged to start up the program and try to rescue Fred and Princess Poppy.

As with The Three Bears, progress in the adventure depends on following clues. On finding a clue, a little looking around should soon bring you to the next clue, and so on. What simplifies this program a little is that you are always told what moves are possible for any particular screen. Instead of chancing various commands in the hope that one will soon be correct, all possible commands are listed at the beginning of the program: N, S, E, W, U (up), D (down), I (inventory), M (moves made) and G (get).

The program is suitably complicated for the age-group and it should keep the average child occupied for quite a while. Success depends to some extent on how well the child has read the book. Comprehension skills are somewhat lacking in many primary school children and everything should be done to encourage reading and improve comprehension. This program facilitates that need without making this learning process painful or 'just like school'. If a number of children play the game and all succeed, they can create their own twist by challenging each other to see who can complete the adventure in the fastest time. Whether the child is a beginner or has played the game for months, a knowledge of directions, design and layout is essential. The program specifically helps in developing this understanding. The child learns how to work with a three dimensional picture in his head. Understanding the difference between North and Up, South and Down thus becomes essential.

It is advisable to encourage children to draw a map, unless they figure out the necessity of one by themselves. The program is large and the number of moves needed to complete it is too much to hold in memory. By drawing a map the child learns to take the directions information from the screen and translate it onto paper. Lesson #1 in cartography completed. Seeing a completed map and a successful game also make for a great sense of accomplishment.

Other lessons in logic and reasoning are also taught. What has a glow-worm to do with a cave? Answer: it can light up your path as you investigate the cave for further clues. Other things are not terribly obvious but one rule of adventuring is that if there is no limit on what you can carry then pick up the lot.

The Magic Sword from Database Software provides a good way of supplementing or adding to your child's school curriculum without it being obvious you're adding more "homework" on the pile. This adventure is fun, challenging, and teaches some foundational skills.

CPC Disc only - $39.95

All three titles are distributed by Pactronics and are available from various dealers throughout Australia or by mail order from The Amstrad User.

SUBS AND STUBS

By now you should all be well on the way to writing good, well structured programs. Paul Gerard this month explains the use of 'stubs'.

At this stage your program will often come up with that annoying "line not found" error. While you are still working on your program there is a handy device for preventing the resulting "crashes", and also confirming that the menu routine is switching you through the program correctly. This is called the "stub", which is basically a line or two telling what will be happening when the program is complete, and a RETURN statement to get us back on line. Some programmers write separate stubs right at the beginning, for every planned routine in the program - personally I find this a bit of a timewaster, although it does enable a very thorough check of the structure of the program. An alternative method is to write one general purpose stub, and then have it called whenever an as yet unwritten part of your program is invoked. As an entirely optional extra, you may like to tack the following onto your program. Note that we put it right at the end, so that it will be easier to get rid of when it is no longer needed.

```
60000  General purpose stub - remove when program comp
lete
60010 CLS#3
60020 LOCATE ((modewidth-20)-LEN(menu$(choice)))\2,12
60030 PRINT menu$(choice)" not yet operational"
60040 GOSUB 800     ' Press any key
60050 RETURN
```

To actually use the above, either change line 40 by putting 60000 instead of the non-existent lines, or keep line 40 as it is, and insert lines like this:

```
5000 ' Retrieve old file routine
5010 GOSUB 60000    ' Stub
5020 RETURN
```

This takes a little longer - but is probably worth it in the long run, as surgery to line 40 is minimised, and we can see from a listing exactly what needs writing.

On with the database!

Before the user of our database program can do anything, he will want to be able to set up his first file. This will consist of a number of "records" divided into a number of "fields".

His file will need to be named. (If we are using tape this is not strictly necessary but it is still a good idea.) The name of the file needs to follow AMSDOS standards - ie. it will need to have a name of up to eight characters, followed by an "extension" of up to three characters. There are advantages in getting the program itself to standardise this extension, so that it can "recognise" its own files. We use ".DAT" here; but you may well feel this is not distinctive enough - by all means use your own initials, any other three letter combination you fancy (apart from ".BAS" or ".BIN" !).

If (say) the file is to be an electronic "little black book" then the "record" will represent the details for each person and the "fields" such details as name, phone number, address and so on. One of the fields (in this case, probably the name) will be the "key field" - and will serve to identify the record. Now this whole convention is really based on bureaucratic forms, and the 80 column punch cards that were the earliest method of computerising these. I am currently working on a "special" database system that gets away from the limitations of a rigid division of records into fields. For our purposes however we will stick with this convention, as its drawbacks only really become evident when we get much more sophisticated than we are going to here!

The most obvious way of organising "record/field" data files in BASIC is to use a two dimensional string array. I will assume here that this is a familiar concept - if not then the manual for your Arnold has a very succinct and fairly clear explanation (look up "arrays" in the index). Almost any book on BASIC will give you more detailed information. The array will be called file.data$(field, record). We could use file.data$(record,field) - the advantage of putting the field first is that it keeps the data for each record together in memory. We will have at times to re-dimension this array (for instance if we load a new file), fortunately Locomotive makes this easy with the ERASE command. Since ERASing an array does however lose all the data we will normally have to ensure that our array is big enough to start with, while being small enough to fit in the memory available.

You will remember when we composed our "input" routine that I mentioned the difficulty we have with large bodies of "string" data in Locomotive BASIC. Because of the "dynamic" way that string memory is allocated we will tend to run into an interminable set of "garbage collections" if we change string values in any

way apart from the "left hand MID$" method. Now our array will in fact get quite big if our data file is to be of a useful size, so that this will definitely apply here. In fact, we will eventually be looking at various cunning tricks for avoiding re-definition of string variables at all.

These then are the constraints we are under with our first real routine - "set up new file". This is rather long for a detailed step by step analysis, and in any case such an analysis would duplicate the general remarks made in earlier articles in this series, so I will simply put it here in full, with a few general comments to follow. First, however, a few amendments to the program you already have.

First, the line that translates "menu" input to the variable "choice". At the moment this reads:

```
2095 choice=VAL(byte$)
```

The following amended lines will let the menu work at all levels:

```
2095 PEN 1
2100 IF VAL(byte$)>0
          THEN choice=VAL(byte$)+(start(menu.number)-1
)    ELSE choice=0:GOTO 2030
```

If you are using the fancier menu, then the insertion of these lines will fix it up:

```
2160 choice=choice+(start(menu.number)-1)
2170 RETURN
```

Next, patch up good ole line 40 as follows (note that this line will be going through a few more changes before we have finished):

```
40   ON choice GOSUB 3000,4000,5000,6000,80,3100,3200,
     3300,3400,3500,3600,3700,3800,3900
```

Finally, there are as always some new and amended variables - these of course involve changes in subroutine 13000 and the block of DATA lines at 40000, as follows:

```
13100 ' Menus
13110 DIM menu$(20)
13120  RESTORE 40100
13130  FOR i=1 TO 20:READ menu$(i):NEXT 'Menu values
13140  DIM menu.length(6)
13150  FOR i=1 TO 4:READ menu.length(i):NEXT 'Menu leng
ths
13160  DIM start(6)
13170  FOR i=1 TO 4:READ start(i):NEXT        'Menu star
ting points
13200 ' Headings
13210 DIM heading$(8)
13220  RESTORE 40200
13230  FOR i=1 TO 8:READ heading$(i):NEXT 'Heading valu
es
13300 ' Current file name
13310 file.name$=SPACE$(8)
13320 file.extn$=".DAT"
13330 file.iden$=file.name$+file.extn$
13400 ' Dummy dimensioning of data array
13410 DIM file.data$(1,1)
13900 RETURN
40100 ' DATA for menu$(n)
40110 DATA "Instructions","Open a new data file","Acces
s an old data file","Change drive (A/B)","Catalogue thi
s disc","Leave this program","Name the file","Define nu
mber of fields","Name fields","Leave this function","Ad
d records"
40115 DATA "Edit record","Display file","Find record","
Search file","Calculations","Save file","Leave this fun
ction","Greater than datum","Print file/search"
40120 ' DATA for menu.length(n)
40130 DATA 5,4,8,9
40140 ' DATA for start(n)
40150 DATA 1,6,10,10
40200 ' DATA for heading$(n)
40210 DATA "Main Menu","New Data File","Defined data fi
le","Old Data File","Catalogue","Name File","How Many F
ields ?","Name Fields"
```

Now, here is routine 3000. All this does at this stage is to set up the "structure" for our data file. As we initially decided, this is very simple, with no distinction between data "types". I follow the useful convention of using file.menu$(0,0), (1,0),(2,0) etc. for field names, so that the records proper can begin with (0,),(1,1),(2,1) etc.

Incidentally, although this routine works the screen displays could probably do with a little sprucing up, and there are a few rough edges to the input (especially if our user over-does the [ENTER] key). You can probably make the necessary changes yourself. Another exercise might be to write your own "add new records", although we will be looking at this next time.

```
3000 ' New file routine
3010 menu.number=2
3020 RETURN
3100 ' Name file
3110 CLS
3120 head=6:GOSUB 100
3130 LOCATE 1,12:PRINT"Type in your new file name > ";

3135 CLS#1:PRINT#1,"Just press [RETURN] to abort functi
on"
3140 caps=TRUE:control=10:length=8:GOSUB 200          'In
```

```
put routine
3150 IF long<1 THEN CLS#3:LOCATE 5,12:PRINT"File name u
ndefined/unchanged"          :CLS#1:t!=500:GOSUB 700:

RETURN
3160 MID$(file.name$,1,8)=LEFT$(user.input$,long)
3170 MID$(file.iden$,1,12)=file.name$+file.extn$
3180 CLS#3:LOCATE (23-long)/2,12:PRINT"New file name is
 ";:PEN 3:PRINT file.name$:PEN 1
3185 CLS#1:t!=1000:GOSUB 700
3190 RETURN
3200 ' Number of fields
3210 CLS
3220 head=7:GOSUB 100
3225 IF fields<>0 THEN LOCATE 3,12:PRINT"Sure you want
to redefine fields ?":GOSUB 500:IF yes THEN CLS#3:CLS#1
 ELSE RETURN
3240 LOCATE 3,12:PRINT"How many fields in ";
3250 IF file.name$=SPACE$(8) THEN PRINT"new file ? "; E
LSE PRINT file.name$" ? ";
3260 control=9:length=2:GOSUB 200  Input routine
3270 IF VAL(LEFT$(user.input$,long))=0 THEN CLS#3:LOCAT
E 2,12:PRINT"Number of fields undefined/unchanged":CLS#
1:t!=500:GOSUB 700:RETURN
3280 IF VAL(LEFT$(user.input$,long))>18 OR VAL(LEFT$(us
er.input$,long))=1 THEN CLS#1:PRINT#1,"  Type in a numb
er between 2 and 18 !":CLS#3:GOTO 3240
3290 fields=VAL(LEFT$(user.input$,long))
3295 CLS#3:LOCATE 9,12:PRINT"New file has ";:PEN 3:PRIN
T LEFT$(user.input$,long);:PEN 1:PRINT" fields"
3297 CLS#1:t!=1000:GOSUB 700
3299 RETURN
3300 ' Field names
3310 IF fields=0 THEN GOSUB 3200:IF fields=0 THEN RETUR
N
3320 CLS:head=8:GOSUB 100
3325 IF file.data$(0,0)<>"" THEN LOCATE 2,12:PRINT"Sure
 you want to change the field names":GOSUB 500:IF yes T
HEN CLS#3:CLS#1 ELSE RETURN
3330 ERASE file.data$
3340 records=INT(FRE("")/38)-fields
3350 DIM file.data$(fields,records)
3360 FOR field=0 TO fields-1
3365     LOCATE 2,field+6:PRINT"Field name "STR$(field+
1)" > ";:PEN 3
3367     caps=TRUE:control=10:length=30:GOSUB 200 ' Use
r input
3370     PEN 1
3372     IF long<1 THEN 3365
3373     file.data$(field,0)=LEFT$(user.input$,long)
3374 NEXT
3390 RETURN
3400 ' Finish new file definition
3410 CLS#3
3420 IF file.data$(0,0)="" THEN LOCATE 3,12:PRINT"Exit
without defining field names ?":GOSUB 500:IF yes THEN f
ields=0:menu.number=1:RETURN ELSE RETURN
3425 PEN 1:LOCATE 3,3:PRINT"File name  > ";
3430 PEN 2:IF file.name$=SPACE$(8) THEN PRINT"Unnamed a
s yet !" ELSE PRINT file.name$
3440 FOR field=0 TO fields-1
3450     PEN 1:LOCATE 1,5+field:PRINT"Field "field+1" >
 ";
3460     PEN 3:PRINT file.data$(field,0)
3465 NEXT
3470 LOCATE 4,23:PRINT"Confirm the above details, pleas
e"
3480 GOSUB 500 ' yes/no
3490 IF yes THEN menu.number=3 ELSE menu.number=2
3495 RETURN
```

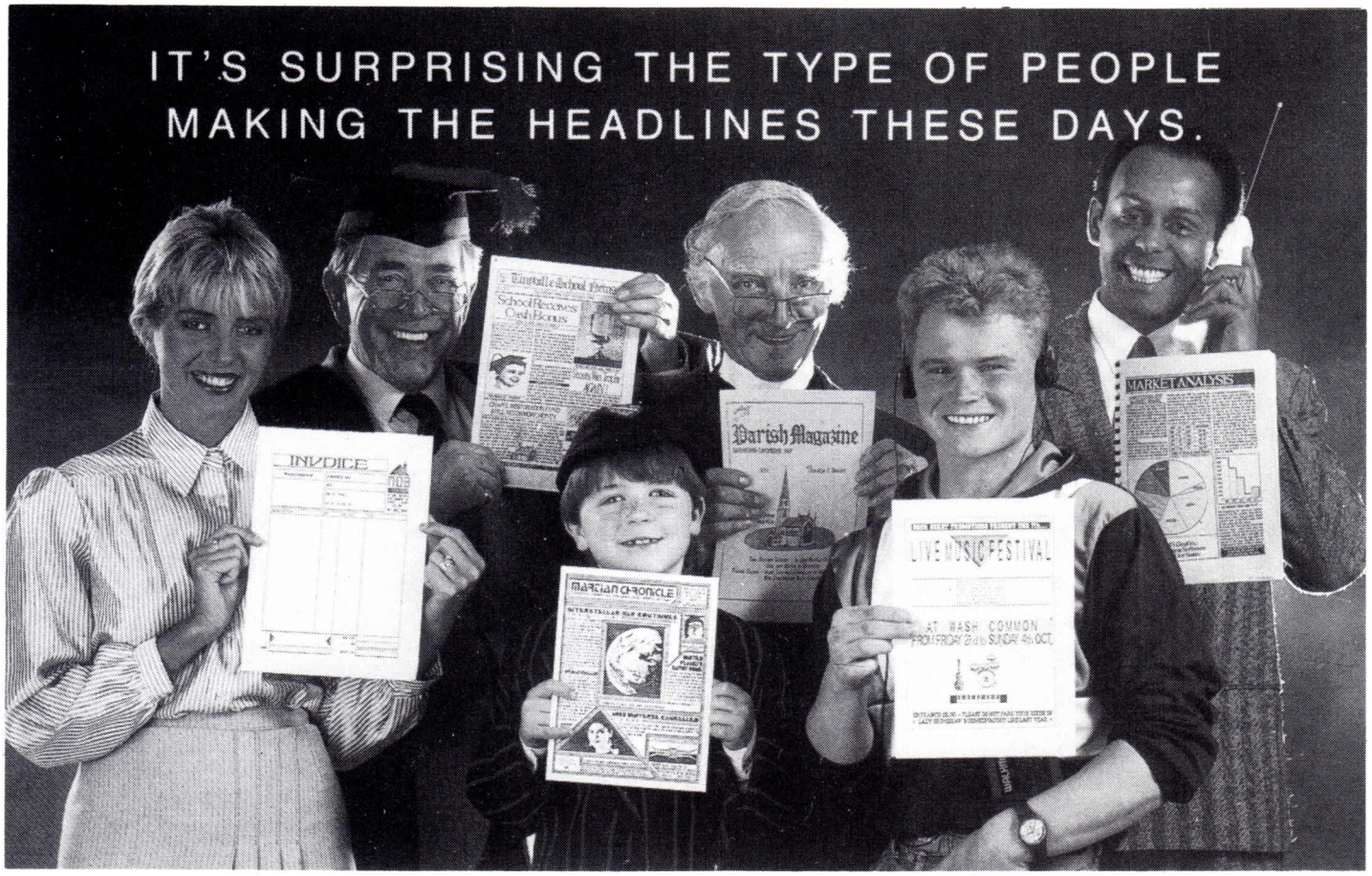
You will notice that following good "structured" practice this routine is broken down into a series of sub-divisions. These are called separately from the menu that is set up by line 3010 - simply by changing one integer variable!

We have here basically two functions, name the file, and set up its field "structure" (ie. number and name the files). Now the file name really is not that vital until the time comes to save the file to the disc (or tape), however, we cannot begin to input any real data at all until the fields are properly set up. Hence the program is much stricter at this stage about field names than it is about the file name - at a pinch this can be defined at a later stage.

Note that file names are assumed to be all alphabetic characters, while field names are limited to single words, all in block capitals. This has been done using the "control" and "caps" functions in our input routine. If you don't like these limitations, they are quite simple to change, either by slightly modifying the content of the characters in control$(n) or by simply using a different number for control.

The number of records that will fit into the rather limited little block of RAM we are using here will obviously be affected by the number of fields, and the amount of data in each. Lines 3340 and 3350 do a rough little calculation based on the number of fields, and an assumption that the number of characters in each field of data is unlikely to average more than 38 - and then dimension our array using this. The dreaded "garbage collection" is deliberately invoked by FRE("") - at this stage it is unlikely to take more than half a second.

If you have 128k (or more) available on your Arnold you will probably want to use this extra memory for your data - this is not overly difficult, but it does involve techniques beyond the scope of these articles.



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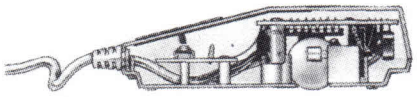

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CORRUPTION

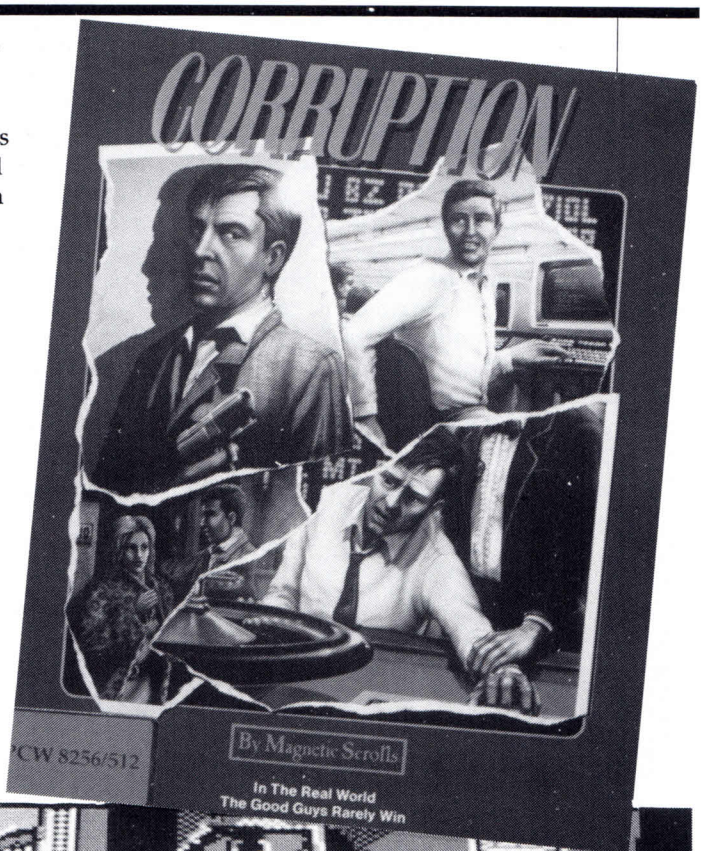
Vic Renfrew reviews a different adventure for CPC 6128s and PCW 8000s from Magnetic Scrolls and Rainbird

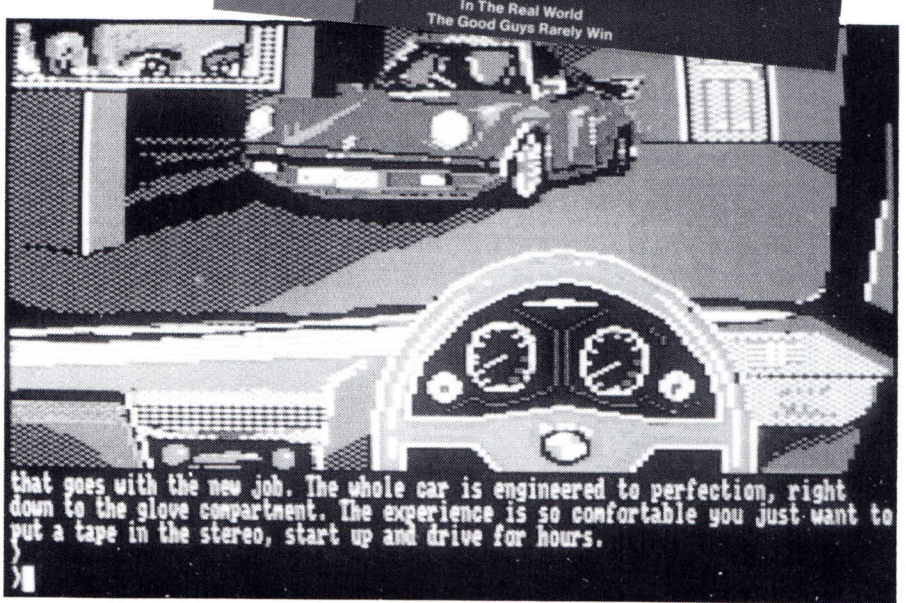
Over the past twelve months or so, the British company Magnetic Scrolls has emerged as the force in adventure software. First there was The Pawn, hailed by many as possibly the best graphic adventure ever written. How could Magnetic Scrolls possibly hope to better that, many writers were to say! Their second offering was Guild of Thieves, hailed by critics as being better than The Pawn, with better graphics and better parsers. Well, two hits in a row, what could Magnetic Scrolls possibly offer that would be better than their first two? The answer was Jinxter, another adventure with superb graphics and more humour than anything offered previously by Magnetic Scrolls. The obvious question from all adventurers was could Magnetic Scrolls continually come up with games of this quality, or would they eventually drop their standards and produce software of lesser quality. The answer to that question was the production of Corruption.

With Corruption, Magnetic Scrolls have left behind the mythical realms so common in adventures, where collecting treasure and solving puzzles are all that confront the hero, and have entered the modern world of high finance. You play the part of Derek Rogers, a young man who, in recognition for services to the firm of Rogers and Rogers, is promoted to the management of the brokerage firm. The game starts with you arriving for work at 9.00am on your first day to be shown into your new office by your partner, David Rogers (no relation?). With instructions to spend your first day getting to know the layout of the firm, you settle down to await the first of your appointments for the day and the obligatory celebration lunch with your wife, Jenny. Whilst awaiting your lunch date, the long arm of the law drops onto you and you are arrested on charges of insider trading and sent off to face a long prison term (what good does the new BMW you just bought do you now?).

In an effort to see what actually happened, you restart the game and set about proving your innocence. To do this, you must become as ruthless and cunning as the people who framed you. This is definitely a situation where good guys finish last! The rest of the game is about you interacting with people in an effort to get the proof that you were framed and who was responsible for it. To do this, you have to pass on information or ask for information from the various characters in the program, as well as find the evidence scattered throughout the game area.

During the course of your in-





vestigation you must find a great deal of evidence; some of which is contained in occupied offices. To do this you must learn the movements of the individual characters, so as well as mapping the various locations within the game, you must map time, as this will allow you to know when a character will be absent from his/her office so you can search it in peace. You also must know when certain characters are in conference, so that you can listen in at the door to see what is going on. What you reveal is a plot to frame you for insider trading, the infidelity of your wife and, somewhere within the plot a drug dealer who is after your hide (you could say it almost makes Dallas look tame).

The presentation of Corruption is up to the standard of the other offerings from Magnetic Scrolls. The detailed graphics are there, as are the powerful parsers. The obligatory cryptic hints are included and, according to the literature the answer to any problem should be found in the last hint in a given series. With comments like "What's the space between your ears for?" not all the hints are useful. Included within the packaging is an extract from your personal planner with a lot of detail regarding people and addresses (including a map of the area surrounding the firm). Also included is a guide to business entertainment spots, and the Gamblers' Casino Companion. An audio cassette is also included in the package, and the use that this is put to becomes evident as your investigation progresses. The one gripe I have about the game manual etc. is that it comes in loose leaf form; to keep it in any semblance of order requires some effort or expense (to purchase a small folder).

The game set-up of Corruption is the same as the other offerings from Magnetic Scrolls; however instead of progress being measured in moves it is measured in time... not real time but game time. The clock is advanced one minute for every action completed, so to pick up a book, a paper and a hat would require three minutes of game time. This can be abbreviated by using the command "get all..." which will collect all objects seen but only take one minute of game time. The one feature missing from previous Magnetic Scrolls adventures is the security system (you know: turn to page x, column y, line z and find the qth word from the left) and that is not a big loss.

Corruption is up to the standard of other Magnetic Scrolls adventures, but it may not appeal to all. It is not in the mould of traditional adventures, but is rather a crime story with no treasure to find, (unless you class that white powder you find inside the plastic bag as a treasure), with only proof of your innocence and revenge against those who tried to frame you as your only goal. Apparently, Magnetic Scrolls do not expect Corruption to be the runaway success of their previous titles, but would rather people read reviews and only purchase the package if they are interested. Corruption is frustrating, but enjoyable and should be rewarded with the same success as the rest of the Magnetic Scrolls stable. If you prefer adventures in the line of The Pawn and Guild of Thieves, have no fear for due for release in the near future is Magnetic Scrolls' next title, called Fish which from all reports is more of a return to the jokey, cryptic puzzle type of adventure that was made so famous by the launch of The Pawn.

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SERENDIPITY

Continuing his look at Public Domain software, Joseph Elkhorne this month investigates PD Disc #606 - Complete Utilities. Readers in the past have complained that they cannot always understand all PD software, so listen to the man!

When you boot up and check out the DIR, you find heaps of files- eleven on Side One and 40 on Side Two - more than enough to keep off the streets for hours and hours. There are .COM files and .DOC files and a CATALOG.

If you are new to Public Domain, you might try something like TYPE -Complea.217 only to get a string of gibberish. First, look at some of the .DOC files. They are text in nature and the TYPE command will let you have a squiz at them. In effect, they are the user manuals for the software, to let you know what they do, and how to do it.

Many times, you will find a READ.ME or README file on a PD disc. In this instance, NOTES.DOC is what to go for first. It summarises what you get on this disc. And Complete Utilities is value for money! There are file management, disc editor, formatter, unerase, directory and display routines. You can read or write a PCW disc on a CPC with one.

Those of you who know the PC approach to directories and sub-directories know it is an easy way to group files. One can duplicate filenames exactly in different sub-directories, with each file being an unique item. Although almost no-one makes use of it, CP/M allows a similar approach in the USER function. It is less easy to manipulate, however, and normally requires an understanding of the PIP commands.

The MAKE.COM facility on this disc should alleviate that difficult problem. I happily decided to have a bash at it first. It did not work. Why is it so? I asked myself and proceeded to examine the thing with SID, the Symbolic Instruction Debugger. This is the Plus version equivalent to 2.2's DDT, or Dynamic Debugging Tool. Both essentially allow you to disassemble and examine a machine code program.

Unfortunately, the Complete Utilties does not come with source code. Say what? Well, the origin of an assembly language program is an .ASM file. It is possible to create one with CP/Ms ED, or even to use a word processor. For that matter, a small one could be done via PIP SAMPLE.ASM = CON: if you're a perfect typist!

The .ASM file contains all the machine instructions, as well as copious comments (hopefully) by the programmer, to explain the inner workings of the program. A look at it will tell you how it functions.

Without this source code, you must hack it with whatever tools you have at hand. I had a copy of Dazzlestar from a user group PD disc, and tried that first. I found it worked - to a point - but was not configured for printout on my system. And, the configuration file was missing...

SID, part of the CP/M Plus disc, which was provided with the 6128, is predicated on the 8080 instruction set. This is the predecessor of the Z80, which has more bells and whistles. Most anything written in 8080 code should run on a Z80 micro - but the reverse is not true. Therefore, true CP/M programs will be transportable from one machine to another. This is the philosophy behind the origins of CP/M.

Fortunately, MAKE.COM was open to inspection, as it was in 8080 format. (If you inspect Z80 code with SID, you'll see cryptic things like ??= 18.) Disassembly, however, is not understanding. I could see the main program body and the subroutines, as well as text strings. The convoluted code did not yield a quick insight, though. I could not see why the program should work, even, and abandoned the investigation. It may be that my copy was corrupted.

RECOVERING LOST FILES

Turning to UNERA.COM, my efforts were rewarded with success. I strongly doubt there is anyone on Earth who can claim he has never lost a file through human error. This beaut little utility is designed to save you from yourself. One minor quibble is that you have to specify the precise filename/type - in the heat of a heavy work session, you may not recollect what it was.

Unerasing a file might sound like magic. I suspect the designers of CP/M took human nature into account, as well as the hardware interface. They designed a dynamic and flexible operating system. When a file is created, it's filename/type and a string of parameters are written in the directory. These values tell the system where the data is on the disc.

When a file is erased, the only change is writing the hex value E5 to the first slot of the directory entry. The data is unaffected. The values previously used for the file storage are released for the system to use again, either for new files or expansion of existing ones.

Storage is normally in 1K blocks - the operating system takes the parameters from the directory entry and interprets them in terms of track and sector. When a disc is "logged in", a map of free space is created. New data goes into the first

available block, and so on.

It is, therefore, conceivable that a file could be erased, then a new file created, and nonetheless the erased one retrieved. Everything depends on the relative locations.

UNERA simply nulls the E5 byte in the directory, and re-establishes the previous location values. If one or more blocks have been used since, your file is corrupted.

To test UNERA, I grabbed a working disc, used the commercial program "Oddjob" (which itself could do an unerase) to find a dead file. Going back to CP/M I then typed UNERA FILENAME.TYP and received the message "File Recovered". The program, however, did not work.

This was not the fault of UNERA. I simply present an example of what MIGHT go wrong when you first try the utility. I then erased a working file and immediately UNERAsed it with perfect results.

The utility DIRCHK displays the information on the location of files and will help the reader understand the directory and file storage process better. It can show you data blocks used in more than one directory entry.

SUPERZAP is a powerful disc sector editor. We will look at this in detail, as well as other utilities, next month.

USING THE TOOLKIT..

There are many ways to achieve a goal. Utilities make things easier. CP/M's toolkit provides many facilities for disc management, although one may find them difficult to operate.

It is worth getting to know them, though. ED can be used to create and edit text, whether as a letter or an assembly language source file. PIP will let you manipulate files: send them to a printer or other user area, concatenate or split them, and a host of other options. It is not easy to drive!

The point is, CP/M provided you with tools that CAN be used. Utilities simplify matters, yet they often have less flexibility than the supplied tools. Still, there are ways and ways...

Have you ever lost a file using Tasword? Would you be surprised to learn that it is possible to retrieve it without going to CP/M or to another program?

Although it may not be as convenient, here's how:

1. Exit from Tasword to BASIC in the normal fashion
2. POKE &A701,&E5
3. Re-enter Tasword via Goto 160
4. Use the Tasword loading method; on the Load screen you will note 'user229'
5. Exit again to BASIC
6. POKE &A701,00 changes back to User 0
7. Goto 160 and continue to work in the normal way.

Now, someone might say the BASIC provides a |USER RSX. True, but the range is 0 to 15. Another might suggest using "Oddjob", but this is only valid on the A drive. With this technique, you can access an erased file on the B drive also. (I even tried to recover a .COM file this way - it didn't work. Be warned!)

Finally, to close off, some screen variety in the CP/M environment. If you're bored with white on blue, or want 40 or even 20 column displays, it is possible.

Indeed, you can use PALETTE.COM but the hacker's notes below allow you to control the screen from within a program.

SCREEN COLOURS UNDER CP/M

When I decided to investigate this aspect of the Amstrad 6128, I looked first at the user manual, Chapter 7, pages 48 to 52. This section gives information on terminal emulation codes.

I had already discovered the clear screen and home cursor functions and serendipity led me also to the screen mode control. This worked as explained. The colour set, however, did not prove consistent with my interpretation of the bit mapping.

For example, under foreground colour, one would assume a black ink to be produced by the value zero: zero intensity for each primary colour. Instead, my 6128 persisted in giving a green "paper" whilst using

VAL	COLOUR	VAL	COLOUR	VAL	COLOUR
00	GREEN	16	pastel green	2C	Bright RED
01	cyan	17	pastel cyan	2D	Bright magenta
02	cyan	18	Bright GREEN	2E	bright magenta
03	Bright BLUE	19	pastel green	2F	pastel magenta
04	GREEN	1A	pastel green	30	GREEN
05	white	1B	pale blue	31	cyan
06	white	1C	YELLOW	32	cyan
07	Bright BLUE	1D	pastel yellow	33	pastel blue
08	GREEN	1E	pastel yellow	34	GREEN
09	BLACK	1F	Bright WHITE	35	white
0A	white	20	BLACK	36	white
0B	Bright BLUE	21	BLUE	37	pastel blue
0C	orange	22	BLUE	38	GREEN
0D	pink	23	Bright BLUE	39	white
0E	pink	24	Bright BLUE	3A	white
0F	pastel magenta	25	magenta	3B	pastel blue
10	Bright GREEN	26	magenta	3C	orange
11	pastel green	27	Bright BLUE	3D	pink
12	pastel green	28	RED	3E	pink
13	pastel cyan	29	magenta	3F	pastel magenta
14	Bright GREEN	2A	magenta	40	green
15	pastel green	2B	Bright BLUE		

SID to poke around. After several deductions proved wrong, I wrote some rough-as-guts code and came up with the table shown in the box. From 40 on, the set repeats because of the masking described in the manual.

Why 20h gives black and zero gives green, I cannot say. Having empirically proved what is what, I can now use a variety of colour sets in my programs.

The key is in the phrase in the manual: "when the text is sent to the screen." A beginner looking at this section may find using it something of a puzzle. What is required is putting the control codes into a string message that the CP/M environment can handle and using the string function call to achieve the change.

One can prove these fundamental actions by using SID. Boot up CP/M (the |cpm command) and type SID. A message and prompt are displayed. Enter the following:

A100 (return)
mvi c,9 (return)
lxi d,120 (return)
call 5 (return)
rst 6 (return)
(return)
s120 (return)
1b (return)
62 (return)
28 (return)
1b (return)
63 (return)
1c (return)
48 (return)
49 (return)
24 (return)
. (return) - that's a full stop.

Now, G100 should reward you with a message in a different ink on a different paper. The assembly listing provides many more useful techniques. Give them a try.

```
1: ;        demonstrations of screen effects
2: ;        in CP/M  --  January 1988
3: ;        (c) J.L. Elkhorne
4: ;
5: bdos     equ     05h             ; call access
6: conin    equ     01h             ; keyboard character input
7: prints   equ     09h             ; print a string
8: ;
9:          org     100h
10: initl:  lxi     h,0             ; for safety, we save
11:         dad     sp              ; old stack pointer
12:         shld    oldsp           ; for system return
13:         lxi     sp,stktop       ; and make our own
14: ;
15: menu:   call    clear
16:         mvi     c,prints        ; user choices
17:         lxi     d,list
18:         call    bdos
19: ;
20: usr:    mvi     c,conin
21:         call    bdos
22:         cpi     'x'
23:         jz      exit
24:         cpi     '1'
25:         jz      big
26:         cpi     '2'
27:         jz      soso
28:         cpi     '3'
29:         jz      prism
30:         jmp     usr
31: ;
32: big:    call    clear
33:         mvi     c,prints
34:         lxi     d,large
35:         call    bdos
36:         mvi     c,conin
37:         call    bdos
38:         call    reg
39:         jmp     menu
40: ;
41: soso:   call    clear
42:         mvi     c,prints
43:         lxi     d,medium
44:         call    bdos
45:         mvi     c,conin
46:         call    bdos
47:         call    reg
48:         jmp     menu
```

```
;
prism:  call    clear
        mvi     c,prints
        lxi     d,colors
        call    bdos
        lda     paper
        inr     a
        sta     paper
        cpi     40h
        jnz     prism
        xra     a               ; zero accumulator
        sta     paper           ; and reset paper demo
        mvi     c,conin
        call    bdos
        call    reg
        jmp     menu
;
exit:   lhld    oldsp           ; retrieve system stack
        sphl                    ; pointer for return
        jmp     0               ; bye bye
;
;       ** subroutines **
;
clear:  mvi     c,prints        ; clear the screen
        lxi     d,cls           ; and
        call    bdos
        mvi     c,prints        ; home the cursor
        lxi     d,home
        call    bdos
        ret
;
delay:  lxi     d,8142h
dl:     dcx     d               ; make it smaller
        mov     a,d
        ora     e               ; any left?
        jnz     dl              ; loop if so, else
        ret
;
reg:    mvi     c,prints        ; restore standards
        lxi     d,dfalt
        call    bdos
        ret
;
;       ** message list **
cls     db      1bh,'E$'        ; Esc,E,string terminator
home    db      1bh,'H'         ; Esc,H and
        db      07h,'$'         ; bell, and end
list    db      'DEMONSTRATION OF SCREEN MODES',0AH,0DH
        db      0ah,0dh,09h,'1. Mode Zero'
        db      0ah,0dh,09h,'2. Mode One'
        db      0ah,0dh,09h,'3. Colours'
        db      0ah,0dh,09h,'x. Exit'
        db      0ah,0dh,07h,'$'
large   db      1bh,33h,20h
        db      'This is Mode 0 size.$'
medium  db      1bh,33h,21h
        db      'The 40-column mode is more familiar.$'
colors  db      'Black ink on changing paper.'
fore    db      1bh,'b'
ink     db      09h
back    db      1bh,'c'
paper   db      00h,'$'
dfalt   db      1bh,33h,22h     ; restore mode two
        db      1bh,'c',21h     ; and blue paper
        db      1bh,'b',1fh,'$' ; with white text
;
;       :: housekeeping ::
oldsp   ds      2               ; room for system stack pointer
        ds      20h             ; and user stack
        stktop:
;
        end
```

INDEX FOUR

For our readers' convenience, a complete listing of every important article, feature, or almost anything else published in the fourth year of The Amstrad User, from February '88 to January '89.

Each item is referenced with the issue number, the Month and Year, then the page number. Obviously, not every article or reference is listed, this would require half a magazine, but a comprehensive cross-section is included.

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MISSED OUT ?

The first Amstrad User Index was published in the April '88 issue covering the first three years of the magazine. This index therefore brings you nearly completely up-to-date. Most back copies of the magazine are available for purchase (see page 64). For CPC readers, our monthly cassette tapes containing all CPC program listings are available for $5 each. Year discs for the CPC (up to issue 48) and PCW (up to issue 40) are also available. The second PCW year disc will soon be out.

BUILDING ON A PCW

Caroline Cunliffe uses her micro to do a builder's books, prepare estimates and write Case in Point articles. Which is the most useful?

Running a small business is akin to working as a circus juggler. I know, because I'm married to one (a builder that is). The demands of our business are like so many spinning plates, and it requires a surefooted operator with incredible sleight of hand, not to mention nerves of steel, to keep them all in the air at the same time.

BOGGED DOWN

What with work in progress at three or four different addresses simultaneously and clients who are invariably separated from each other and the local Builders' Merchants by a section of the ring road currently under construction, to travel one mile and back can take up most of a morning.

Add to that the vagaries of our climate where heaviest precipitation occurs at times of trench digging and re-roofing, irrespective of the season, and you will appreciate that a builder's lot is not a restful one.

The job's not finished until the paperwork's done; in fact it can't even start until the paperwork is done. With all the calls on our time, we have been on the lookout for some reliable helper to take over when our calculator and our ageing typewriter leave us, praying for days with 48 hours in them.

Well, the prayer has been answered in the form of the Amstrad PCW (don't ask me to call it Joyce, I never did like that name... anyway with all its magical powers I see the PCW more as a genie... no, definitely not a girl's name, Aladdin perhaps.. I digress). We had favourable reports from our accountant, we read a few computer magazines, and one visit to a dealer later the office had been computerised.

FIRST FOOTING

I should point out that I have had no previous experience of word processing nor of using computer programs: my working life to date has been in strictly manual clerical and administrative systems, and I'm no typist, to boot.

For me carbon copies hold many terrors, and Tippex, used by the pint, has been an indispensable accessory to all my QWERTY crimes.

However, despite misgivings inculcated by various magazine reports of the PCW's manual, I surprised myself by the ease with which I was able to get LocoScript to produce beautiful letters to my husband's clients. I was puzzled about envelopes, but since the text in the LocoScript template suggested 'address correctly positioned for window envelopes'. I decided to give the latter a try. They work very well - a great little time-saver.

Delighted with progress, I consigned the hated typewriter to the back of the understairs cupboard, with my Tippex and carbons. Although I had seen samples of the printed output from the PCW before purchasing our machine, I admit to slight disappointment on the NLQ printing. However, when I look at the costs involved in upgrading to a daisywheel printer, not to mention the space needed to house same, I feel I can manage with the integral printer, and I enjoy varying the look of our letters with Bold, Word Underline etc.

Incidentally, I've discovered that we can produce very smart small adverts for local newsagents' windows, and the different Style types, especially 10 pitch for headings, can be used to great effect.

At this stage my main worry was to find a comfortable position for me and the PCW in our rather limited home office space. I haven't quite cracked this yet, but a proper typing chair has improved things, and I may invest in an anti-glare screen.

AUTOMATED ESTIMATES

Naturally, a large part of the paperwork of a building firm involves estimating, invoicing, final accounts and contract documents. I had to wrestle with the complexities of Layouts for a while, before I could create a Template Std. for each of my Groups, but by trial and error I managed to get tabs and decimal tabs, and certain fixed text set up, formatted invoice or estimate with columns of information and prices lined up.

To one who never mastered tabulation on a typewriter, (I just didn't use tabs at all), the decimal tab in particular is a miracle. We are now considering ways to use the PCW in the actual production of an estimate. This will be a challenging area for us, since estimating is a crucial part of a builder's work - the tried and tested manual system is reliable but very time consuming; errors can be costly. At the moment

however, pride of place in our library of programs belongs to Sage Popular Accounts.

POPULAR ACCOUNTS

Fortunately our accountant uses an Amstrad, together with Sage Popular Accounts *(very handy - Ed)*, so we have been gently eased through the trauma of giving up a tax book and Cash book and various bits of paper with summaries of wage payments. Bought ledger, or 'Purchase Accounts' as Sage insists we call them, takes up most of the inputting time, since we buy over $75,000 worth of materials per year. Each invoice account is automatically updated so that at the end of a quarter we can produce a tax analysis for the tax department, and not a calculator in sight.

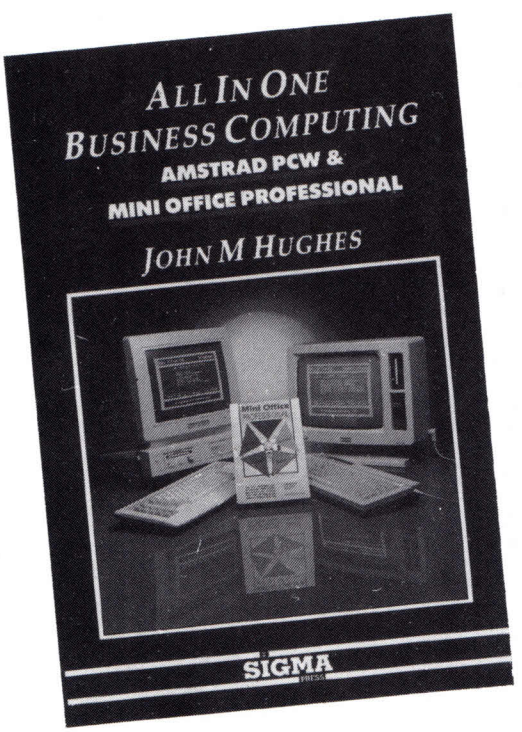
No more adding and re-adding interminable columns for figures until they balance. With the Sage program we simply enter the gross amount of an invoice, tell the system what tax code to use, and the amount of tax and the net amount are calculated automatically.

So far, I haven't experienced any serious problems with the program, although there are a lot of disc changes to make which slows progress down - an 8512 with two disc drives would avoid this. Another small quibble is that it isn't possible to enter a company name more than 25 characters long when one first enters the system. This has meant the loss of a crucial part of our name when reports are printed.

At this stage, we certainly feel that we are getting tighter control over our accounting, with the expenditure of marginally less time. I suppose the ultimate test will be whether our records are sufficiently complete to reduce our accountant's time and bills when he does our yearly audit.

All in all we are delighted with our Amstrad, and we are looking forward to exploring the PCW's other abilities - possibly a 'fun' newsletter for members of staff. We'll be introducing our two year old to the computer age; perhaps he can learn to spell on Mummy's 'pooter', as he calls it. 'DON'T TOUCH!' may soon change to ' Please hurry up with your homework, so that I can do the Accounts', or even 'Please hurry up with the accounts!'

Everything you ever wanted to know about Mini Office Professional but were too afraid to ask...



Hot off the press, this well written and easy to follow book by John Hughes takes you through the Mini Office Professional business package for the PCW. Make the most of your PCW, maximise your productivity, and never complain again that you don't understand your computer.

Pick up "All In One Business Computing" *for $37.95 + p.p.* by mail order through:

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A MATTER OF CONVERSION

Converting programs written in Mallard BASIC into CPC BASIC or vice versa is not as difficult as some may at first think. Chris Wooton takes us through the basics of BASIC conversion!

With the number of PCW Basic programs being published in The Amstrad User rising, it seems, with every issue, many CPC owners may want to convert some of these programs into Locomotive Basic. Obviously one cannot convert every program as the PCW has essential differences from the CPC in the form of the size of its screen, memory size, file management etc.

MALLARD BASIC'S FEWER COMMANDS

Mallard Basic has a wide range of differences from Locomotive ranging from its use of control codes to sending data to the printer. The use of control codes stems from the fact that Mallard Basic has very few of the commands which CPC owners take for granted, eg. CLS and LOCATE and CP/M control codes must be used instead. A list of these control codes can be found (by 6128 owners) in chapter 7 (pages 49-52) of their manual.

The PCW screen, with its dimensions of 90 x 30 characters is considerably larger than CPC MODEs 0 and 1 but MODE 2(80 x 25) can be used as long as screen co-ordinates are changed to cope with the smaller screen.

A function FNat$(x,y) (or similar name) is often defined in PCW programs to return the codes necessary to move the cursor to position x,y on the screen. The easiest way to change this for the CPC is to redefine the function as:

```
DEF FNat$(x,y)=CHR$(31)+CHR$(x+1)+ CHR$(y+1).
```

Another (harder) way of changing the FNat$'s to suit the CPC is to replace the PRINT FNat$(x,y) statements with LOCATE x+1,y+1. This is harder than merely redefining the function as sometimes several FNat$'s will appear in the one statement (necessitating splitting the line up). The need to add 1 to the PCW screen co-ordinates is derived from the fact that for the PCW the co-ordinates of the top left of the screen are 0,0 while on the CPC they are 1,1.

ESCAPE/CONTROL CODES

Now on to control codes or ESCape codes. These codes derive their name from the ASCII Code (ESC or 27) which prefixes all the control code sequences. Escape codes do all sorts of handy things like clearing the screen, locating the cursor, moving the cursor relative to its current position and entering and exiting inverse video mode. The table shown in the box should aid conversion of these codes.

Note: In some programs, a variable, esc$ is setup to equal CHR$(27) and ESCape sequences are thereafter entered with esc$ instead of CHR$(27) eg.

```
PRINT esc$+"E"+esc$+"H"
```

Other differences exist between Mallard and Locomotive other than those already mentioned. These include the LPRINT command which is equivalent to the CPC's PRINT #8 command.

SEQUENTIAL ACCESS FILES

Another important difference is the way in which Mallard Basic opens, writes to and closes sequential access files (the same type used on the CPC). Files are opened by the OPEN command followed by 3 parameters. The syntax for the OPEN command is

```
OPEN <filetype>,<stream number>,
<filename>.
```

<filetype> is either "I" (input) or "O" (output). The second is a stream number and the stream is written to

CONVERSION OF ESCAPE CODES INTO CPC BASIC

ESCape sequence	*Function*	*CPC equivalent*
CHR$(27)+"E" +CHR$(27)+"H"	Clears the screen	CLS
CHR$(27)+"A"	Moves the cursor up 1 line	PRINT CHR$(11);
CHR$(27)+"B"	Moves the cursor down 1 line	PRINT CHR$(10);
CHR$(27)+"C"	Moves the cursor left 1 char	PRINT CHR$(8);
CHR$(27)+"D"	Moves the cursor right 1 char	PRINT CHR$(9);
CHR$(27)+"P"	Enters inverse video mode	PRINT CHR$(18);
CHR$(27)+"Q"	Exits inverse video mode	PRINT CHR$(18);
CHR$(27)+"H"	Homes the cursor	PRINT CHR$(30);

in a similar way that the CPC writes to streams (PRINT #<stream>). The last parameter is the disc filename to read from or write to. Eg.

```
OPEN "I",1,"INPUT"
```

opens a file called INPUT on the disc as stream number 1. This file is read from by the INPUT and LINE INPUT commands followed by #1 eg. INPUT #1,a$. The OPEN command should be replaced by OPENIN"INPUT" and data read from the file by INPUT #9.

OPEN "O",2"OUTPUT" (equivalent to OPENOUT"OUTPUT" on the CPC) opens a file called OUTPUT on the disc as stream number 2 (the stream number is arbitrary). The file is thus written to by the PRINT #2 command (PRINT #9 for the CPC). All open files can be closed by the CLOSE command (CLOSEIN: CLOSEOUT on the CPC) or closed individually by CLOSE #<stream number> (CLOSEIN for input files, CLOSEOUT for output files).

EOF is another command associated with sequential files. Assuming only one input file is open, EOF<stream number> is equivalent to the CPC's EOF. Mallard Basic possesses a few commands not directly implemented in Locomotive Basic. These include the SWAP command which swaps two variables (this can be simulated by using a temporary variable) and the FIND$ command which returns a string depending on whether a specific file can be found on disc or not.

Random Access (RA) files are not supported on the CPC and any programs which make use of them will be very hard to convert. Commands associated with random access files include FIELD (for defining fields), OPEN "R" (for operating RA files) and GET (for moving the file pointer to a particular record).

PCW KEEPS TIME

Those of you who read the PCW section in TAU will probably know that a clock is kept by the PCW in a similar fashion to the TIME command in Locomotive. The differences between this clock and the CPC Time are twofold; 1: the time is stored as hours, minutes and seconds elapsed as opposed to the number of 300th's of a seconds elapsed (on the CPC) and 2: the PCW does not possess a command to read the time. Instead the PEEK command is used to read the addresses.

To date, about 50 PCW Type-ins have been published in The Amstrad User with programs such as the Spreadsheet, Database and the Superannuation calculator well worth the time to be converted.

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256k Silicon Disc (CPC6128)	$350.00
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PCW EXPANSION'S

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PLANNING AHEAD

Mike Turner looks at PlanIt; yet another offering from the Database Software stable, through the Pactronics network.

For some time now Database Software have been releasing quite good quality software for the Amstrad onto the Australian market at reasonable prices. Perhaps one of their most successful of late has been Mini Office Professional/ Personal for the PCW and PC range.

An earlier and relatively unknown release from Database is a package called PlanIt. It is billed as the complete personal organiser. I am somewhat sceptical of that type of statement and sometimes wonder if a simple diary or note pad wouldn't do the job just as well. However, a friend of mine who purchased the package swears by it, and took little convincing to allow me to borrow it for evaluation. So throwing my natural caution to the winds, I scurried home to see how organised I could get.

PlanIt comes in versions to suit both CPC and PCW computers; the version tested being for the PCWs. The package consists of four programs - Personal Accounts, Card Index, Financial Diary and Loan Calculator. All of these are supplied on one side of a CF2 disc which is copy protected thus not allowing a back-up to be made. In the case of the PCW version the programs are written in Mallard Basic and are automatically accessed from CP/M as part of the loading procedure. A reasonably well laid out 45 page instruction booklet accompanies the package and covers all the necessary commands and procedures required to use the programs. One error in the manual concerning the loading of the Loan Calculator program is covered in a READ.ME file on the program disc. This program is now accessed directly from the main menu rather than by the more complicated method listed in the manual.

ACCOUNTING FOR YOURSELF

The personal accounts module provides 24 individual accounts, some of which can be tailored to suit your particular needs. They can cover such things as mortgage, electricity, gas, rates, credit cards and a cheque account. All the accounts are linked to each other and update automatically when payments are made or cheques issued. For example, if you issue a cheque to pay your monthly credit card account, you will automatically update your bank account and your credit card account.

Various reports and statements are available from this module and you can obtain a detailed breakdown of what money was spent in various areas. Unfortunately, this module is specifically designed for England, so don't expect to see $ signs as you will get £ signs instead.. You also won't find an account for Bankcard and there is no way to make this available to the user. There is also only provision for one bank account. So if you have separate savings and cheque accounts you could be in for a bit of fun reconciling your funds.

Overall I found this module reasonably easy to use although I was frustrated by its limitations. Thankfully the rest of the package is of a much higher standard and more suited to Australia.

PICK A CARD

The card index module is yet another simple database application. I wondered at the usefulness of this for someone like myself who already has a good database like dBASEII or Masterfile 8000. However I tried it out and was quite surprised by just how easy to use and flexible it is. The database is set up by default as a simple name and address type list but it can easily be changed to other simple applications such as inventories or record or video collections and so on.

One disadvantage of this module is that you may only store one card index on each data disc regardless of its capacity. So for PCW 8512 owners it is pointless using the B drive with its huge 720K capacity unless you are contemplating keeping a very large database such as that needed to keep track of things like school library borrowings. A normal A drive disc will give you a card index with over 550 records. This is more than enough for household use.

The card indexes may be stored in any way you like on any field. Various reports are available and there is even a very handy label printing option which is ideal for making mailing labels or stock labels for an inventory type application. You may search through the records either on a keyed field or on any of the fields. So if you don't know a person's surname but know their nickname you can look for that nickname; and provided that it is recorded somewhere on that person's card the computer will find the correct record for you. You can also print out the full details of any

Joined up writing on a PCW8256? Yes, use LocoFont!

LocoFont Set 1 & 2 give you ten distinctive typestyles on the PCW's built-in matrix printer.

With LocoFont your PCW printer can print in a variety of different typestyles. A total of fourteen styles are available in Set 1 and Set 2.

A set of LocoFont typestyles consists of a disc including a "character set" file for each of the extra typestyles, together with full installation instructions. Except for Old English, all styles include all of the characters provided by LocoScript2. Briefly, all you need to do to access the fonts is to copy the files to the Start-of-Day disc and update the Settings file. To use one of the new typestyles, simply select the appropriate character set.

The Sans Serif style has been designed with the same character widths as the standard style. So Sans Serif documents lay out identically to the standard style. The other new styles have different character widths and documents using these may lay out in a slightly different way.

The two "Mini" styles are designed for use at eight lines per inch, giving more characters to the page. The rest are intended to be used at six characters per inch.

Note that a document can only use a single style.

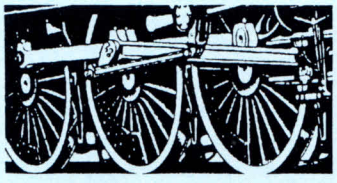
LocoFont Set1 & 2 are available from The Amstrad User at $75.00 and $65.00 respectively.

LocoScript2 - *New Edition!*

If you haven't already, now's the time to move up to LocoScript2 - the better word processor for the PCW.

Not only have we released LocoFont (which only works with LocoScript2), but for LocoScript2 itself now comes with two highly quality typestyles. And if you want to use a different printer, we now support over 250 matrix, daisywheel and laser printers - but for some, you may need the Printer Drivers Disc

The new edition of LocoScript2 costs $87.00. Buy LocoScript2 together with our spelling checker LocoSpell for $130.00 saving $32 on the combined price. To complete the family, add LocoMail for $105.00.



LOCOMOTIVE SOFTWARE

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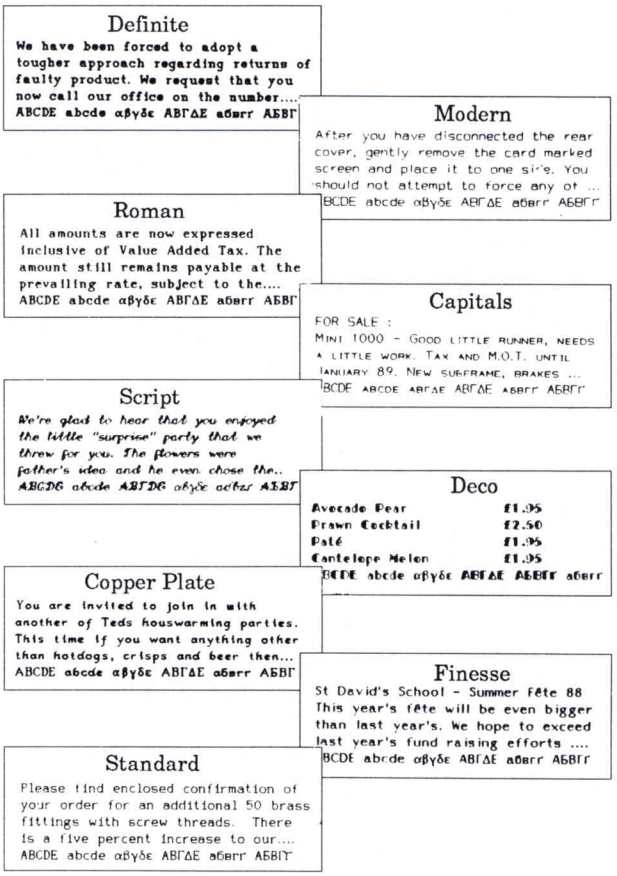
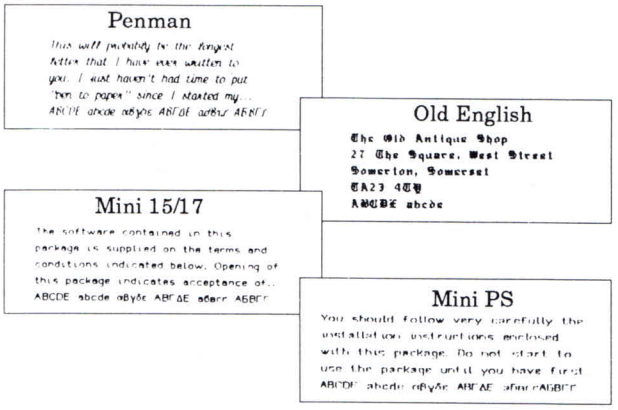
Phone (0306) 740606

LocoFont - Set 1



LocoFont - Set 2



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card if you wish.

If you don't already own a database, then this module will at least give you a basic database capability. If you already have a lot of your personal records on a database of some kind be wary of duplicating them all on the card index. As there is no data importing or exporting option available to you, it will mean typing in all the records again from square one. That also means typing in any updates twice, once on your old system and once into the card index. Duplication of data is a big problem when using two different packages to do virtually the same job. It is very easy to let one or both of your databases get hopelessly out of date.

HOW MUCH PER MONTH?

The loan calculator module is a very simple variation on an old theme. To use it you must know the principal, the interest rate and the period of the loan in years. The computer does the rest and tells you what the monthly payments will be as well as the total interest payable and what the total amount repayable will be.

As usual I have left the best until last. The financial diary module is to put it simply - brilliant. It is designed as a business diary which can contain both text entries and financial information. As the manual states quite correctly, "Emphasis has been placed on ease of entry, quick search and organise facilities and the ability to report to either screen or printer". The diary utilises the computer's memory to hold the active file which makes things very fast. There is no date restriction on its use and entries may be keyed in months or even years in advance. There is a limit of 200 entries at a time in the activity file (the current diary), but this should be more than adequate for most people. The ability to archive information monthly thus frees up more entries to be made available for use in the current activity file. Archived entries may still be accessed and even amended if required.

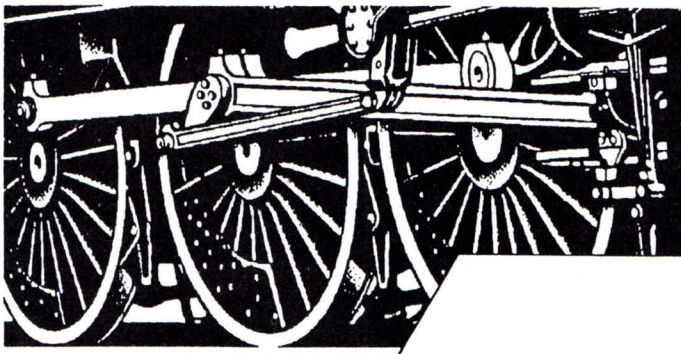
Each entry in the activity file may be up to 50 characters long, although keeping the entries down to below 30 characters will help keep the computer's memory usage efficient and ensure the maximum number of entries are available to you. I found this module extremely easy to use and was impressed by the speed of operation and the flexibility provided. The program is well written and allows for most operator's errors including a nice touch of not allowing you to exit without saving (or updating) the current diary file to disc. This could save many hours of wasted typing. One word of warning though, and that is - save your work regularly. The program is written in basic and it is possible to crash it. I know because I did it quite unintentionally. Should the program crash you will be returned to the OK prompt in Mallard Basic and will loose all data input or changed since the last save. Apart from that one glitch, I found no obvious bugs in the software and was really impressed.

The information keyed in can be retrieved in a multitude of ways and the quality of the search facilities and report generation is great. For anyone who wants to rid the refrigerator door of those dreadful magnets holding reams of school notices, doctor's appointment cards and other ancillary information, this module is for you. Because it can also handle and manipulate financial information it is also ideal for recording those items you wish to claim as tax deductions, (are there any left?), and produce a report at the end of the year for the tax man.

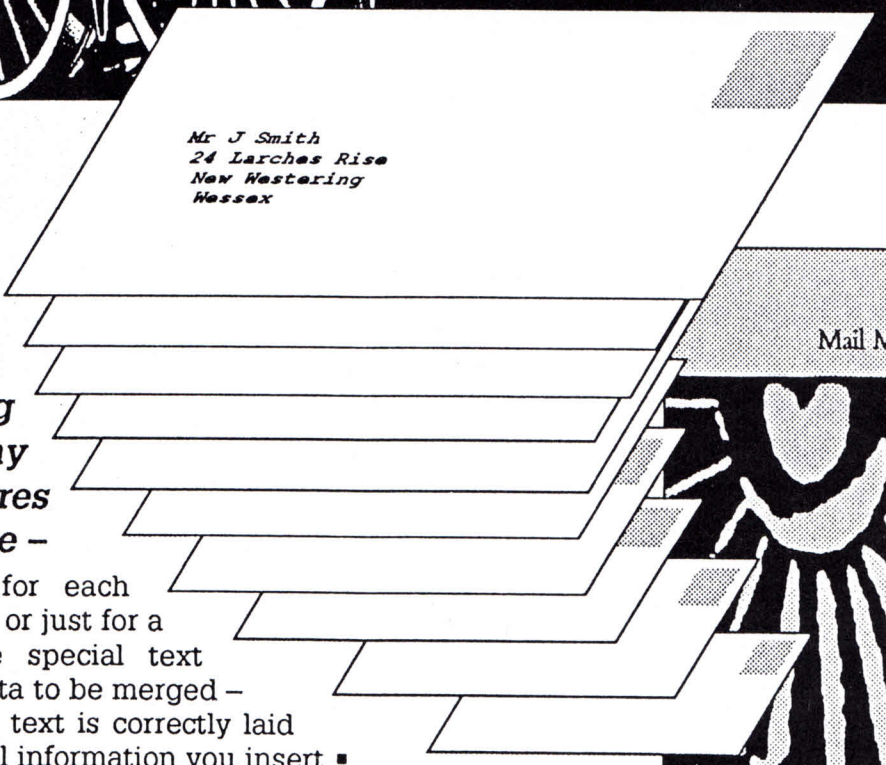
OVERALL IMPRESSIONS

PlanIt is an easily mastered useful package. The financial diary module alone would make it worthwhile, but the card index and personal accounts modules make it quite good value for money.

PlanIt is available from various retailers throughout Australia or by mail order through The Amstrad User for $39.95.

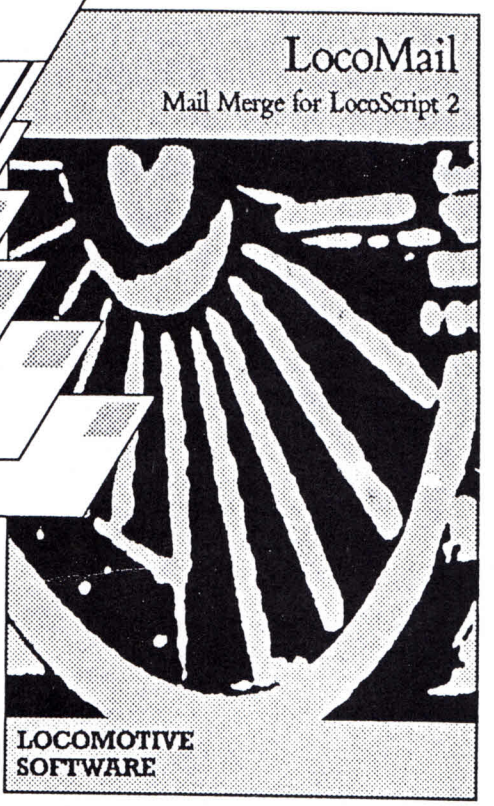


LocoMail for LocoScript 2



Use LocoMail to send letters to everyone on your mailing list. Use its many advanced features to do much more –

▪ Produce letters for each name or data record, or just for a selection ▪ Include special text depending on the data to be merged – each version of your text is correctly laid out, whatever special information you insert ▪ Edit the merged letter before printing ▪ Save the result to disc if required ▪ Use LocoScript data files or ASCII data files from a CP/M program ▪ Prompt for information to be typed at the keyboard ▪ Perform arithmetic within LocoScript documents ▪ Add paragraph numbers automatically ▪ Produce sophisticated LocoMail 'programs' for Invoicing, Credit Control, Enquiries etc.▪



LocoMail now comes with a completely revised 288 page User Guide – available separately for users of the PCW9512 and earlier versions of LocoMail.

▪ An extended tutorial section ▪ Detailed descriptions of the advanced facilities ▪ Worked examples of "program units", loops and conditional operations ▪ Descriptions of typical uses of LocoMail – Club Membership, Invoicing, Enquiries, Labels ▪ A set of "building blocks" to include in your own LocoMail applications ▪ Full technical description of LocoMail ▪ Troubleshooting guide ▪

All the examples described in the User Guide are supplied on the LocoMail master disc. In case you're just buying the new User Guide, they are also supplied on the LocoMail Examples Disc, available separately.

• LocoMail	$105.00
• LocoScript2 with LocoSpell	$130.00
• LocoMail User Guide	$54.95
• LocoMail Examples Disc	$17.50

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PARLEZ-VOUS PD?

Roger Williams finds some useful Public Domain offerings and encourages readers to look at new computer languages.

I like reading, but I regularly change authors. I like roast dinners, but I don't have them every night. I like writing computer programs, but I don't always use the inbuilt BASIC on my CPC6128. Sometimes I change language just for variety, other times I change because this implementation of BASIC is too "messy" for the job or the program would be too slow, and just occasionally I have to change to achieve greater computational accuracy or because I need to use some facility which this BASIC cannot cope with.

What do I change to? For variety I might use LOGO, FORTH or BCPL; for speed I change to C or PASCAL; for greater computational accuracy I change to CBASIC COMPILER. When nothing else is available, I resort to Z80 assembly code.

FINDING THE RIGHT SOFTWARE

What language to use, and when to use it pre-supposes a knowledge of, and access to, the appropriate software. Knowledge can be obtained from reading books and magazine articles (like this series). Access to the software is the real problem - it costs money! Commercially produced software for the Amstrad CPC and PCW computers is much cheaper than that available for "small business" models, but even so, the cost is often way beyond what the average user can afford just to experiment with an alternative language.

Public Domain software is the answer, provided it is carefully selected and suitably evaluated. Most programs in this category are written by enthusiastic amateurs and are made available for free distribution. (Of course, you must pay for the disc, handling and postage.) The quality can range from atrocious to absolutely brilliant. The Amstrad User is offering a carefully selected range of Public Domain discs, some of which contain versions of alternative languages for CPC and PCW owners. Other suppliers advertise PD software, and User Groups are also a good source. This is the ideal way to investigate and learn about some of the alternatives to the version of BASIC which came with your purchase. If you take a liking to a particular language through experimenting with a PD version, then you should seriously consider buying a "proper" implementation by a software specialist; if you decide that a particular language is "not your style" after experimenting with a PD version, your out-of-pocket expenses are minimal (and you can re-use the disc).

Of course, names like FORTH and C are quite meaningless in an advertisement. Who wants to spend their hard earned money on a disc full of "stuff" which may turn out to be totally useless? That's exactly the point I made to the Editor! In the months to come I will be reviewing a number of Public Domain discs which contain alternative language choices. The essential features and special advantages of these languages will be highlighted and comparisons will be made with other alternatives (both Commercial and PD).

All these discs run under CP/M. This will be no problem to PCW owners, but those of you who have CPC models, and have never used anything but AMSDOS and LOCOMOTIVE BASIC, must now spend some time learning how to load the CP/M operating system. Your User Guide contains details of how to make back-up copies of your system discs, and how to activate CP/M. My reviews will include a test under both CP/M 2.2 (for CPC464/664) and CP/M PLUS (for PCW and CPC6128). Some may not be suitable for CPC664 owners!

UNSQUEEZING AND TEXT EDITING

Before rushing out to acquire some PD software, there are two important points to be aware of. To fit more onto a disc, many PD files are distributed in "squeezed" or compressed format; before the files can be used, they must be "unsqueezed". Programs to do this are freely available in the Public Domain; obtain one from your User Group, from a friend, or if all else fails, buy a PD offering which contains such a program. Secondly, using alternative languages usually requires the use of a text editor to prepare the source code, i.e. the actual program. A text editor is somewhat like a word processor, but lacks some of the more sophisticated features of many word processors and works with simple ASCII files. CPC and PCW owners are in luck here - there is a perfectly good (albeit somewhat ancient) text editor on your system discs. Its name is ED.COM. If you haven't noticed it before, blame your User's Guide. The CPC6128 Guide mentions it once, on page 5-37, but gives absolutely no details on how to use it.

YOUR HOMEWORK...

Using ED.COM is easy, once you adjust to its somewhat strange ways of giving instructions. It was written in the days when the standard computer terminal was the Teletype; it doesn't know anything about VDU screens or cursor keys. It really is "fun" to use. My next article will tell you how. In the meantime you can get yourselves ready for this exciting adventure. Read up on how to use CP/M in your Users Guide, prepare a CP/M work disc, and copy ED.COM from your system discs onto this work disc.

PCW POT POURRI

Due to popular demand, the section where no stone is left unturned is back this month with more questions and answers for serious PCW users.

CLEVER TRICKS

Please help this humble, desperate programmer with a sticky problem that even 'Batman' would find difficult. How does one access the graphics that programs such as the aforementioned 'Batman' and '3-D Clock Chess' utilise??

The graphics used by several of the more crafty software houses in their recent games for the PCW are a closely guarded secret.

There's no easy way to get at them on your own, although DR offer packages like DR Draw which go somewhere towards it.

Another package which may be a help is CP Software's 'All you really wanted to know... '.

KITCHEN CALCULATIONS

I am looking for a program to assist me to prepare kitchen quotations quicker and more accurately.

Ideally I would like to input the kitchen group i.e. price range and then just input the catalogue number. Hopefully, the computer would then record the unit description, price, running total, etc. I am not concerned about graphics.

Do I try to find a ready made program, or buy a database and try and produce what I want myself, or pay someone to write a program up for me?

The kind of problem you describe seems ideally suited to a spreadsheet. Have a look at SuperCalc2, The Cracker or CalcStar.

BASIC BOOSTER?

As Mallard Basic is, to all intents and purposes, compatible with Microsoft's MBasic, will BASCOM (the compiler for MBasic) work with Mallard Basic? If not, is there a compiler for Mallard Basic?

Although Mallard BASIC is compatible with the commands in Microsoft BASIC, the internal structure of the two languages is different and the BASCOM compiler therefore isn't totally compatible. So long as the program is written in that subset of BASIC common to both Mallard and Microsoft, and then stored in ASCII, (for example SAVE "EXAMPLE.BAS", A) the program can be edited and tested from within Mallard BASIC and then compiled and linked using the appropriate Microsoft software. This subset is not terribly extensive, however (no JETSAM, for example).

dBASE GRIEF

I've been doing a lot of programming in dBase II, version 2.34 (Note: not the cheap version), and I've hit a snag. I've been attempting to control the printer by software control within a dBase program. I've mastered the various typefaces but I can't alter the form length and I would like to be able to do this for changing between address labels and statements/invoices without having to quit dBase II and reset the form length using the Paper.Com program. So can anybody out there please help me?

To set the form length to just nine lines (for a label) type the command:

```
?CHR(27) + 'C' + CHR(9)
```

Replacing the 9 at the end of the line with 66 will set it back to normal continuous stationery length.

BRAINSTORMING BRAINSTORM

I recently bought Brainstorm and have been trying to use the blasted thing, but I can't get any further than the title/sub-title screen. I assume from the instruction book, that ↑T means SHIFT + T to put the title in the top section of the second screen. But each time I have tried to use ↑T or any of the other ↑ functions all I get is a representation of that letter on the sub-title section.

This is extremely irritating so could you please tell me what is at fault: the PCW? the program? the instruction book? me?

You and the instruction book. ↑T is normally taken to mean CONTROL + T. On the PCW there's no CONTROL key - you use the ALT key instead. So try ALT + T and you'll be able to begin brainstorming.

PRINTING DISC LABELS

I am hoping you can help me with a little problem of mine. I know how to number (label) a disc with the Set utility and how to print out a directory of CP/M files (using ALT + P DIR). But how do you get the computer to head that printed list of files with the disc number? I know I have actually labeled the disc because you can see it on the monitor if you insert the disc after loading Locoscript. I know I could show the files on a Locoscript Disc Management Screen and then do a screen dump (EXTRA + PRT) but I'd like to be able to make a 10 c.p.i. list of my directories.

It's not in the Amstrad manual, but these are the commands you should type from the CP/M A> prompt (in this instance you have to type in the square brackets and words they enclose as individual characters. ALT and RETURN are single keys):

```
ALT + p
show [label]RETURN
dir [sort]RETURN
```

This will give you a print out of your disc number followed by the files sorted into alphabetical order. The only catch is that you must first copy the CP/M files SHOW.COM and DIR.COM onto the relevant disc. Which makes the whole operation of dubious value.

HAVING A GO WITH LOGO

Giving LOGO readers a shot at some serious programming, Angus Kidman demonstrates the power of LOGO with a pull-down menu utility.

There is an obvious lack of LOGO listings in this magazine , and this was something I felt I had to address. Rather than sit around and winge about it thuogh, I decided to get the ball rolling with this program listing.

This is not in fact a "full-on" program but a utility which can be used in other LOGO programs. It generates "pull-down" menus - the sort where an option is selected using UP/DOWN keys and then RETURN, as used in Mini Office II, Locoscript etc. The routine is a little slow and does not restore the screen contents behind it (as a proper pull-down menu does), but you can't have everything.

To use a menu, you will need to have **pulldown_menu** and **pulldown_input** in memory (**test** is just an example of how the program works). The following variables need to be set by your master program:

x — the x co-ordinate for where you want the menu to appear (NB. left of screen starts at 0 not 1 as in BASIC and only goes to 38).

Y — Y co-ordinate for where the menu appears. Ensure this is not larger than 23 minus the number of options in your menu or the program will crash.

options — a list (ie. enclosed by square brackets) of the options to appear on your menu. Since LOGO treats each word in the list as a new item, if you want your menu option to include spaces (such as 'Load New File') you have to precede each space with the LOGO control character \ (the above example becomes Load\ New\ File). An example of this is shown in the test program. Try removing the backslashes and see the effect.

cx,cy — Contain x and y co-ordinates where the cursor is to be displayed on the screen. Unfortunately the cursor in LOGO is visible on the screen when rc (read character) is used, and this can mess up the look of the menu. If, however, you set these variables to place the cursor at the end of a sentence or in an inobtrusive place on the screen, the effect is minimised. This is shown in the test program.

To invoke the routine, just use the command **pulldown_menu** after the user has made his/her selection, the number of their choice (1 for first option, 2 for second. .) will be held in the variable **current**.

The program is fairly foolproof - it only accepts the UP, DOWN and RETURN keys and is safe for the user. However, it takes no measures against the programmer trying to make a menu out of an empty list or displaying a menu too low on the screen or whatever. Be careful!

The routine was written for a 6128, but should work with little or no alteration on a 464 or a PCW.

```
To pulldown_menu
make "number count :options
make "offset 1
repeat :number [setcursor list :x :y + offset - 1 type item
:offset :options make "offset :offset + 1]
make "current 1
pulldown_input
end

to pulldown_input
setcursor list :x :y + :current - 1
type char 24
type item :current :options
type char 24
setcursor list :cx :cy
make "choice rc
make "choice ascii :choice
setcursor list :x :y + :current - 1
type item :current :options
if :choice = 243 [stop]
if :choice = 240 [make "current :current - 1 if :current <
1 [make "current : number]]
if :choice = 242 [make "current :current + 1 if :current >
: number [make "current 1]]
pulldown_input
end

to test
ts
make "options [Directory Catalogue List\ Of\ Files POP\
Stack End Quit Finish]
make "x 1 make "y 2
make "cx 33 make "cy 10
setcursor [0 10] pr [Use UP, DOWN and ENTER to
select]
pulldown_menu
end
```

EXPANDING YOUR PC1512/1640

Last month we discussed using one of the three expansion ports to add a games card to your Amstrad PC. But what are the true expansion possibilities?

The three "expansion slots" (ports) are located at the right/back of the unit underneath the monitor. They are revealed by removing the monitor and then the cover plate from the base unit. There's not much to look at - just three slots to accommodate your choice of expansion card - and they are merely extensions to the main printed circuit board. If you are the owner of a hard disc machine, you will be restricted to two slots.

DESIGN DIFFERENCES

The design of your Amstrad PC is a little different from the standard IBM and other 'clones' so the choice of some cards may be excluded. For example, display adaptor cards aren't much use. This is because the Amstrad display system is 'hard-wired' into the system whereas on most other PCs the display adaptor card is required. In some respects therefore, you are saved the expense of an extra display card, but if you have a PC1512 you are effectively stuck with the display quality which for most is quite adequate. The same applies to PC1640 owners unless they made a decision to purchase the 'ECD' model. This particular model houses an Enhanced Graphics Adaptor, conforming to IBM standards, and producing a superior quality display.

So the bad news is that you'll have to forget about adding a display card to your Amstrad. The good news, compared to other 'clones', is that you can also forget about adding a serial or parallel printer card, a modem card or a mouse controller card as they come stock standard with your PC.

PICK A CARD

Having now knocked out of the list a number of expansion cards, you will be surprised to learn that there are still quite a few that your Amstrad may accept. So when you decide to go into 'expansion mode' you need to think very carefully on how you are going to use up the two or three expansion ports available.

One of the most popular types of card to be attached to PCs these days is a Memory Expansion card. This can take the size of memory from almost anything between 640k and 8mbs using 'above board' memory cards.

Equally as popular, for disc storage, a Hard Disc card will add a large amount hard disc capacity and for connecting your PC to a network of other PCs you'll need a Network Interface Card.

To allow your Amstrad PC to act as a terminal to a larger computer you'll need a Direct Minicomputer and Mainframe connection card, and to allow the PC to act as a telex machine and monitor a telex line, a Telex interface card is the answer.

Although you already have serial and parallel ports, an additional parallel port would be needed if you used two different types of printers and didn't want to keep swapping cables. If you are running a modem from the built-in serial port you may choose to have an additional serial port for a printer or connecting to a network.

An unenhanced Amstrad PC is pretty fast compared to most PCs, but even so the speed can be increased by adding an Accelerator card. (Beware though, some cards are used for bringing slower PCs up to the speed of an Amstrad, so choose carefully). Adding an 80286 or 80386 processor will push your machine even faster. The new PC2286 and 2386 have these processors and perform at 12MHz and 20MHz respectively compared with the PC1512 and 1640 at 8 MHz.

There are also numerous cards to enable specific applications to be carried out such as voice recognition and optical scanning.

SLOTTING IN

Experience has shown that expansion slots are mostly consumed for hard discs, modems or networking.

As one becomes more adept at using a PC and starts adding a number of 'heavy' applications, the old floppy discs become a pain in the neck (and the wrist with constant disc swapping). Thoughts inevitably turn to hard discs and this so often happens much earlier than planned. It is therefore wise to keep a slot free for a hard disc installation later on.

You may feel the need to communicate and like the idea of an internal modem. This will take another slot but consider first the performance compared to that of an external modem. There's not a lot and you would save a slot going for the external type.

If your Amstrad is being used in an office environment, there may well come a time when you need to 'converse' with other machines through a network. You'll need a slot for a Network Controller Card.

It's no easy task determining the final use of the slots if your PC is to work hard. If it seems like becoming a difficult choice, have a look at multi-function boards first - you can cram in even more with these!

LAPTOP TAKEOVER

Amstrad have joined a growing market of lightweight, take 'em everywhere portable computers. Kevin Mclean investigates...

The need to transport computers from place to place and from the office to field environment saw the transportable computer evolve. These transportables were originally called 'PORTABLES'. In the early '80s these were about the size of older style, box shaped school bags. The general design consisted of a processing box containing 64k ram, a 9 inch screen, and some floppy drives. The keyboard usually clipped on to the processing box. Since then, technology has taken over and the new breed of portable has shrunk to such a degree that they are now termed LAPTOPS.

The modern day laptop is now about the size of a standard dot matrix printer. Configuration varies greatly with price, but the IBM standard type configuration of 640k, 2 disc drive, and XT running speed sells for around the $1000 - $2000 mark. In fact, the AMSTRAD PPC range of laptops starts off at $1099, and is currently the best value for money in the laptop market. Screen sizes have seen changes too, and most laptops will have a display screen about half the size of a normal monitor. The quality of these screens varies greatly, as with monitors.

LAPTOP USERS

Businesses that required transportable computers are now revelling in the new breed of high tech laptops. Journalists, well travelled managers, and general information gatherers now use a portable computer of some description. There is a great variance in the size of laptops, and even smaller, handheld computers are making their mark now in Australia. Hewlett Packard have several available along with other companies such as Sharp and Casio and Psion.

Field usage of the new laptops has increased dramatically since 1987. Calculators are starting to be overrun as the prices drop to an affordable amount. Data gathering is another area where laptops are finding a market. Where a vehicle can be used as a base the laptop has found a home. Next time you see a Tickles truck, jump up in the back and have a look how the driver does his ordering and cataloguing!! I also know of a sheep station in Western Australia which uses a Bodwell portable in the shearing shed for keeping track of their fleece weights.

Police vehicles in Europe and the USA presently have laptops mounted to their dashboards for database searching. Where a vehicle is not applicable to the job required, the tendency is to use smaller hand held data recorders which can be downloaded to an office PC later.

HARDWARE

User preference will determine screen size, memory, and disc drive configuration. Most laptops will run MS-DOS applications, so software shouldn't be a problem, as long as the screen can handle the application. Two ports should be available: a parallel port for hardcopy, and a comms port for transferring data to other PC's, or down the phone line. Some journalists work entirely from home these days, sending their articles down the phone line to their various publishers.

Battery life is the major consideration for the field user. Unfortunately, Amstrad saw fit to install replaceable, rather than rechargeable batteries to their machines. That might be OK in the UK, but Australia's wide expanses are a different story. I hope Amstrad have the hindsight to bring out a model with rechargeable batteries, as I cannot see users pulling out batteries everyday, instead of plugging the laptop into a power source overnight. Battery life depends on the number of disc drives and disc accesses required, but I would guess most laptop users would recharge their machines every night when in a full time work situation.

Memory and disc drive configurations vary greatly and the November 1988 range of Toshiba laptops can have megabytes rather than kilobytes of memory available. Some of these laptops have far more power than an XT type, desktop computer. A few are capable of running at 4 or 5 times the 4 mhz clock speed. Disc drives for the newer laptops are the 3.5" type with greater capacity . . . 720k. Hard discs and modems are available, but I would caution any intending purchaser about hard discs and rough roads. The PPC512 Amstrad can have a modem for the cost of some belated Christmas cheer. This would allow data to be transferred down any telephone line to any other computer with a modem. However the PPC640 comes with a modem already fitted.

SOFTWARE

As mentioned before, standard MS-DOS applications will run on most IBM compatible laptops. Some laptops have a 'RESUME' feature which throws the user back to the last screen of operation. I think this screen and the relevant memory addresses are stored in a battery backed RAM for instant recall at switch on time. Some laptops can use their extra memory as 'extended memory' for large applications, or, as simulated small hard discs. Either way will greatly speed up an application.

PRINTERS

Computers are no good without hardcopy and laptops pose a real problem in this area. If no on-site hardcopy is required then hopefully

all the data can be printed out in an office situation, (more about that later). Most users I feel will require some form of hardcopy and to achieve this they must have a portable printer. If there is an area that has scope for improvement in the computer industry, then this is it. Being largely mechanical doesn't help but these printers have real world problems in field conditions.

Dust and mother nature can play havoc with these new portable printers, not to mention the paper, platen, paper guides, ribbon/ink, batteries and cables. Portable printers are, as yet, relatively young, and so most users will encounter difficulties with them (or at least some minor hiccups!!). Regular recharging of batteries may avoid difficult situations with the people requiring the hardcopy, though.

LAPTOP TIPS

Just a few quick hints for the unsuspecting before I finish. 3.5" discs are a real problem for laptop users because of their higher density. Very cheap, or low quality discs should be avoided at all costs. It's hard enough writing data onto the small discs in the office, without being out on gravel road in the back of Burke in a dust storm. The smallest speck of dirt or grime will make a difference to these small floppies. The computer should not be touched or moved whilst the disc drive is being accessed, as this could cause the disc drive head to 'bite' the disc. The MS-DOS 'CHKDSK' program may recover lost data but not always (especially if the boot sector gets 'bitten').

Portable Printers will require a daily 'maintenance or checklist schedule'. Paper, ribbon/ink, and batteries need careful monitoring. Rechargeable NiCad batteries in the printer (and the laptop) need to be fully discharged before recharging.

If your laptop has a megabyte of RAM then MS-DOS SYSTEM files can be stored in the C: drive for instant rebooting of the computer. The top 384K of RAM (less MS-DOS) can be used for running applications. This regular back up of data discs may save a lot of heartburn in the event of a disc drive head crash. When plugging in cables for hardcopy or data transfers care has to be taken not to damage the flex in any way, as the smallest break in the cable will 'hide' and only work intermittently, causing the user great confusion and distress.

One last tip . . . if you've been sitting down for over an hour trying to get hardcopy from your printer, and you checked all the connections, paper and software about 2400 times and it still won't work . . . you've probably got the printer cable plugged into the extension floppy disc drive port ... !@#$%&*?!!

Laptops definitely have a place in the Australian work place right now and even with the advent of 640k IBM compatible handheld computers, I somehow think the laptop is only just starting its career in the workplace.

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SCREEN SAVING WITH GEM

'Snapshot' is a useful utility that allows you to take images off the screen and place them in a file on the disc. Here's how!

The major use of this utility is in taking pictures of output from a piece of software and using the output yourself. For people just dabbling, the major use might be in saving 'Doodle' pictures as there is no other easy way of saving your masterpieces.

SETTING UP

Snapshot uses up memory and as GEM needs a lot for its own use, Amstrad decided not to have Snapshot installed automatically (if you had Snapshot permanently in memory you'd have little space to run anything else). They did this by renaming the file so that GEM wouldn't find it. The file is in the GEMBOOT directory on your disc 2 GEM Start-up disc or just in the GEMBOOT directory on a machine with a hard disc. There are two files here that you will need: SNAPSHOT.ACC and SNAPSHOT.RSC. Don't worry if you can't find the first file (.ACC) - that's the one which has been renamed by Amstrad to just SNAPSHOT without the .ACC extension. When GEM looks for files ending in .ACC it naturally won't find it!

To get Snapshot to load you need to put disc 2 in drive A and at the A> prompt type the following *single* line:

```
REN GEMBOOT SNAPSHOT
SNAPSHOT.ACC
```

When you next re-boot the machine and load GEM, Snapshot will be there for you to use.

SNAP HAPPY

Once loaded you can decide what you would like to dump to disc and the relevant picture should be loaded. A word of warning though - Snapshot is a powerful little program but it requires a great deal of memory to process a large screen image which has a lot of detail. You are recommended to set your Ramdisk to a minimum of around 30k. This is altered by using CONFIG.SYS.

The pull-down menu in the top right of the screen should contain the Snapshot option and when selected will produce a dialogue box in the centre of the screen showing a camera icon and a question mark in the middle of it. Clicking on the question mark will provide some 'help' on using Snapshot. Clicking on the 'close' box cancels the current operation.

The real action takes place when you click on the camera icon. An item selector screen will be presented to give you the opportunity to specify the directory and name of the file you want to save the image to. Once that's done the program returns to the original screen and the cursor becomes a 'cross hair'. Select the area of picture you wish to be saved by clicking on the top left hand corner (keep your finger on the mouse button) and 'dragging' the mouse to the bottom right hand corner creating a 'rectangle' as you go. With the image selected, release the mouse button and the image will be written to disc.

You will find that the image can be edited later on with GEM Paint or included in a GEM Write file. Experiment - you will be amazed with what you can come up with!

"Do you have anything a little more... 'user friendly'?"

GUIDE TO MS-DOS

In the first of a three part series, David Worlock takes the inexperienced PC user through the fundamentals of MS-DOS.

If you've recently moved up to a PC-compatible after some experience of a home computer, the concept of a disc operating system (or DOS) may be a little strange. After all, if a humble Sinclair Spectrum or Amstrad 464 doesn't require you to mess around with DOS discs, why should a more expensive and sophisticated machine?

The answer is largely because PC computers are more sophisticated. Home computers have operating systems, but they are permanently stored in the computer's memory, usually in conjunction with the Basic programming language. Because these operating systems are "hard-wired", they can't easily be changed.

This means that although the manufacturers might come up with a better version of the operating system, the users won't see any benefit because it isn't worth the manufacturer's while to change all of the existing machines.

On PCs, however, the operating system is not built into the machine. The first benefit of this approach is that the manufacturer can simply and cheaply provide users with an improved DOS by circulating a new disc.

A second benefit is that you don't have to stick to the operating system that your hardware manufacturer provides. Although there are a great many good reasons why MS-DOS is the operating system supplied with virtually all PCs, some users have special needs that are better served by alternative operating systems, such as Unix, or Pick, or DOS-Plus.

But for most users the reason for buying a PC in the first place was to run the wide selection of software available, and that means using MS-DOS.

WHAT DOES DOS MEAN, ANYWAY?

So what is MS-DOS? Even some PC users who have had their machine for some time tend to think of their DOS disc as a magic key without which the PC is unusable. Feed your DOS disc to the PC and it will happily function until the next time.

Some other users recognise that DOS is the PC's housekeeper, a software program in its own right that performs many valuable functions such as formatting new discs, copying existing discs, and allowing users to see what is on their discs.

But DOS will do more than these common functions, even though they are the most commonly used. DOS is much more like a magic genie, and once you know the magic words, the genie is ready to help you get far more from your PC than you might think possible.

First, you should recognise that DOS can be thought of as two parts: the BIOS, and a collection of commands. The BIOS is perhaps the heart of DOS, but unless you plan to do some low-level programming it need never concern you. It is there, behind the scenes, making sure that the DOS commands work in the way they should - and it's the commands that we are interested in here.

Again, the commands can be split into two groups: memory-resident and disc-resident, also called internal and external commands. The former group are the most commonly used commands and they are loaded into your PC's memory when DOS is loaded so that they are always available. This group contains the commands that all users eventually get to know; things like DIR, COPY, TYPE and DEL.

The disc-resident commands tend to be both more complex and less-frequently used. They include FORMAT, DISKCOPY and a host of others - many of which you may never need, but rest assured they are valuable tools to have at your disposal.

In future articles we will be looking in detail at some of the less-common DOS commands, but for the present let's concentrate on some of the basic aspects that may be puzzling to newcomers to the PC, and that perhaps have been overlooked by users who have worked with DOS for some time.

DOS AND DISC DRIVES

Because DOS is primarily a disc operating system, it is important to understand how DOS looks at disc drives. An important concept is the default drive, which means the drive that DOS will work with unless you specify otherwise. Drives are identified by letters, usually A and B for floppy drives, C and D for hard discs, and other possibilities for hard disc partitions, RAM discs and so on.

You can tell which is the default drive by looking at the DOS prompt, the familiar A>. The "A" part of the prompt tells you that drive A is the default drive. If you have a twin-disc PC, you change the default drive by typing the letter identifier of the preferred drive followed by a colon, so to change the default to drive B you would type:

```
b:
```

and to switch back to drive A, type:

```
a:
```

Some users seem to think that unless you are logged on to a particular drive, DOS can't access it, so that in order to see what files are on a disc in the B drive, they first change the default drive to B before

entering a DIR command. However, this isn't necessary since DOS allows you to specify the drive to which a given command will apply.

So, if your default drive is A, you can see what is on a disc in drive B by typing:

```
DIR B:
```

and in order to delete a file on drive B, you type:

```
DEL b: filename
```

Equally, however, if you want to do a lot of work in files in drive B, it makes sense to make B the default drive because you don't need to type the drive identifier every time.

IDENTIFYING DISCS AND DRIVES

On a single disc system, DOS allows you to treat the system as if you had two drives by issuing the drive identifiers as usual, but in this case DOS recognises that it is dealing with two different discs rather than two different drives.

For example, to get a directory of a second disc, at the A> prompt you would type

```
DIR B:
```

and DOS responds

```
"Insert diskette for drive b and strike any key"
```

It is important to keep track of which disc is acting as the default drive in a one-disc system, not only because it can be irritating when commands don't work as you expect because you are logged onto the wrong disc, but more importantly because - to give a "worst case" example - if you issue a command to delete all files on a disc, heartbreak will follow when you discover that the wrong disc was in the drive.

The second important aspect of the way in which DOS treats disc drives is in commands which copy whole discs, or files, or which rename existing files.

DOS always expects you to issue these commands in the form

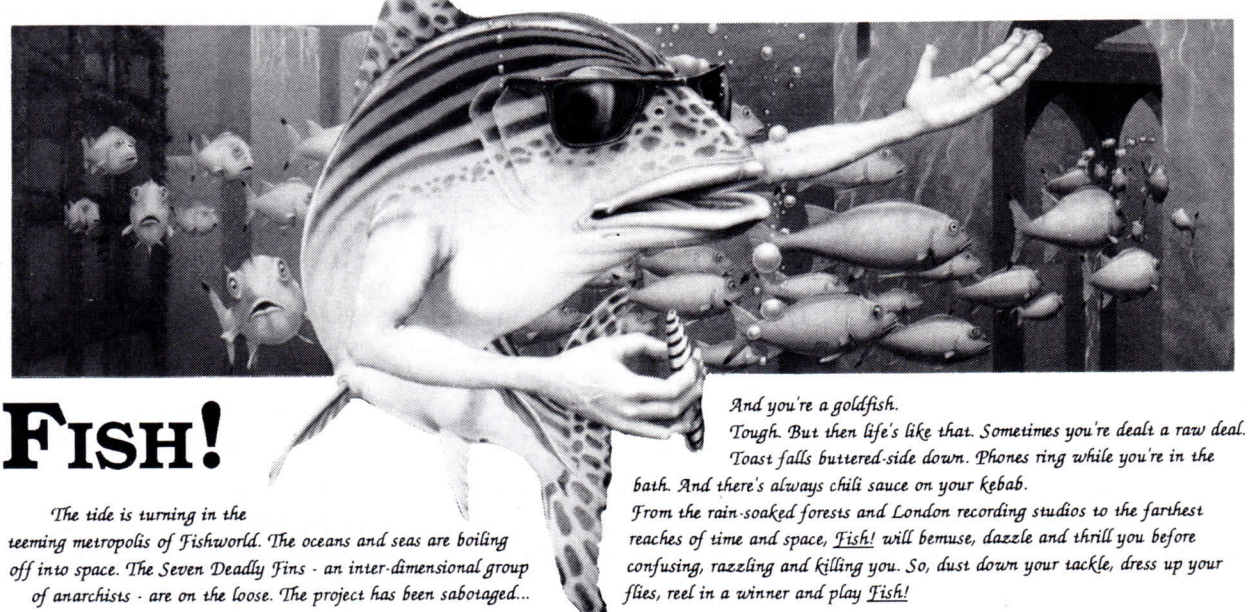
```
COMMAND from "origin" to "destination".
```

If you don't specify a drive name in such commands, DOS assumes the default drive is meant. This is a very flexible method of handling files, but again you can come to grief if you believe you are issuing one command when DOS "knows" that you are telling it to do something else.

For example, if you are copying files from A to B, and then - secure in the knowledge that you now have copies, delete all the originals, you will be more than upset to learn that in fact you copied the files from B to A and subsequently erased your only copies.

The moral is simply that your genie - DOS - is very powerful and eager to please, but like all well-meaning servants it won't question your orders. If you tell DOS to do something you must be sure of the consequences because there are few cries more pathetic than, "I didn't want you to delete those files, you stupid machine."

JUST WHEN YOU WERE THINKING IT WAS SAFE TO GET OUT OF THE WATER.



FISH!

The tide is turning in the teeming metropolis of Fishworld. The oceans and seas are boiling off into space. The Seven Deadly Fins - an inter-dimensional group of anarchists - are on the loose. The project has been sabotaged...

And you're a goldfish.
Tough. But then life's like that. Sometimes you're dealt a raw deal. Toast falls buttered-side down. Phones ring while you're in the bath. And there's always chili sauce on your kebab.
From the rain-soaked forests and London recording studios to the farthest reaches of time and space, Fish! will bemuse, dazzle and thrill you before confusing, razzling and killing you. So, dust down your tackle, dress up your flies, reel in a winner and play Fish!

ONE NIBBLE AND YOU'RE HOOKED. FISH! BY MAGNETIC SCROLLS IS AVAILABLE ON THE AMSTRAD PCW, PC1512 (TEXT ONLY) AND PC1640 FOR $69.95. SO WATER YOU WAITING FOR?

BITS & PIECES

Chris Collins this month updates readers with the latest news, and lifts the lid on more PC bargains.

Welcome one and all to yet another edition of Compatible's Corner. This month brings yet more news of software, commands and help for all you PC users out there. So we had better get on with it, if we are to finish before our time runs out!

ATTRIB COMMAND

The ATTRIB program is located on your MS-DOS diskette, and is used to display and change the attributes of a file. The correct command line syntax is as follows:

[d:][path]ATTRIB [+R|-R][+A|-A][d:][path]filename.ext

As always when we break this command line down into small sections, it becomes very easy to understand. [d:][path] before the ATTRIB specifies the drive and path where ATTRIB can be found.

[+R] is used to set a file to READ-ONLY, which means that one cannot change the file, [-R] is used to set a file to READ-WRITE.

[+A] is used to set the archive bit to ON. This is used when doing back-ups to tell DOS which files have been modified since the last back-up. [-A] is used to set this bit to OFF.

[d:][path]filename.ext is used to tell DOS which file or group of files you wish to modify the ATTRIBUTES on.

Once broken down into it's component parts, ATTRIB is as easy as any other DOS command that we have investigated so far.

BEYOND ALL EXPECTATIONS

Response for the January set of EGA specific programs has exceeded all my expectations. This has brought home to me the fact that there appear to be many new users of PC1640/ECD combinations and probably a lot more old users than anyone thought. All you ECD owners had best keep an eye on the column for more EGA specific software, as there will be more on the way shortly.

Also to the same people my apologies. One of the programs that I supplied on your EGA games discs is called ALDO. This is an EGA specific version of Donkey Kong. According to the documentation supplied with the program, it really requires at least an 80286 machine to run properly. However, with the power available in the PC1640, plus the fact that I don't have access to an ECD to check, I was hoping that it would run with no problems. My sources tell me that this is not the case, even when using the ALDO 4 command to limit the number of barrels. My apologies to all concerned.

Also on the EGA Games disc was a game called EGAROIDS. Apparently, this begins to load, then locks up the machine as tight as a drum. Any disc that has been purchased from me after January 26 has different games on it. Anyone with the original discs can update them to the new version of the diskettes if they send in their two original EGA Games diskettes and $3.00

PC FILE UPDATE

Many new updates are in the wind at the moment. PC File:dB has finally reached me, and what an upgrade this is. More features and more power, but at a price. The new version requires at least 420k of RAM to run, as well as a hard disc drive. According to the documentation, PC File:dB will run on 2 720K floppy disc drives, but seeing as only the 2000 series Amstrads have that format, it doesn't affect us. This new version is 2 diskettes for the program and utility files and I will have the documentation diskette available by the time that you read this. Upgrade price for PC File+ users will be $10, if you have all THREE PC File+ diskettes. If you only have TWO PC File+ diskettes, upgrade price will be $16. If you wish to purchase PC File:dB for the first time, cost is $22. Please do not order this upgrade unless you have a hard disc fitted to your machine, as you will not be able to run it.

PC WRITE UPDATE

PC Write version 3.02 is now available. This is the latest version of this great word processor, and now occupies 3 diskettes. The best feature of this upgrade is that you are no longer limited to 60k for your file sizes, as PC Write will now use all of the RAM available to it! Other features include multiple columns on screen, box drawing, improved help screens at different levels, and improvements to the spelling checker. As always, only the tutorial and quick reference guide are on the diskette for you to print out. Upgrade for current PC Write users is available for $16 with the return of your old diskettes and $22 to people who wish to purchase PC Write for the first time.

There are also a couple of other upgrades on their way from the States to me, but until they arrive and I have checked them out, I don't want to say too much about them.

IMAGE 3d

Image 3d looks for all the world like a copy of AutoCAD. It is a three dimensional modeling program using wire frame images. Image 3d enables you to create, edit and view three dimensionable objects using a menu driven interface. You can scale, move, rotate and tip your image any way that you choose, making the program most suitable for a variety of uses.

Image 3d has seven sample 3d drawings for you to look at and play with. It enables you to change your point of view at any stage, and with

the least amount of problem.

The documentation on diskette runs to 72 pages, made up of two files called MANUAL1.TXT and MANUAL2.TXT. Image 3d is also specific in it's video requirement. There are two versions of this program available, one to run in CGA and one to run in EGA. The program comes on only one diskette, but you must specify whether you require the EGA or CGA version.

Only one other thing is required to make Image 3d work, especially for the EGA version. This is a memory resident screen program to actually print out your images. At the moment I am checking out a couple of different ones and one will be on the diskette by the time that you receive it!

EZ FORMS AND EZ FORMS EXECUTIVE

These two programs profess to be form generation programs. Both are from the same author and publisher, and are so similar that I will describe EZ Forms first, with notes about the difference between the two later.

EZ Forms is the smaller and less powerful of the two, and is true Shareware in the best sense of the word. This program allows you to generate master forms, that can be saved and filled out at a later date. This will not affect the master form, although with a different option, one can change a master form if it no longer fits a purpose.

The installation and manual are limited only in the amount of information that is available to you. No matter how I tried I could not get the installation program to accept any printer other than a generic text printer. Theoretically, this means that the program will only print in DRAFT mode, but that can easily be overcome. The on-line manual is necessarily short for memory constraints and disc space limitations. However, that doesn't stop you using what is available.

Approximately one dozen sample master forms are available for you to play with and modify to your heart's content. No documentation as such, but the on-line manual is sufficient.

The program is menu-driven, and is laid out in quite a logical manner, except for the installation option. I would feel happier if when you first start the program, only INSTALL was available, so that you must set it up correctly from the beginning.

Only one point about EZ Forms really bugs me. When you first start the program, it puts up a Shareware Information Screen for you to read. Now I don't mind that, because most other programs have them, and they ask you to press a key to continue. Not EZ Forms, it requires that you press a CAPITAL Y to continue, not any key or a y, but a CAPITAL Y. Annoying, I think.

EZ Forms Executive is the big brother to EZ Forms, and claims over 30% more code to top it all off. EZ Forms Executive is claimed by it's authors to be a "Valueware" copy of the commercial package. However, I would be more inclined to call it "CRIPPLEWARE", as it is so badly hampered by the method used, that it is almost unusable in printing. I will explain more later.

EZ Forms Executive has a slightly different menu system to EZ Forms. Whereas EZ Forms uses a menu drawn across the horizontal centre of the screen, EZ Forms Executive uses proper pull down menus from the top of the screen. It also has a small window at the bottom of the screen to explain your options at this point. Very easy to use.

As to my statement before, EZ Forms Executive has a selection of printers available, and lets you choose any one of them to use. However, after it prints approximately two lines, it will flash up a small screen describing the "Valueware" concept and keep it there for approximately 15 seconds, during which no printing takes place. It then goes on to print another two lines before doing the same thing again, ad infinitum down the page. It almost reduces the program to absolutely useless status.

EZ Forms Executive will also read all the sample forms from EZ Forms, so there is no problem getting started. Each program occupies only one diskette, but neither comes with documentation, as discussed above.

A bit of late news. It seems that a lot of users have been having trouble with the EGA diskettes and PKXARC. To make life even easier for my readers, I am putting a new help file on all my diskettes. At the moment I am only up to the E's, but I will be finished before any more go out. If you need help, please type README! at the DOS prompt, and this will explain a lot to new users and old users alike.

A new diskette has been created for you readers. You have all heard me mention PKXARC and archiving, now I will give you the programs to create your own .ARC, .PAK and .ZOO files. On this diskette, I have placed PK361 (PKPAK and PKUNPAK), PAK151, and ZOO201. PKPAK and PKUNPAK are the fastest archiving utilities in existence. This is the new version having been renamed from PKARC and PKXARC after a court battle with SEA, the originator of the .ARC file format.

PAK is a new system that consistently produces .PAK files that are 10% or smaller than an equivalent .ARC file, but is approximately 50% slower than PKPAK. PAK will also read and convert .ARC files, so nothing is lost except speed.

ZOO is another new system that has yet to take off. It produces .ZOO files that are approximately the same size as .ARC files, and does it at the speed of PAK. It is offered only for you to have a look at.

Also included on this diskette is PK-KIT71.ARC. This has a few new utilities to make your use of PKWare products more productive.

As always all diskettes are available at the following cost: $10.00 for the first diskette in an order and $6.00 for any other diskette in the same order. This includes postage and handling, but please allow me at least 14 days to get the diskettes back to you, as I have to earn a living as well.

Happy Computing!

Chris Collins' mailing address is:
1 Woods Street, Newport 3015

ADVENTURER'S ATTIC

Philip Riley takes a look at Level 9's Lancelot, and collates your questions and answers

The latest offering from Level 9 is Lancelot, a game that is obviously based on the times of King Arthur and the Knights of the Round Table. Being set in ancient England, the game could have been terribly overdone with olde English prose. You know the sort of thing I am talking about, lots of thee and thou. Thankfully this is not the case, in fact the text is skillfully written and sets the scene beautifully and does not go over the top at all.

I had the cassette version, spread over three tapes. The first tape you should be able to get through pretty quickly, especially those people who are familiar with the Level 9 parser.

Tape one sees Lancelot making his way to Camelot to try and join Arthur and the Knights of the Round Table. As soon as the game starts your valour is tested. Remember that you wish to be a chivalrous knight and you should make it to Camelot alive.

Tape 2 takes you to Logris where many captured knights await rescue and a few maidens in distress will also pop up from time to time. There are many villains along the way for you to dispose of in various ways and many brave and daring feats to perform. Remember again that you are a chivalrous knight and always do the good thing and eventually you will win out.

At the time of writing I had only had a short look at tape 3 which sends you and other knights of the Round Table on a search for the Holy Grail, and what I have seen looks equally as good as the first two tapes. You can if you wish go directly to tape 3 and bypass the first two tapes, but if you are going to buy an adventure you may as well play the whole game and not just the last third of it.

The game plays extremely well and the location descriptions set the mood beautifully, with a sprinkling of humour here. They keep the player coming back time after time. The main criticism involves the hints given along the way. Subtlety is light here and unfortunately the commentary is at times too obviously encouraging the player to re-assess his/her moves. One feels slightly cheated of victory.

On the whole it is an excellent game that is well worth the money. It is highly playable and very interesting and will keep the player up until late at night trying just one last time to rescue the captured knight who you have just discovered.

PCW - $59.95 CPC Disc - $49.95 CPC Tape - $39.95

PROBLEM POINTS

Now onto some points of interest, firstly from John Dawson who had some trouble loading Bestiary. According to John the loading of the game took him longer than playing it.

He bought the CPC version and according to NOTES.DOC (the help program) there should be a program called BASIC.COM on the CP/M master disc, which there wasn't. He had to copy the files B.BAS and BESTMESS.MES onto another disc and then copy BANKMAN.BAS and BANKMAN.BIN onto the same disc. He then loaded B.BAS, changed one line which said it was a PCW machine instead of the CPC machine (i.e. variable$="PCW"), and then changed a line that showed a syntax error, by removing a 0 (zero) from POKE &0539 (or something like that - this is in John's words here). This then ran except that when trying to save it, he had to change a line from GOTO 11000 to GOTO 2000. It then worked. If others have had problems with this game John has offered to provide help.

Tracy Stewart finds it infuriating that a lot of this column is devoted to problems concerning Lord of the Rings; this is one game Tracy does not play. Really sorry about that, Tracy, but I have to publish any questions and answers that come in. I don't think the people into LOR would appreciate it if I ignored them.

Apologies to Tracy, but the next point of concern is from Leah Brien and concerns LOR. Leah is having trouble with the computer locking up when she tries to load a saved game. It loads and saves perfectly up until the grassy glade in the forest of moving trees. Well Leah, unfortunately you are not the only one who has trouble with the computer locking up in LOR. The same problems were encountered in The Hobbit. If you think it is the disc that is faulty try saving to another blank disc, if this does not work then at this point in time I cannot help you. I have had these games lock up on me in various places but never when loading or saving. If anyone has resolved this problem maybe they could let us know how they managed to fix it.

To John Dawson: your first problem can be fixed by looking at page 15 of the September 1987 mag, your second problem is being looked into *(can we be let in on these problems? - ed.)*.

Karla Slack writes she has just become a Zorker, so we will let her finish off the column this month. Take it away Karla: "Happy adventuring from a new Zorker!"

QUESTIONS

Tracy Stewart has the first questions this month, they concern Aftershock. She is stuck in the city and keeps

on falling down the drain. Can anyone out there help her. John Dawson also has some problems with this game, what do you do with the elephant and the oil? How do you unflood the flooded tunnel? What do you do with the pick-axe and how do you get through the storm drain?

Tracy would also like to know how to get the wheelbarrow out of the shed in the Pawn.

Dinah Tarasinski would like to know if there is a library and military supply in REEMA in the game of Tau Ceti, and if so in what direction are they from the reactor substation, civilian supply or start of the game.

Three questions for Lancelot, the new Level 9 game from Grant Lowther. How do you get through the briars (this one has got me stumped at the moment). How do you kill Nabon the giant? How do you free the knights from Turquins manor? Grant has also supplied some answers to this game for us.

Mission One project volcano is giving Sean Gollschewsky (how do you pronounce that name) trouble, he would like to know how to remove the droid that guards the lift. He has tried talking to it, giving it an I.D. card and shooting it. If he shoots it the burnt out shell blocks the way. What should he do?

John Dawson would like to know how to get Strider to cross the stone bridge in Lord of the Rings. He has done everything that he has said, read the book, got the scroll from Radagast and collected five elfstones.

Dinah has some questions for Marsport. What articles do you need to get into the plant room and chemist? What articles do you need to put into the factor unit to get into the soil depot and where do you get them from? Do you need to use a combination of previously used and unused articles to get into some rooms and open some doors?

Fairlight is giving John some trouble. What do you do with the cross? What use do the hour glass things have? How do you get past the sorceror who blocks the door near the well?

Karla Slack would like any hints from anyone for Heavy on the Magick, Zork II and Forestland.

ANSWERS

Karla Slack and Albert Alcoceba have both given us answers to Jason Pavys question, how do you kill all the black riders in LOR. If you have the ring you will need to hide, if you don't stab them with your sword and if you have only one elfstone type "ELBERETH" and that will kill them. To avoid suffering from starvation when not using elfstones make sure that everyone has something to eat before you attack. Karla would also like to point out that if Jason wants more help with LOR he can write to her at her address (Karla is listed in the contact list).

As I said before Grant has given us some answers for Lancelot. They are; to kill Phelot pick up the dead wood and throw it at him. You have to burn the sails of the sessoines ships by putting coals onto them. Put the coals into the cauldron and then take it to the ship and put the coals onto the sails. Doing this will allow you to enter Tintagel Castle but remember to take the harp with you. You must become the best knight in the world and free Elaine to enter Corbin Castle. Once free she will lead you into the castle.

Karla has given us a couple of hints for Zork III, the glue repellant can be used in the dark place and the man should be woken up and given bread. Tackle the Royal puzzle after the Earthquake. Any object dropped will break the beam and don't touch indicator 4.

Steve and Robyn Ballard would like to correct Barry Hoole about his answer to Warlord. To step into the ring of crystals you do not need to wear the cloak, you require the cloak to pass through the fire at the end of the rock cavern after which it can be dropped before you step into the ring. The stone slab to the North of the Danaan settlement is used for transforming your sword to assist in slaying some Formorians. The food is not necessarily needed to be eaten to capture the Roman, it is merely used earlier in the adventure to fill you with renewed energy. You can in fact complete the game without eating the food at all.

Some more info on Bastow Manor from Steve and Robyn is next. Unlock the mailbox with the iron key, look inside the mailbox and you will find a letter. Read the letter and look inside the mailbox again, you will find a much needed torch. The dark room is an entrance to the house, the second storey window is the exit after the ladder is placed against it. (P.S. make sure you turn the torch on before you enter the dark room.)

P.S. Adventurer's Attic turns three next month!

ADVENTURER'S CONTACT LIST

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CPC Games; Forest At Worlds End, Bored Of The Rings, Warlord, Necris Dome, Zork I & II, Hitchikers Guide To The Galaxy, The Hobbit, Swords And Sorcery. **PC Games;** Zork I, Hitchhiker Guide To The Galaxy, Kings Quest I, II & III, Police Quest, Space Quest, Land Of The Lounge Lizards, The Hobbit, Castle Adventure, Crime Adventure, New York Adventure, Buckaroo Bonzai.

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The Hobbit, Enchanter, Tau Ceti, Sorceror, Planetfall, Mordons Quest, Jewels of Babylon, Forest At Woods End, The Neverending Story, Swords and Sorcery, Bugsy, Seabase Delta, Message From Andromeda, Zork 1, Leather Goddesses of Phobos, Knight Tyme, Everyone's a Wally, The Boggit, Pyjamarama, Robin of Sherwood, Shogun, Sorcery+, Academy, Jack The Nipper, The Wild Bunch.

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Acheton, Adventure Quest, Arnold goes Somewhere else, Aftershock, Ashkeron, Black Crystal, Brawn Free, Castle Advent., Castle Blackstar, Circus, Classic Adventure, Colossal Adventure, Countdown to Doom, Crystal Quest, Desert Island, Dun Darach, Dungeon, Adventure, Emerald Isle, Enchanter, Espionage Island, Eye of Bain, Feasibility Experiment, Forestland, Golden Apple, Golden Baton, Ground Zero, Guild of Thieves, Heavy on the Magick, The Hobbit, Inca's Curse, Infidel, Invincible Island, Jewels of Babylon, Kentilla, Last Will and Test-ament, Leather Goddesses of Phobos, London Adventure, Lords of Time, Mansion Quest, Marsport, Mission X, Mooonmist, Mordons Quest, Murder at the Manor, The Neverending Story, The Pawn, Pharoahs Tomb, Philosophers Quest, Planet of Death, Return to Eden, Return to Ithaca, Rifts of Time, Sherlock, Ship of Doom, Smugglers Cove, Snowball, Starcross, Subsunk, Ten Little Indians, Terrormolinos,Time Machine, Time Quest, Tir Na Nog, Traveller, Trials of Arnold Blackwood, Valhalla, Volcanic Dungeon, Warlord, Wise and Fool of Arnold Blackwood, Wishbringer, Worm in Paradise, Zork II, Zork III

THE CASTLE

Adventure junkies Barrie and Mark Eaton this month bring us part one of their Basic adventure program. Can you beat it?

There haven't been a great many adventure type-ins in the four years of The Amstrad User, but things are looking up for our small but vocal crowd of ad-addicts. This first effort by Barrie and Mark Eaton is an adventure that will provide you with hours of fun as well as give you an insight into programming. This month, we publish part one; next month we'll publish the rest - so don't come screaming when it won't run!

Getting serious, it's your task to retrieve Zildabar's golden crown from the evil Castle of Ancients and thus restore the Kingdom to its former glory. Are you game?

```
10 REM **** CASTLE ADVENTURE ****
20 REM ** AUTHOR: BARRIE EATON **
30 REM * PROGRAMMER: MARK EATON *
40 MODE 1
50 GOTO 3130
60 CLEAR
70 INK 0,13:INK 1,0:INK 2,24:INK 3,1:BORDER 13
80 DIM loca%(40,4),loca$(40),obj%(25),obj$(25),get$(35)
,get%(35)
90 posi%=1:az=0
100 FOR x=1 TO 40:FOR y=1 TO 4:READ loca%(x,y):NEXT y:R
EAD loca$(x):NEXT x
110 FOR x=1 TO 24:READ obj%(x),obj$(x):NEXT x
120 FOR x=1 TO 34:READ get%(x),get$(x):NEXT x
130 DATA 0,2,0,0,on a narrow winding mountain path.To t
hesouth you can see the shape of the      castle you ha
ve been seeking silhouettedagainst the grey skyline.A s
heer drop   lies below you
140 DATA 1,3,0,0,outside the castle of the ancients.It
isvery old and grey in appearance with a  wide and murk
y looking moat completely  surrounding it.In front of y
ou lies a   drawbridge somewhat rotted through in   par
ts
150 DATA 2,0,0,0,on the drawbridge.A portcullis prevent
s any further approach to the castle.Time has eroded th
e ropes that once raised   and lowered it
160 DATA 0,0,5,6,swimming in the moat.The water is very
  stagnant.Above you looms the lofty wallsof the castle
,0,0,6,4,in the moat.It is so stagnant it stinks.You ha
ve to hold your breath
170 DATA 0,0,4,5,in the moat.Above you you can barely
```

```
 make out a sign scratched onto the castle wall
180 DATA 0,0,9,8,in the moat swimming under water.It is
 so murky you can hardly see,0,0,7,9,in the moat swimm
ing under water,0,0,8,7,swimming under water.Below you
set into the wall you can see something though very r
usty looking
190 DATA 9,11,0,0,in an underground cellar.To the south
 you can see a flight of steps and to thenorth a way
out of the cellar,10,12,0,0,in a dimly lit passageway.T
o one side you can see a heavy looking wooden door
200 DATA 11,0,0,0,at the end of a passageway.Set into t
he wall you can see a stone hand projectingout holding
a flaming torch,0,0,12,0,in a small cell.It is quite ba
re except for a small shelf set into the wall.The air i
s damp and cold
210 DATA 0,0,11,0,in a larger room.In one wall you can
seean alcove with a ledge about one foot from the flo
or.Sitting firmly on the ledge is a chest.Above it i
s a stone eagle projecting from the wall
220 DATA 0,14,0,16,in a damp but large cellar.In the
 opposite corner high above the ground there is a
recess set into the wall.You can just make out some obj
ect resting there
230 DATA 0,0,0,0,in a cold and dark room.It is dirty an
d bare save for a ring hanging down from aprojection in
 one wall
240 DATA 0,0,16,0,in a narrow passage that seems to lea
d to nowhere.All you can see here is a round nodule
 set into the wall,17,19,0,0,In a larger passageway.It
slopes from north to south into an open cavern
250 DATA 18,0,0,0,At the edge of a wide and deep gorge.
 A stone causeway spans across it reaching the other si
de.However the middle portion of the causeway has
 collapsed astime has eroded the stonework.A sheer dr
op to oblivion confronts you
260 DATA 19,21,23,0,On the north side of a deep and wid
e gorge.To your south lies a passageway onan upper l
evel of the cavern with an exit to the east
270 DATA 20,0,0,0,inside a torture chamber.It is a cold
 and forbidding place with old implementsof torture l
ying around covered in cobwebs.You can see a large
 key hanging from a hook on the wall
280 DATA 0,0,0,0,in a dungeon both small and dingy
 looking.There is no way out.Above you the ceiling i
s getting lower and lower
290 DATA 0,0,0,20,in a small room.It has a stone carvin
g on one of the walls and in its centre you can see
a sunken hole.You can only go west from here
300 DATA 0,0,0,23,in a narrow passage.At the far end li
es an iron door,0,0,0,24,inside a corridor of the castl
e.The walls are made of brick and at the far end l
ies a wooden door
310 DATA 0,0,27,25,inside the main hall of the castle.T
he walls are overlaid with oak panelling and the flo
or is neatly tiled.A huge chandelier hangs from the
 ceiling and a suit of armour stands in one corner. Y
ou'd swear it was staring at you
320 DATA 0,0,0,26,at the foot of a large staircase.Abov
e you there is a large landing,30,33,29,0,on the landi
ng.Exits lead off to the north and south with a door
way lying directly to the east.A staircase leads to
 the great hall below
330 DATA 0,0,0,28,in what looks like a guest room.It is
 now covered in cobwebs and very dusty,0,28,31,0,in a
 corridor that goes from east to west.The walls cont
ain some pictures
340 DATA 0,0,0,30,outside the east tower.It has what lo
okslike an iron door or panel set inside the brickwor
k.To one side of the door resting on the floor is a s
tone pedestal
350 DATA 0,0,0,31,inside the east tower.Sitting in the
 middle of the floor is an altar draped over with wh
ite linen,28,37,0,34,on the upstairs landing with exits
 leading off in three directions,0,0,33,35,in a na
rrow but high corridor
360 DATA 0,36,34,0,outside the west tower.To the south
liesan open door,35,0,0,0,inside the west tower.It look
s like somekind of storeroom,33,0,0,0,in the south wing
.A steel door lies in front of you
370 DATA 0,0,39,37,on the battlements.The sky above is
a welcome sight.Far below you can see the moat that s
urrounds the castle,0,0,40,38,on the battlements that g
o from east to west.Below you lies the moat
380 DATA 0,0,38,39,on the battlements.Far down below yo
u can see the drawbridge spanning the moat
390 DATA 2,a steel bar,6,a sign,9,rusty grille,10,a ske
leton,10,a sword,10,a poker,13,an iron key,14,a chest,1
5,wooden box,15,a beam,31,a marble pedestal,21,a large
key,29,a stone statue,32,a jewel studded crown,36,a sil
ver key,36,rope
400 DATA 12,stone hand,12,torch,14,stone eagle,16,ring,
17,nodule,14,"",15,"",3,portcullis
410 DATA 1,steel bar,1,bar,2,sign,3,rusty grille,3,gril
le,4,skeleton,5,sword,6,poker,7,iron key,8,chest,9,wood
en box,9,box,10,beam,10,"",11,marble pedestal,11,pedest
al,12,large key,13,wings,13,statue
420 DATA 14,jewel studded crown,14,crown,15,silver key,
16,rope
430 DATA 17,stone hand,17,hand,18,torch,19,stone eagle,
19,eagle,20,ring,21,nodule,22,parchment,23,"",23,cube,2
4,portcullis
440 CLS
450 WHILE qqq%<10
460 IF posi%=22 AND ba<>1 AND az>0 THEN az=az+1:PRINT"I
t has no effect.The ceiling gets lower and lower":PRINT
:IF az=6 THEN PRINT"You are a squashed tomato":GOTO 272
```

```
0
470 IF posi%=22 AND az=0 THEN az=1
480 IF (posi%=38 OR posi%=39 OR posi%=40) AND ao=2 THEN
 PRINT:PRINT"The rope is dangling downwards":PRINT
490 IF posi%=19 AND ai<>2 THEN loca%(19,2)=0
500 IF posi%=20 AND ai<>2 THEN loca%(20,1)=0
510 IF(posi%=19 OR posi%=20) AND ai=2 THEN obj%(10)=pos
i%
520 IF posi%=16 AND bf=0 THEN PRINT"A steel panel shuts
 off the exit behind you.":bf=1:PRINT
530 PEN 3:PRINT"You are:-":PEN 1:PRINT loca$(posi%)
540 kk=0
550 a$="":IF loca%(posi%,1)>0 THEN a$="North"
560 IF loca%(posi%,2)>0 AND LEN(a$)>0 THEN a$=a$+",Sout
h" ELSE IF loca%(posi%,2)>0 THEN a$="South"
570 IF loca%(posi%,3)>0 AND LEN(a$)>0 THEN a$=a$+",East
" ELSE IF loca%(posi%,3)>0 THEN a$="East"
580 IF loca%(posi%,4)>0 AND LEN(a$)>0 THEN a$=a$+",West
" ELSE IF loca%(posi%,4)>0 THEN a$="West"
590 IF LEN(a$)=0 THEN a$="Nowhere at all!"
600 PRINT:PRINT:PEN 3:PRINT"You can go:- ":PEN 2:PRINT
a$
610 e=0
620 FOR x=1 TO 24:pp%=0:IF obj%(x)=posi% THEN pp%=1
630 IF pp%=1 THEN 650
640 NEXT:GOTO 680
650 IF e=0 THEN PRINT:PRINT:PEN 3:PRINT"You can see:- "
660 PEN 2:PRINT obj$(x):e=e+1
670 GOTO 640
680 PEN 1:PRINT:PRINT:PRINT"What do you wish to do now?
":PRINT:INPUT "",z$
690 z$=LOWER$(z$):y$=LEFT$(z$,2):x$=LEFT$(z$,3):w$=LEFT
$(z$,4):o$=LEFT$(z$,5):p$=LEFT$(z$,6):h$=LEFT$(z$,7):i$
=LEFT$(z$,8):v$=RIGHT$(z$,8):u$=RIGHT$(z$,9):t$=RIGHT$(
z$,10):s$=RIGHT$(z$,11):r$=RIGHT$(z$,12):q$=RIGHT$(z$,1
3)
700 CLS
710 IF (y$="n" OR w$="go n") AND loca%(posi%,1)<>0 THEN
 kk=1:posi%=loca%(posi%,1)
720 IF (y$="s" OR w$="go s") AND loca%(posi%,2)<>0 THEN
 kk=1:posi%=loca%(posi%,2)
730 IF (y$="e" OR w$="go e") AND loca%(posi%,3)<>0 THEN
 kk=1:posi%=loca%(posi%,3)
740 IF (y$="w" OR w$="go w") AND loca%(posi%,4)<>0 THEN
 kk=1:posi%=loca%(posi%,4)
750 IF kk=0 AND (y$="n" OR y$="s" OR y$="e" OR y$="w")
THEN kk=1:PRINT"You can't go in that direction":PRINT
760 IF kk=0 AND (w$="go n" OR w$="go s" OR w$="go e" OR
 w$="go w") THEN kk=1:PRINT"You can't go in that direct
ion":PRINT
770 IF h$="get key" THEN PRINT"Which key?":PRINT
780 IF x$="get" THEN kk=1:GOSUB 1090:GOTO 480
790 IF y$="i" THEN kk=1:GOSUB 1330:GOTO 480
800 IF i$="drop key" THEN PRINT"Which Key?":PRINT:GOTO
820
810 IF w$="drop" THEN kk=1:GOSUB 1360:GOTO 480
820 IF o$="forc " OR p$="force " OR o$="leve " OR p$="l
ever " THEN kk=1:GOSUB 1540 ELSE IF w$="forc" OR w$="le
ve" THEN kk=1:PRINT"Please be more specific":PRINT
830 IF o$="unlo " OR p$="unloc " OR h$="unlock " THEN k
k=1:GOSUB 1600 ELSE IF w$="unlo" THEN kk=1:PRINT"Please
 be more specific":PRINT
840 IF o$="clim " OR p$="climb " THEN kk=1:GOSUB 1720 E
LSE IF w$="clim" THEN kk=1:PRINT"Please be more specifi
c":PRINT
850 IF o$="span " OR w$="lay " THEN kk=1:GOSUB 2060 ELS
E IF w$="span" OR x$="lay" THEN kk=1:PRINT"Please be mo
re specific":PRINT
860 IF w$="tie " THEN kk=1:GOSUB 2020 ELSE IF x$="tie"
THEN kk=1:PRINT"Please be more specific":PRINT
870 IF w$="put " OR o$="plac " OR p$="place " THEN kk=1
:GOSUB 1910 ELSE IF x$="put" OR w$="plac" THEN kk=1:PRI
NT"Please be more specific":PRINT
880 IF o$="jump " OR o$="dive " THEN kk=1:GOSUB 2190 EL
SE IF w$="jump" OR w$="dive" THEN kk=1:PRINT"Please be
more specific":PRINT
890 IF o$="lift " OR o$="rais " OR p$="raise " THEN kk=
1:GOSUB 1650 ELSE IF w$="lift" OR w$="rais" THEN kk=1:P
RINT"Please be more specific":PRINT
900 IF o$="pull " THEN kk=1:GOSUB 1680 ELSE IF w$="pull
" THEN kk=1:PRINT"Please be more specific":PRINT
910 IF o$="push " OR o$="pres " OR p$="press " THEN kk=
1:GOSUB 1870 ELSE IF w$="push" OR w$="pres" THEN kk=1:P
RINT"Please be more specific":PRINT
920 IF v$="zildabar" THEN kk=1:GOSUB 2430
930 IF o$="turn " THEN kk=1:GOSUB 2230 ELSE IF w$="turn
" THEN kk=1:PRINT"Please be more specific":PRINT
940 IF w$="exa " OR o$="exam " OR p$="exami " OR h$="ex
amin " OR i$="examine " THEN kk=1:GOSUB 2260 ELSE IF w$
="exam" THEN kk=1:PRINT"Please be more specific":PRINT
950 IF o$="read " THEN kk=1:GOSUB 2460 ELSE IF w$="read
" THEN kk=1:PRINT"Please be more specific":PRINT
960 IF w$="inse" THEN kk=1:GOSUB 2500
970 IF w$="quit" THEN kk=1:GOSUB 2580
980 IF o$="open " THEN kk=1:GOSUB 2640 ELSE IF w$="open
" THEN kk=1:PRINT"Please be more specific":PRINT
990 IF w$="drin" THEN kk=1:GOSUB 2680
1000 IF o$="swim "THEN kk=1:GOSUB 2700 ELSE IF w$="swim
" THEN kk=1:PRINT"Please be more specific":PRINT
1010 IF w$="save" THEN kk=1:GOSUB 2830
1020 IF w$="load" THEN kk=1:GOSUB 2980
1030 IF kk=0 THEN PRINT"I don't understand what you mea
n by ";:PEN 2:PRINT z$:PRINT
1040 WEND
1050 l$="":FOR x=1 TO LEN(z$):IF MID$(z$,x,1)=" " THEN
l$=RIGHT$(z$,LEN(z$)-x):x=200
```

CPC & PCW PUBLIC DOMAIN SOFTWARE

The following discs contain compilations of public domain programs put together by the Advantage Computer User Group (in England) and which have been tested under CP/M Plus.
Unless otherwise stated, programs will run on the PCW, 6128 and 464/664 with extra memory and CP/M Plus. Programs for the 464/664 are on the CP/M 2.2 Collection. The discs are supplied in Data format and contain documentation files to help the user get started and provide instructions on running the programs plus useful sorted directory and MENU systems.

But remember, as Public Domain programs they are supplied on an as-is basis.

CP/M 2.2 COLLECTION

For 464/664 disc drive users with CP/M 2.2. Contains File Manager, Compare, Find, Disc sector editor, Key definer, Bad sector eliminator, Grep, Full Screen text editor, Easy lister, File transfer utility, Unerase erased files, erased files catalogue and many more.

CPC Ref: #430

FULL SCREEN TEXT EDITOR

This machine code editor offers full screen editing, full block operations, windowing, automatic horizontal scroll (line length up to 255 characters), macro functions, word-wrap and formatting, pagination, find/replace, undelete and many user options.
The editor, which is less than 10k in size, is fast because it edits a file entirely in memory. It produces ASCII text files and has enough features to be used as a word processor. A comprehensive on-disc manual is included together with keyboard configuration files for the CPC and PCW.

CPC Ref: #601 PCW Ref: #801

DATABASE

A small relational database suitable for storing simple data and producing reports and forms letters from the data. Offers free format query language with macros and commands plus on-line help. The disc also contains an Inventory Database. Whilst these databases provide a useful introduction and you can use them to set up a full operational database system they are not meant to replace commercial packages for professional or business use.

CPC Ref: #602 PCW Ref: #802

COMMUNICATIONS

Programs to allow data transfer between computers (local and remote), access databases and bulletin boards. UKModem7, New Kermit, MEX and various communications utilities. The disc also contains software for Prestel (Viatel) emulation (PCW only).

CPC Ref: #603 PCW Ref: #803

VIDEO CLERK

Keep track of your video collection. With four Sort options and Forms Management system for printing out the data in order of title number, video number, global alphabetic or unique. Includes extensive on-disc documentation.

CPC Ref: #604 PCW Ref: #804

FIXED ASSETS LOG

Allows you to keep a record of all your assets and their value. For example, at home, you may wish to keep a record of how much money you are spending on your computer or the value of a stamp collection etc. In business you can use it to keep a record of how much money you have tied up in land, buildings, office equipment, cars etc. It can also be used as a stock-taking program.

CPC Ref: #605 PCW Ref: #805

COMPLETE UTILITIES

• *Newsweep* - one key erase, copy, rename and print, plus many other features. Ideal for sorting out your disc collection quickly and efficiently • *Superzap* - disc sector editor - edit by track/sector or filename. Fully menu-driven with cursor key SETKEYS file • *DisckitA* - multi-choice disc formatter, offers 178k data format for PCW discs and 5.25" second drive formatting • *Unerase* erased files • *Read/write* PCW discs on a CPC • *CP/M v2.2 emulator* • *Make* - allows you to copy files across user areas • *Cleanup* - useful for speedy file deletion • *Lookat* - speedily lists any file in Hex and ASCII • *Screen Dump* (CPC only) • *Password* • *Easy Lister* • *Password Protection* • *File Scrambler* • *File Splitter* • *Directory check*

CPC Ref: #606 PCW Ref: #806

TEXT PROCESSING UTILITIES

• *Sideways* - prints text file sideways on an Epson-compatible printer. Ideal for those wide spreadsheets • *Sort* any ASCII list into alphabetical order • *Word count* - can be used on any ASCII file • *WSClean* - removes higher order bits from a text file and converts it to straight ASCII • *Calendar Generator* - prints out calendar for any year • *Simple Spell Checker* - with starter dictionary and dictionary editor • *Scoring card generator* • *Banner printers* • *Typewriter emulator*

CPC Ref: #607 PCW Ref: #807

DISC ORGANISATION

Catalogue your disc collection and produce a printed index. Useful for speedy location of files and for keeping your discs in order. Library utilities for archiving and saving disc space. File dating system. Squeeze and unsqueeze for saving up to 40% disc space. Menu system - allows menu-driven access to programs on a disc. Completely and easily user-definable.

CPC Ref: #608 PCW Ref: #808

Z80 PROGRAMMER

A complete Z80 Assembler which is capable of converting an ASCII assembler file into a fully executable machine code .COM program. Plus Z80 Disassembler, Z80 Debugger, Z80 Library, 8080 Disassembler, Z80 to 8080 Translator and associated utilities.

CPC Ref: #609 PCW Ref: #809

'C' PROGRAMMER

The Small 'C' Compiler by Mike Bernson. Includes source code and 25k of documentation. Produces executable .COM programs.

CPC Ref: #610 PCW Ref: #810

'C' TOOLBOX

A disc full of 'C' source code examples together with the corresponding executable .COM programs. Useful to those wishing to see some practical examples of 'C'. As a bonus, the programs are quite useful too. The 'C' source was written for a variety of compilers and may need modifying to compile on MIX or Small 'C'.

CPC Ref: #611 PCW Ref: #811

FORTH, STOIC AND 'C' INTERPRETER

For experimenters interested in using these languages. Documentation is included on disc.

CPC Ref: #612 PCW Ref: #812

GAMES COMPENDIUM

A varied selection of the best machine code programs available for CP/M. Includes Pacman, Snake (PCW only), Chess, Othello, Mastermind, Spellit, Awari, Life, Golf, Polish Pong, Maze, Biorhythms, Word Search puzzle maker, TicTacTo.

CPC Ref: #613 PCW Ref: #813

ADVENTURES

• *Colossal Cave Adventure* which originated on main frame computers. With game save and reload • *Bestiary* (written in Mallard Basic for either PCW or 6128 Mallard users. Standard CPC users see Adventurer's Attic March 1989)- you play the part of a young prince, your greatest love being to read the ancient bestiaries about strange and often legendary animals. Your task is to find a solution to the terrible blight which, one year, destroys both crops and animals in the kingdom. Includes game save and re-load • *Return from Arg* - a short but interesting new adventure written in 'C'.

CPC Ref: #614 PCW Ref: #814

PCW GRAPHICS (PCW only)

Simple user-designed graphics drawing program. Enables you to create, save, edit and print pictures on your PCW. Plot lines, points, boxes, four fill patterns, easy to use and wholly interactive • *PCW Screen Font designer* with several ready-to-run font sets • *Biomorph* - fascinating, graphic demonstration of natural selection - develop your own bugs! • *Readme* - program to display any ASCII text file in 45 character format on the 90 character screen - makes it easier to read.

PCW Ref: #815

How to order your discs

You may either order over the phone by credit card or by post. *It is very important that you get the reference number correct. CPC and PCW discs are different.* (Software contained on 3" discs only). The cost per disc is $17.50. • ***BANKCARD, MASTERCARD & VISA accepted*** •

• Price includes postage in Australia, overseas add A$2.00 •

Send Your Order to:

The Amstrad User,
1/245 Springvale Road,
Glen Waverley. Victoria. 3150.
Phone: (03) 233 9661

THE AMSTRAD USER MAIL ORDER SERVICE

For details on how to order please see the last page of this list.

Amstrad CPC Range 464, 664 and 6128

(unless otherwise stated)

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with Gauntlet II, Outrun, California Games, 720° and Rolling Thunder	**49.95**	**39.95**
Gold, Silver, Bronze		
Three discs or tapes containing Summer Games 1 and 2 and Winter Games	59.95	49.95

CPC - continued

Karate Ace Compilation
with Way of the Exploding Fist, Bruce Lee, Kung Fu Master, Avenger, Samurai Trilogy, Uchi Mata etc. 49.95 39.95

Konami Arcade Collection
with Shao-Lin's Road, Jail Break, Mikie, Yie Ar Kung Fu I and II, Hypersports, Green Beret, Nemesis, Jackal and Ping Pong 49.95 39.95

Leaderboard Par 3
with Leaderboard, Leaderboard Tournament, and World Class Leaderboard 49.95 39.95

Live Ammo Compilation
with Green Beret, Rambo, Top Gun, Army Moves & Great Escape - 39.95

Magnificent Seven Compilation
with Wizball, Short Circuit, Arkanoid, Head over Heels, Great Escape, Cobra, Franki goes to Hollywood + FREE Yie Ar Kung Fu 49.95 39.95

Space Ace
with Venom strikes back, Xevious, Cybernoid, Zynaps Trantor, Exolon and North Star 49.95 39.95

Straight Six
Loriciel's compilation with 3D Fight, Billy, Soccer, MGT, Flash and ZOX2099 29.95 19.95

Supreme Challenge
compilation with Elite, Sentinel, Tetris, ACE II and Starglider **49.95 39.95**

Taito's Coin Op Hits
with Rastan, Arkanoid 1, Arkanoid 2, Flap Fight, Bubble Bobble, Legend of Kage, Renegade etc. - 39.95

TAU Games + *(6128s only)*
Dominoes, Snakes and Ladders, Mah-Jong, 3-D Noughts & Crosses, Trucking, Tycoon plus Graphic Designer and Sprite Designer 32.95 -

Ten Great Games Vol III
with Iridis Altha, Tenth Frame, Firelord, Ranarama, Fighter Pilot, Leaderboard, Rebounder, Alley Cat, Eagles and Last Mission - 39.95

Ten Mega Games Vol 1
with North Start, Cybernoid, Deflektor, Triaxos, Blood Brothers, Mask 2, Tour de Force, Hercules, Blood Valley, Masters of the Univ. - 39.95

Time and Magik trilogy
Lords of Time, Red Moon and Price of Magik 49.95 45.95

We are the Champions
with Renegade, Barbarian, SuperSprint, Rampage and International Karate 49.95 39.95

AMSTRAD USER YEAR DISCS

Containing all the type-ins appearing in each month of The Amstrad User

Year Disc 1 - Issues 1 to 12	50.00	-
Year Disc 2 - Issues 13 to 16	22.50	-
Year Disc 3 - Issues 17 to 20	25.00	-
Year Disc 4 - Issues 21 to 24	25.00	-
Year Disc 5 - Issues 25 to 28	25.00	-
Year Disc 6 - Issues 29 to 32	25.00	-
Year Disc 7 - Issues 33 to 36	25.00	-
Year Disc 8 - Issues 37 to 40	25.00	-
Year Disc 9 - Issues 41 to 44	25.00	-
Year Disc 10 - Issues 45 to 48	25.00	-

Separate tapes for each issue's type-ins are also available : each - 5.00

SERIOUS SOFTWARE

Advanced Art Studio (Rainbird) Graphics package (128k only)	69.95	-
Brainstorm - ideas and reporting system(6128s only)	99.00	-
Cardbox - card index system (6128s only)	129.00	-

CPC - continued

Cardbox Plus - enhanced version of Cardbox (6128s only)	199.00	-
Expendiport - cheque management and analysis sytem	39.95	-
Extra Extra - a disc full of ready made graphics, fonts and clip art compatible with AMS Stop Press	89.00	-
Instant Recall - database with very fast search facility	59.95	-
Masterfile III - the best relational database system	109.00	-
Mastercalc 128 - spreadsheet program for 6128s (or 464 with disc drive and memory expansion)	99.00	-
Matrix - spreadsheet with text editing facilities, database, mail merging etc.	79.95	-
Mini Office II	59.00	-
Money Manager - powerful cash book program	59.95	-
OCP Art Studio (Rainbird) Graphics package similar to 'Advanced' but without Mode 0 facility (128s only)	59.95	-
Personal Excellence Package - High quality Mental performance analyser	109.00	-
Plan-It - desktop organiser	39.95	-
Print Master Plus - create your own Banners, Letterheads, Signs, Calendars or Greeting Cards with graphics or borders supplied. ***(Runs under CP/M Plus only)***	**59.95**	**-**
Protext - high speed w/p	89.95	-
Protext Filer - pop-up database module for Protext. (Requires Promerge & Protext)	69.95	-
Protext Office - pop-up add-ons for Protext including mailmerge and invoice generator. (Needs Promerge & Protext)	99.95	-
Prospell - spell checker	79.95	-
Promerge - mail merger	79.95	-

STOP PRESS from AMS

The ultimate Desktop Publishing package for CPC owners. Combine text and graphics with 'what you see is what you get' facilities. The ideal publishing software solution for home enthusiasts, schools, societies and small businesses.

Stop Press (disc only)	**159.00**
With AMX MkIII Mouse	**289.00**
Extra Extra clip art	**89.00**

Tasword 464	-	59.95
Tasword 464/D	79.00	-
Tasword 6128	79.00	-
Tas-spell	56.00	-
Tasprint	45.95	32.95
Tascopy	45.95	32.95
Tasdiary	45.95	-
Tas-sign	89.95	-
Touch 'n' Go - Typing tutor (6128s only)	69.00	-
Ultrabase - easy database	69.95	49.95

EDUCATIONAL

From SCHOOL SOFTWARE

Play School (3-7)	29.95	22.95
Magic Maths (4-8)	29.95	22.95
Maths Mania (8-12)	29.95	22.95
Better Maths (12-16)	29.95	22.95
Maxi Maths (12-16)	29.95	-
Physics (12-16)	29.95	22.95
Better Spelling (9-99)	29.95	22.95
Chemistry (12-16)	29.95	22.95
Biology (12-16)	29.95	22.95
Weather/Climate (12-16)	29.95	22.95

CPC - continued

From LCL SOFTWARE

Micro Maths (9-11)	59.95	49.95
Mega Maths (9-11)	59.95	49.95
Micro English (9-11)	59.95	49.95
Primary Maths (7-11)	79.95	49.95

From FERNLEAF SOFTWARE
(Developing Reasoning, Logic, Estimating and Forward Planning skills).

1. Treasure/Perfume Hunter (7-10)	49.95	39.95
2. Fletcher's Castle/Raider(8-12)	49.95	39.95
3. Thorn Sea/Ferry Captain (9-13)	49.95	-

From FUN SCHOOL: three discs in the series each containing 10 educational programs.

Vol 1 - ages 2 to 5	29.95	-
Vol 2 - ages 5 to 8	29.95	-
Vol 3 - ages 8 to 12	29.95	-

(All reviewed Issue 48 - Jan '89)

The Magic Sword - including full colour reading book	39.95	-
Three Bears - graphic adventure to improve logic, deduction and reasoning	34.95	-

PERIPHERALS

AMX MOUSE Mk III - with superior ball technology and high resolution movement this updated mouse from AMS gives total control and flexibility, and compatibility with AMS Stop Press. Comes with an interface for CPC owners 150.00

KEMPSTON MOUSE - comes complete with Blueprint, a comprehensive graphics package 199.00

COMPUTER/TV MODULATOR CONVERTER
This Amstrad unit (MP3) allows a CPC colour monitor to be used as a colour television - all you need to connect is a TV aerial to watch your favourite stations 149.00
(Please add $7.50 for certified post & packing)

MOUSE MATS - keeps Mouse clean (Blue) 19.95

UTILITIES

Disc Demon - comprehensive menu driven disc utilities	69.95	-
Fido - unique disc catalogue and menu maker program	-	29.95
Model Universe - 3D rotating drawing program	54.95	-
Rampak - nearly fifty machine code subroutines	44.95	37.95
Rembrandt - multi mode icon driven drawing prog.	69.95	-
Supersprites - sprite designing and control program	29.95	19.95
System X - adds over 40 new Basic extension commands	29.95	19.95
Toolkit - the most advanced Basic extension for the CPC	69.95	49.95

JOYSTICKS

CHALLENGER CPC – futuristically shaped joystick in high-impact light grey plastic. Ultra-sensitive top and bottomfire buttons. Features a very smooth stem movement and fast micro-switches 29.95

WINNER 220 - a really robust joystick with built-in precision control. Fully micro-switched with two fire buttons on the base and two on the stem for fast and furious action 34.95

ZIPSTICK SUPERPRO - 90% British made quality

CPC - continued

moulded high impact plastic with self-centring actuator & eight-way micro switches. 1.4m of cable. Left and right hand fire buttons, steel shaft, non-slip rubber pads 39.95

ZIPSTICK ELITE - a smaller, specially designed hand-held model with similar specifications to the Superpro, but with just one forward centrally located fire button. Also has rubber pads on base for flat surface use 29.95

MISCELLANEOUS

Screen Filter 29.95

Ribbons
Black Nylon for DMP 2000/3000/3160 19.95
Black Nylon for DMP4000 19.95

3" drive cleaning kit 19.95

CF-2 3" discs each 7.00

Joystick Splitter Cable - to allow the use of two joysticks through the single joystick port of the CPCs *(not simultaneously)* 19.50

CPC6128 'Seal 'n' Type' Keyboard protector
Stops damaging spills etc. 29.95

Amstrad PCW Range 8256, 8512 and 9512
(unless otherwise stated)

GAMES

Academy (Tau Ceti II) § 65.95
Armageddon Man § 57.95
Batman § 57.95
Catch 23 § 57.95
Classic Quest Adventures:
Goblin Towers (moderate) 49.95
Forestland (hard) 49.95
Witch Hunt (very hard) 49.95
Corruption **59.95**
CP Compilation - *with 3-D Clock Chess, Backgammon, 3-D Draughts and Bridge 2000 all on one disc* 59.95
Distractions: *3 graphics games compilation: On the Run, 2112 AD and Nexor* § 59.95
Double T Patience - *compilation of six frustrating games including Kuala Lumpur, Poker Patience and Fourways* 64.95
Giant Killer - maths adventure 10 to adult 54.95
Graham Gooch Cricket *(Limited Overs & Test Match)* 49.95
Guild of Thieves 69.95
Gnome Ranger 59.95
Head over Heels § 57.95
Heathrow ATC/Southern Belle 57.95
Ingrid's back 59.95
Jinxter 69.95
Knight Orc 59.95
Lancelot 59.95
Living Daylights 49.95
Match Day II - *animated soccer action* 57.95
Mindfighter § 65.95
Pawn, The 69.95
Return to Doom *(Topologika adventure)* 54.95
Scrabble de luxe 65.95
Steve Davis' Snooker 54.95
Time and Magik Level 9 trilogy: *Lords of Time, Red Moon and Price of Magik* 54.95
Tomahawk: helicopter simulation 57.95
World of Soccer - international Soccer management simulation 59.95

PCW - continued

PUBLIC DOMAIN DISCS **17.50**

(The games above marked with a § symbol are known to work only on the 8256/8512)

PCW YEAR DISC

Containing all the PCW type-ins published in The Amstrad User for issues shown
Year Disc 1 - Issues 25 to 40 27.50

EDUCATIONAL

Better Maths (12-16 yrs) 39.95
Better Spelling (12-16 yrs) 39.95
Biology (12-16 yrs) 39.95
Chemistry (12-16 yrs) 39.95
Giant Killer - maths adventure 10 to adult 54.95
Magic Maths (4-8 yrs) 39.95
Maths Mania (8-12 yrs) 39.95

PUBLISHING

Desk Top Publisher 99.00
Newsdesk International 125.00

STOP PRESS from AMS

The ultimate Desktop Publishing package for PCW owners. Combine text and graphics with 'what you see is what you get' facilities. The ideal publishing software solution for home enthusiasts, schools, societies and small businesses
Stop Press (disc only) **179.00**
With AMX Mk III Mouse **299.00**

DATABASES

Cardbox 129.00
Cardbox Plus 199.00
Condor One 149.00
Masterfile 8000 119.00
TAIT Database and Labeller 49.95

MISCELLANEOUS

Brainstorm - tool for structuring raw ideas in a logical manner 99.00

Daatafax Personal Organiser Gift Pack from Kempston - with soft-ware, stylish binder, subject tabs, and starter stationery 149.00
(Additional stationery available)

Graphics, the Universe and everything...
This latest version (2.0) provides the means to create professional graphics output and more. Source code included (All PCWs) **75.00**

Lightning Basic Plus - ***turbo charge your Mallard Basic (all PCWs)*** **75.00**

Master Paint - deluxe graphics program, for use with either mouse or keys 59.95

Mini Office Professional - the PCW version of the highly successful Mini Office II with Spreadsheet, Wordprocessor, database, graphics and communications 149.00

Money Manager Plus - cashbook/personal accounting 99.00

NewWord2 - only one available just 150.00

Personal Excellence Package - High quality mental performance analyser 109.00

Plan-it - desktop organiser, plan budgets, sort files etc. 39.95

Print Master Plus - create your own Banners, Letterheads, Signs, Calendars or Greeting Cards with graphics or borders supplied. ***(Runs under CP/M Plus only)*** **59.95**

Protext Filer - pop-up database module for Protext 69.95

PCW - continued

Protext Office - as Protext Filer but with mail-merge and invoice generator module 99.95

Protext PCW 179.99

Prospell PCW - spellchecker for most word processors incl. Wd/Star and LocoScript 89.95

Scratchpad Plus spreadsheet 99.00

Stockmarket - watch your investments **79.95**

Tait Accounting System - small business Debtors, Creditors and Invoicing 129.00

Tempdisc - a disc full of instant templates exploiting LocoScript to the full. Provides a wide range of heading styles, agendas, invoices, borders and documents:
Tempdisc 1 (needs Loco1) 59.95
Tempdisc 2 (needs Loco2) 59.95
Tempdisc 8.2 (needs Loco2, Locomail and 8512) 67.95
Tempdisc 9 (for 9512) 67.95

T/Maker - ***Relational database, Spreadsheet, Word Processor, Spell Checker, Graphics, List processor - for 8000s and 9512*** 149.00

Touch 'n' Go - typing tutor 69.00

PERIPHERALS

8256/512 'Seal 'n' Type' Keyboard protector
Stops damaging spills etc. 29.95

9512 'Seal 'n' Type' Keyboard protector
Stops damaging spills etc. 29.95

AMX MOUSE plus interface from AMS - the most popular and sought after peripherals for your PCW, especially with StopPress 165.00

MM3 Margin Maker - ***Single sheet locator and aligner for PCW 8000 printers*** **39.95**

PCW Joystick Interface from Kempston 59.95

SCANNER - Master Pack - a scanning device which attaches to a PCW printer head to copy photos or other art work, Master Scan software and Master Paint, a powerful graphics package. Compatible with Desktop Publisher, FSE and Newsdesk International 279.00

SCREEN FILTER 29.95

TASMAN RANGE

Tasword 8000 79.95
Tas-spell 8000 56.00
Tasprint 8000 52.00
Tas-sign 8000 89.9!

CONSUMABLES

PCW 8000s Printer Ribbons
Black Carbon or Nylon 19.95
Coloured Nylon - Blue, Red or Green 24.95
PCW 9000s Printer Ribbons
Black Carbon or Multistrike 15.95
Black Nylon 19.95

Daisy Wheels for 9000s
Prestige Pica 10; Prestige Elite 12; Courier 10; Cubic Pica 10; Mini Gothic 15/Micro; Orator 90%/10; Letter Gothic 10/12; Script 12 *each* 19.95

3" disc drive cleaning kit 19.95

CF2 3" discs each 7.00

LOCOMOTIVE PRODUCTS

LocoScript 2 (v. 2.16 - N/E) 87.00
LocoScript 2 + LocoSpell 130.00
LocoMail2 105.00
LocoSpell2 75.00
Locomail1 to 2 upgrade 18.50

PCW - continued

LocoSpell1 to 2 upgrade	18.50
LocoScript2 upgrade to v2.16 (N/E)	18.50

(Original LocoScript2 disc must be returned certified mail for upgrades. Please note that upgrades are not available/ necessary for 9512 owners. Upgrades from LocoScript1 to LocoScript2 are not available.)

The following are for PCW 8000s using LocoScript 2.12 and above (Please state 8000s):

24 Pin Printer Driver - suitable for most 24 pin print head printers attached to the 8000s	**64.95**
Printer Character Set Disc for defining new character sets	59.95
Extra Printer Drivers Disc containing a PrinterFile for every LocoScript2 compatible printer	59.95
Keyboards Disc to configure LocoScript2 to use American, Canadian, Danish, English, French, German, Italian, Norwegian, Spanish or Swedish keyboard layouts with any nationality of LocoScript2.	59.95
Locofile/8000 - the resident 'pop-up' database for LocoScript2	**110.00**
LocoFont SET 1 adds nine extra fonts to your matrix printer	75.00
LocoFont SET 2 adds a further set of five fonts to your matrix printer	65.00
LocoKey to customise your keyboard	59.95
Locomail Sorting Program	39.95
Locomail2 Examples disc	17.50
LocoMail2 New User Guide	54.95

The following are for PCW 9512s using LocoScript 2.12 and above (Please state 9512):

24 Pin Printer Driver - suitable for most 24 pin print head printers attached to the 9512	**64.95**
Printwheels Disc allows the correct printing of the characters from any printwheel supplied for the built-in printer.	59.95
Locofile/9000 - the resident 'pop-up' database for LocoScript2 on the 9512	**110.00**
Keyboards Disc to configure LocoScript2 to use American, Canadian, Danish, English, French, German, Italian, Norwegian, Spanish or Swedish keyboard layouts with any nationality of LocoScript2.	59.95
Printer Driver and Character Sets supports a wide range of printers and printwheels used as an alternative to the built-in printer	59.95
Locomail Sorting Program	39.95
Locomail2 Examples disc	17.50

Amstrad PC Range PC1512/1640 and PPC512/640

(unless otherwise stated)

Items marked with a "†" symbol are also available in 3.5" disc format.

GAMES

221b Baker Street	49.95
4 x 4 - Off-Road Racing †	49.95
4th and Inches (Grid Iron)	**44.95**
4th and Inches Construction Set	**35.95**
Aces High Compilation *with World Series Baseball, Wizball, Top Gun and Arkanoid*	69.95
Action Service	54.95

PC - continued

Alternate Reality (The City)	49.95
After Burner	69.95
Alter Ego (female version)	**47.95**
Amazon	59.95
Annals of Rome	**64.95**
Apollo 18	**64.95**
B-24	69.95
Battle Chess	69.95
Battle for Normandy	69.95
Battle Hawks 1942	**64.95**
Batman	69.95
Beyond Zork	49.95
Bionic Commandos	**54.95**
Black Cauldron †	59.95
Black Jack Academy †	49.95
Bobo	69.95
California Games †	49.95
Captain Blood	69.95
Charlie Chaplin	69.95
Classic Quest Adventure Series:	
Goblin Towers	39.95
Forestland	39.95
Witch Hunt	39.95
Catacombs	39.95
Cornucopia	39.95
Classic Arcades 1	59.95
Classic Arcades 2	59.95
Colossus Mahjong	69.95
Combat School	69.95
Concentration	49.95
Crazy Cars	59.00
Crosscheck	49.95
Crusade in Europe	59.95
Daley Thompson's. Olympic Challenge	69.95
Dark Castle	49.95
Dark Side	**54.95**
Decision in Desert	59.95
Def Con 5 (American 'Star Wars' defence)	**59.95**
Demon Stalkers	**54.95**
Destroyer †	49.95
Dragonworld	59.95
Dream Warrior	69.95
Driller	69.95
Echelon	54.95
Elite	69.00
Empire	47.95
F-15	59.95
F-16 Falcon †	49.95
F-19 Stealth Fighter	**79.95**
Fahrenheit 451	59.95
Family Feud	49.95
Fire Power	**47.95**
First Expedition †	49.95
Fish	69.95
Flippit	39.95
Gettysburg	69.95
Gnome Ranger	59.95
Gold Rush	52.95
Grand Prix Circuit	59.95
Great Escape, The	59.95
Gunship †	79.95
Hardball	49.95
Hitch Hiker's Guide to the Galaxy	**64.95**
Hunt for Red October	49.95
Impossible Mission II †	49.95
Ingrid's back	59.95
Inside Trader	59.95
Impact (mouse or keyboard only)	49.95
Jack Nicklaus Golf	59.95
Jackal	69.95
Jeopardy	49.95
Jet	69.95
Jewels of Darkness	59.95
Kampfgruppe	69.95

PC - continued

Kings Quest 1 †	49.95
Kings Quest 2 †	49.95
Kings Quest 3 †	49.95
Kings Quest 4 (9x5.25" and 4x3.5")	84.95
Knight Orc	59.95
Lancelot	59.95
Leisure Suit Larry (AO) †	59.95
Leisure Suit Larry II (AO)	59.95
Man Hunter - New York	64.95
Mean 18	69.95
Mean 18 Famous Courses 1	24.95
Mean 18 Famous Courses 2	24.95
Mean 18 Famous Courses 3/4	24.95
Mech Brigade	69.95
Might and Magic	79.95
Mini Putt	49.95
Moebius	59.00
Mystery Trilogy (3 mystery games)	**47.95**
Night Raider	69.95
Nine Princes in Amber	59.95
Nord & Bert couldn't make head nor tail...	**47.95**
Pawn	69.95
Peter Rose Pennant Fever	**47.95**
PC Gold Hits Compilation (for CGA) *with Infiltrator, Bruce Lee, Ace of Aces and World Class Leaderboard*	49.95
Perry Mason - Mandarin Murders	59.95
Phantasie	69.95
Phantasie 3	69.95
PHM Pegasus †	59.95
Pinball Wizard	69.95
Pirates	69.00
Platoon	69.95
Plundered Hearts	**47.95**
Police Quest †	59.95
Police Quest 2	59.95
Portal	**47.95**
President Elect	69.95
Project Space Station	49.95
PSI-15 Trading Company	49.95
PT-109	**64.95**
Rack'em (Pool, Billiards, Snooker)	**54.95**
Rambo III	69.95
Reach for the Stars †	49.95
Rebel Charge at Chick.	69.95
Rendezvous with Rama	59.95
Rings of Ziflin	69.95
Roadwar 2000	69.95
Roadwar Europa	69.95
Romantic Encounters (AO)	49.95
Sapiens	69.95
Sargon III (Chess)	84.95
Scavengers	**54.95**
Serve and Volley	**54.95**
Shard of Spring	69.95
Shiloh	69.95
Silent Service	59.95
Silicon Dreams	59.95
Silpheed	52.95
Solomon's Key	69.95
Space Quest 1 †	59.95
Space Quest 2 †	59.95
Space Quest 3	59.95
Speed Ball	**64.95**
Spitfire Ace	59.95
Star Command	79.95
Star Fleet	59.95
Star Trek: Kobayashi	49.95
Star Trek: Promethian	49.95
Star Trek: The Rebel Universe	49.95
Star Quake (Amstrad j/stick port only)	59.95
Stellar Crusade	69.95
Star Glider	59.95
Station Fall	**47.95**

PC - continued

Street Sports Baseball †	49.95
Street Sports Basketball †	49.95
Sub Battle Simulator †	49.95
Summer Games	45.00
Tau Ceti	59.95
Technocop	69.95
Test Drive	59.95
Tenth Frame	59.00
Tetris	49.99
Thexder†	59.95
Thud Ridge	**54.95**
Thunderblade	69.95
Time and Magik	59.95
Train, The	**54.95**
Trantor	69.95
Ultima V	59.95
Untouchables	69.95
Victory Road	69.95
Wargame Construction Kit	69.95
WEC Le Mans	69.95
Wheel of Fortune	59.95
Who framed Roger Rabbit †	**54.95**
Winter Games †	49.95
Wizard's Crown	69.95
World Class Leaderboard Golf value pack	**64.95**
Zac McKracken & the alien mindbenders	**64.95**
Zork Quest II - The Crystal of Doom	**37.95**

BUDGET GAMES

Arcade 1: *Pitfall, Artillery, Goob and X-Wing*	14.99
Arcade 2: *Munchman, Bowling and Depth charge*	14.99
Arcade Bonanza: *Frog, Pac-em, Tank and Red Alert*	14.99
Board Games	14.99
Master Blaster: *Paratrooper, Round 42 and Rockets*	14.99
Mind Games: *Concentration, Magie, Hide-away and Mindscan*	14.99
Sink the Bismark: *Computer Battleships and Naval Trivia*	14.99
Space Battles: *Space War, Meteor Shower, Moon Lander, Space Zombies*	14.99
Space Games	14.99
Strategy Games: *Ruler, Killer Bees, Engineer, Sabotage and Vampire*	14.99

EDUCATION

Alphabet Zoo	59.95
Arrakis Advantage Series:	
Algebra 1/1 - Sets & notatations	59.95
Algebra 1/2 - Number Sys.	59.95
Algebra 2/1 - Equations & Formulae	59.95
Algebra 2/2 - Linear Equations	59.95
Algebra 3/1 - Polynomials	59.95
Biology 1 - Respiration	59.95
Biology 2 - Digestion & Nutrition	59.95
Biology 3 - Reproduction & Dev.	59.95
Biology 4 - Circulation & Heart	59.95
Chemistry 1 - The Atom	59.95
Chemistry 2 - The Periodic Table	59.95
Geometry 1 - Basic Geometry	59.95
Geometry 2 - Plane and Space	59.95
Physics 1 - Motion	59.95
Physics 2 - Light	59.95
Statistics 1 - Intro. Descriptive Stats	59.95
Trigonometry 1 - Intro. to Trig.	59.95
Better Maths (12-16 yrs)	39.95
Better Spelling (9- Adult)	39.95
Biology (12-16 yrs)	39.95
Chem Lab	69.95
Chemistry (12-16 yrs)	39.95
Chinease -tutorial on Mandarin	69.95

PC - continued

Computerease - tutorial on PC	39.95
Cryptocube	59.95
Decimal Dungeon	49.95
Delta Drawing	59.95
European Nations & locations	59.95
Face Maker	59.95
Fraction Action	49.95
Grammar Examiner	59.95
In search of the most amazing things	59.95
Kids on Keys	59.95
Kidwriter	59.95
Kindercomp	59.95
Lex, Wizard of Words †	39.95
Magic Maths (4-12 yr) CGA	39.95
Maths Mania (8-12 yr) CGA	39.95
Maxi Maths (12-16 yrs)	39.95
Micro Maths - advanced for Years 9-11 students	69.95
Mission Algebra	59.95
Mixed up Mother Goose †	59.95
Notable Phantom	59.95
Number Fun 1 †	29.95
Physics (12-16 yrs)	39.95
Race Car Arithmetic	49.95
Remember!	89.95
Sesame Street series - covers problem solving, predicting, logic & reasoning	
Ernie's Big Splash (4-6 yrs)	39.95
Astro Grover (3-6 yrs)	39.95
Grover's Animal Ad (4-6 yrs)	39.95
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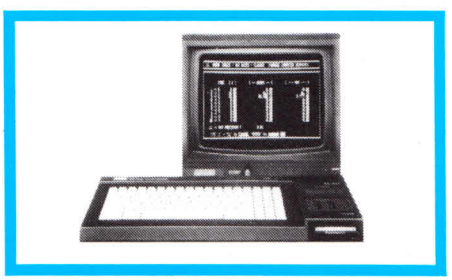

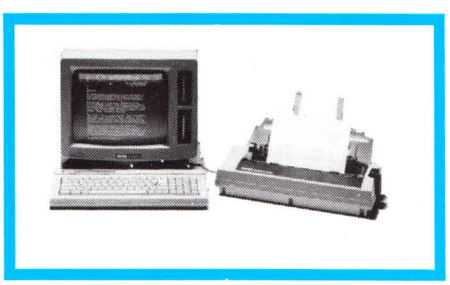

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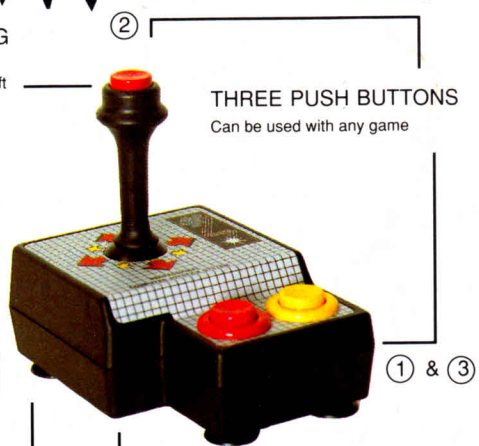

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