

November 1987

£1

AMSTRAD

COMPUTER USER



EXCLUSIVE: Amstrad's
new 24 pin printer

RoDos – Escape
from AmsDos

Plus: Pokes, news, advice on
serious software, survey report
and much, much more

**Imagine's fantasy
coin-op previewed**

Official Amstrad Home Computing Magazine

Norway NOK 20.00
Spain 300 Ptas
Turkey 1650 TL
Denmark Kr. 31.00
New Zealand NZ\$4.95 Rec.

KNIGHT ORC



KNIGHT ORC

Available in August:

AMIGA (Disc) · ATARI ST (Disc)

To follow soon:

IBM PC (Disc) · MAC (Disc) · APPLE II (Disc)

AMSTRAD CPC (Disc) · AMSTRAD PCW (Disc)

ALL AT £19.95

CBM 64/128 (Cassette or Disc)

AMSTRAD CPC (Cassette) · SPECTRUM (Cassette)

ATARI 800 (Cassette or Disc) · MSX (Cassette)

ALL AT £14.95

*Text version only.

At all good retailers or direct from:
RAINBIRD MAILORDER

To order enclose a cheque/PO payable to
BRITISH TELECOM plc stating machine,
cassette or disc, and number required and send to
RAINBIRD MAILORDER, PO BOX 394, LONDON N8.

Or call the RAINBIRD HOTLINE on
01-348 8618

quoting your Access/Visa card number.

Remember, always state your Name, Address and
Postcode including the reference code printed below.

All prices include P&P. Allow 28 days for delivery.



PUBLISHED IN THE UK BY RAINBIRD SOFTWARE,
FIRST FLOOR, 74 NEW OXFORD STREET, LONDON WC1A 1PS
Rainbird and the Rainbird logo are trademarks of
British Telecommunications plc.

Enter the world of Knight Orc.

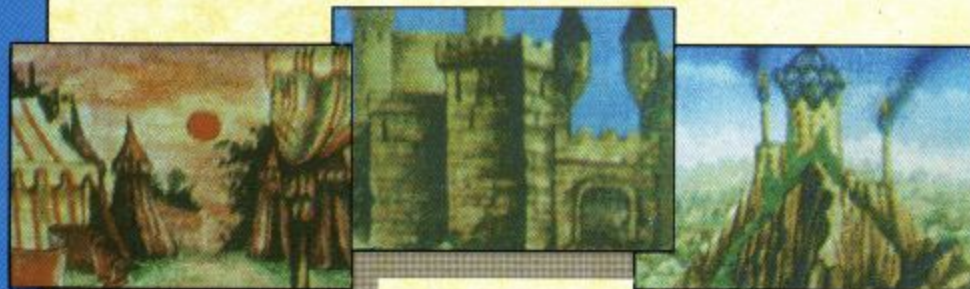
The latest, most challenging and fun packed three part
adventure from Level 9.

The text is pure Level 9 at their most innovative and
the graphics, well they are superlative; state of the art and
worlds beyond.

You are cast as a desperate, downtrodden, evil minded
Orc on the rampage in adventureland.

For generations the Humans have been persecuting
Orcs, which is hardly surprising as Orcs are singularly
unpleasant creatures.

Now it's time to redress the balance.



With 70 characters to contend with, masses of spells
and puzzles to use and solve, you'll need all your Orcish
cunning if you are to reap your ultimate revenge.

But be warned adventurers, for all is not as it first
appears in ... Knight Orc!

Screen shots taken from the Amiga version.



REGULARS

- 5 News
- 11 Letters
- 19 The Hairy Hackers Haunt
- 27 Adventures
- 47 Gallup chart
- 74 LSB

REVIEWS

38 LQ3500 Review

Amstrad Computer User's exclusive review of the long awaited 24 pin dot matrix printer. Now you can have quality and speed without paying a fortune.

42 RoDos

Jeff Walker looks at an alternative disc operating system for the CPC. If you want bigger discs, random access or hieratical directories then RoDos is for you.



63 Software reviews

New games reviewed. This month the excellent Mask from Gremlin tops the lot.

FEATURES

25 Survey report

You are male, read *Amstrad User* regularly, own discs and a printer, use Mini Office II and play games. You are a typical ACU reader. Have a look at your other foibles in our survey results.

33 Cage Page

Electronic exchange of *Amstrad User's* views. Paul Needs referees as users advise on macros, non-Amstrad monitors, corrupted discs and more.

48 Gryzor

Imagine's latest arcade conversion is splendid. Simon Rockman took a sneak preview of the Konami-to-Amstrad conversion.

51 Applications Advice

David Foster continues his clinic on sensible software with advice on Masterfile and a review of the Qualitas package which offers high quality print on Epson-compatibles.

PROGRAMMING

56 Assembly point

Peter Green's regular column for machine code maniacs looks at disc formatting. You need never worry about the state of your discs again.

OFFERS

- 68 Goodies, and no baddies, to make your Arnold feel better.

AMSTRAD

COMPUTER USER

The official magazine for all users of Amstrad computers

Editorial and Advertising offices:
169 King's Road, Brentwood, Essex CM14 4EF.
Tel: 0277-234459 (Editorial); 0277 234434 (Advertising)
Telecom Gold: 72:MAG021

Published by Avrallite Ltd, 36/38 St. Petersgate, Stockport SK1 1HL.

News trade distribution: Diamond-Europress Sales & Distribution Ltd,
Unit 1, Burgess Road, Ivyhouse Lane, Hastings, East Sussex TN35 4NR.
Tel: 0424 430422.

Editor: Simon Rockman
Advertisement Manager: Jane Nolan
Advertisement Assistant: Lorraine Day

ABC

63,599
Jan-June 1987

Amstrad is a registered trade mark, and with the title *Amstrad Computer User*, is used with the permission of Amstrad Consumer Electronics plc. No part of this publication may be reproduced without permission. While every effort is made to ensure the accuracy of all features and listings we cannot accept any liability for any mistakes or misprints. The views and opinions expressed are not necessarily those of Amstrad or Amsoft but represent the views of our many readers, users, and contributors. Material for publication is only accepted on an all-rights basis. We regret that *Amstrad Computer User* cannot enter into personal correspondence. © Avrallite Ltd 1987.

How to be a **COMPLETE**



Game

Ade is the sort of person who loosens the screws from the handles of disabled persons' toilets or markets Space Shuttle Jigsaw Puzzles.

In the game he has successfully gate-crashed a yuppie party on the posh side of town and to succeed as **The Complete Bastard** he must incapacitate all the guests by the end of the party and light up each letter in the phrase **COMPLETE-BASTARD**. He must also build up as many **Bastard Points** as he can by extremely offensive behaviour.

Now you can play Ade and be a **Complete** and **Utter Bastard** in this arcade adventure with split-level screen that's crammed full of absolutely **tasteless humour**.

'Anything this horrible is bound to sell millions.' Sinclair User.

Based on the book of the same name © 1986 by Adrian Edmonson, Mark Leigh, Mike Lepine. A Virgin Book.



Amstrad screen.



Spectrum screen.



HOW TO BE A COMPLETE BASTARD is available from all daring software retailers, or directly from us **under plain brown wrapper**.

Please make crossed cheques or postal orders payable to Virgin Games Ltd and send to Virgin Games Ltd, 2/4 Vernon Yard, Portobello Road, London W11 2DX.

PLEASE DO NOT POST COINS OR MONEY

- ☐ Commodore 64/128 (£9.95) ☐ Spectrum 48/128 (£7.95)
☐ Amstrad CPC cassette (£8.95)

Name _____

Address _____

Total money enclosed _____



New machines are key to prices

IN a move which gives Amstrad customers a choice of more than 20 different machines, the company has launched two new models of PC. Two machines which are no longer mentioned are the 10 megabyte hard disc models, which have not sold particularly well and are expected to be discontinued.

The restructuring of the range leaves Amstrad with six PC 1512 models and nine PC 1640s.

As a result there will be some changes in the prices of most Amstrad computers.

The price of the PC 1512 has been cut by about £50, back to the level the machine was launched at one year ago.

Two new versions of the PC1640 have been introduced, the PC1640 MD and the PC 1640 CD. They have been available in the USA for some time and it makes sense for the improved mono and colour machines to be sold here. They will eventually replace the PC 1512.

Moving down the range, the PCW9512 has been launched at £499. The PCW 8256 is to carry on for the foreseeable future, but with a price cut of £100 making it a bargain at £299. The PCW8512 drops to £399 – all prices plus VAT.

Moving to the bottom of the range, the Spectrum Plus 3 has been criticised for being overpriced, despite a number of bundling deals. The price has been cut from £249.95 to the magic £199.95.

All this must leave us wondering what will happen to the CPC 6128. It is the machine which ACU expects to maintain its price, although anything which encourages more people to buy CPCs must be seen as a good thing.

The CPC464 and 6128 will be bundled with a joystick and 17 games – including Trivial Pursuit and Seawolf.

ACU hopes that Amstrad will continue to produce the machine for the next year at least. The French market is strong enough to justify that, if nothing else.

However there are a number of seri-

ous rivals. The Commodore 64 is to have its price cut, and the Atari ST at £299 is perilously close to the 6128 – although that does not include a monitor. Don't expect any major CPC announcements this year though.

On a more positive note, Amstrad has launched two new printers, the LQ3500 and LQ5000, both 24 pin high quality. See our exclusive review on Page 38.

There have been major moves on Amstrad's part to make the company a major world force. Until recently distribution in Italy had been a little patchy. Now Amstrad Italy has been set up. This is owned by Amstrad UK and will take on Olivetti at home – what's the chance of Amstrad following the Italians with a Formula 1 racing car? Probably nil.

Equally exciting is the purchase of Vidco, Amstrad's American distributor. Until recently Vidco has performed a stalwart job of selling Amstrad PC computers.

ACU suspects that Amstrad will build on this success by using its substantial financial clout. The takeover cost Amstrad £5 million, coincidentally the same price as Amstrad paid for the Sinclair properties. So if you want to sell out to Amstrad it seems that £5 million is to Amstrad what £299.95 is to



"This deal will give Vidco the means to become highly competitive and at the same time have the resources to capitalise on the market's potential."

"It was clear that Vidco was unable to support the inventory levels to achieve the penetration of the market we require."

"We have learned that the US market is very competitive and, frankly, there seems no room for a middle-man distributor."

– Amstrad chairman Alan Sugar talking about the Vidco buy-out.

computer buyers – the right price.

Rumours have been circulating about the formation of Amstrad GmbH. Schnieder currently sells Amstrad computers in Germany and to a number of other European countries. Now it appears that Amstrad intends to take over this marketing, after becoming unhappy with the way Amstrad computers are selling over there. This has not been substantiated.

We are the Champions

IT's official. Amstrad Computer User is the best selling Amstrad magazine in the country. And it's all thanks to you.

The Audit Bureau of Circulation has confirmed the magazine has a circulation of 63,599 copies every month. This is very nearly twice as many as our nearest rival.

The ABC is an organisation paid for by publishers and advertisers who act impartially

to assess the circulation of most of the major publications in the country. Until now ACU has not been ABC certified. Now we have it in black and white that you like us best.

But Amstrad Computer User is not going to rest on its laurels. There are some super new features coming up. Thank you for making ACU the country's favourite Amstrad magazine. We'll ensure it stays the best.

THE NEW AMX MK. III MOUSE. TRAP ONE SOON.



The MK III AMX Mouse is a product of Swiss precision and the result of a world-wide search to find a worthy successor to the AMX Mouse MK II. The new Mouse has been specially chosen to be the perfect partner to the ever expanding range of AMX software.

The unique patented design includes high resolution D.P.I. and superior ball technology to ensure that contact between the Mouse and the surface is constant at all times. There's a new shape too, that fits comfortably in the hand.

Join the great "Mouse-Swap". Part exchange your old Mouse for the new MK III for only £29.99.



*ART AND CONTROL

**AMX MOUSE MK III PLUS ART AND CONTROL,
TAPE AND 3" DISC, £69.99**

Acknowledged as the most sophisticated yet easy to use paint package available for the Amstrad CPC, it's no wonder over 20,000 have already been sold.

AMX Art features include cut, copy, paint, plus many, many more such as fantastic spray and zoom facilities. The package also includes AMX control which enables you to create a mouse environment in your own programs. Available for Amstrad CPC 464, 664, 6128. Please state which version is required when ordering.

*STOP PRESS

AMX MOUSE MK III PLUS STOP PRESS, 3" DISC £79.99

The most highly acclaimed desktop publishing software available for the Amstrad CPC. Already thousands of users are producing professional documents, newsletters, fly-posters etc. In fact anything where text and graphics are required. 'Stop Press' comes complete with 16 variable typefaces. Available for Amstrad CPC. 6128, CPC 664 (+ 64K min add on Ram), CPC 464 (+ 64K min add on Ram + Disc Drive). Please state which version is required when ordering.

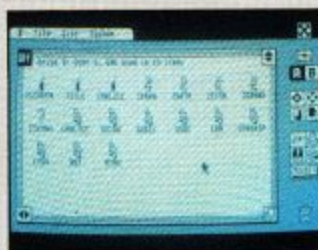
STOP PRESS (ONLY) £49.99

EXTRA! EXTRA! 2 x 3" DISC £24.99

300K fantastic clip art and over 25 extra fonts.

*MAX 3" DISC £19.99

MAX provides an easy to use graphic based front end to your computer's disc filing system including a comprehensive set of disc management operations such as cataloging, copying, deleting and re-naming. Also included are disc utilities such as sector editing, recovering erased files, formatting, verifying and faster tracking. You can also run programs from within AMX. Available for Amstrad CPC, 464, 664, 6128. Please state which version is required when ordering.



*AMX MAGAZINE MAKER 3" DISC £129.99

A combination of Stop Press and the Rombo Vidi-Video digitiser. Using any video and the digitiser, images from a camera or TV can be converted into a graphics screen with Stop Press to illustrate magazines or newsletters. In fact anything that needs to be created on A4 size paper. With Stop Press's many features a variety of pictures can be composed, the only limit being your imagination.

ROMBO VIDI DIGITISER (ONLY) £89.99



There is also a growing list of AMX support software including: AMX 3D Zicon (3" Disc) £24.99 with Zicon you can transform vector data into on screen graphics. Printers and plotters are fully supported, AMX Utilities (3" Disc) £19.99 Utility software for the original art program supplied with AMX Mouse. A Mouse and Interface (only) can be purchased for £34.99 direct from AMS using the order form enclosed in MAX, Stop Press and AMX 3D Zicon. These superb products are available from all good computer dealers or direct by cheque, Access or Visa. All prices include VAT and post and packaging.



FOR INSTANT ACCESS, VISA ORDERS TELEPHONE (0925) 413501/2/3



*ALL THESE PROGRAMS WORK WITH
KEYBOARD, JOYSTICK OR MOUSE.

AMX SOFTWARE

· IMAGINATION AT YOUR FINGERTIPS ·

ADVANCED MEMORY SYSTEMS LTD. 166/170 WILDERSPOOL CAUSEWAY, WARRINGTON, WA4 6QA. TELEX 628672 AMSG. FAX 0925 58039.
TUBELINK ON PRESTEL *800256# SUPPORTS THE AMX MOUSE, AND ALL AMS SOFTWARE.

DTP gets its yearbook

THE world's first yearbook dedicated to the rapidly-growing desktop publishing industry is being produced to coincide with the most important exhibition event in the DTP calendar – The Desktop Publishing Show 1987.

Compiled with the co-operation of PIRA, the UK Technology Centre for the printing and publishing industry, the yearbook will have comprehensive details of price-performance of all the most important hardware and software in the field, and detailed articles aimed at the newcomer and the experienced user.

All visitors to the show – being held from October 15 to 17 – will receive a free copy.

Meanwhile another category has been added to the list of PIRA-sponsored Desktop Publishing awards to be presented at the show.

Already the search is on to find the best DTP newspaper or magazine, in-house company report and leaflet or newsletter. The extra award is for the best example of a "predominantly DTP produced" book.

Details on how to submit entries can be obtained from 061-456 8383

On with the show

GOOD news concerning the forthcoming Amstrad Computer Show in Manchester is that it will include the Amstrad Theatre – scene for non-stop presentations of all that's new for Amstrad machines.

This is the first time the highly popular attraction has been a feature of an Amstrad Computer Show outside London.

The auditorium includes seating enabling 150 to watch and listen in comfort while experts demonstrate the latest hardware and software and conduct question-and-answer sessions.

In addition, there will be no fewer than eight feature stands occupied by Amstrad itself, the Official Amstrad User Club and major suppliers.

These impressive focal points – just part of the total of 70 exhibitors – are made possible by the show's location.

The 100,000 sq ft Greater Manchester Exhibition Centre was specially chosen by organisers Database Exhibitions to house the UK's biggest com-

puter specific show ever held outside London.

Already a large number of firms have said they will bring exciting new products to the show – providing visitors with an ideal opportunity to fill their Christmas stockings.

The show runs from Friday to Sunday, October 23 to 25. A money-saving advance ticket order form is on Page 41.

Word perfect

COMPUTER users can now have access to what is claimed to be the biggest – and most up-to-date – multi-lingual dictionary in the world.

It is all part of a new service being offered by MicroLink, the UK's fastest

growing electronic mail service, through a cross-Channel electronic link.

The computerised dictionary offers translations from any one of eight languages into any other – or into more than one at the same time.

Sitting at their keyboards, all subscribers have to do is type in a word or a complete phrase and the Great European Dictionary does the rest.

Housed in an EEC sponsored main-frame computer in Luxembourg, it is the result of a massive collaboration between language experts throughout the community.

The Great European Dictionary consists of more than 380,000 words and phrases in English, German, Danish, Dutch, French, Italian, Portuguese and Spanish.

New software

With magazine publishing lead times being a constant burden it is difficult to keep up to date with what is new on the shelves in your local computer shop.

But we try. Here is a round up of the latest releases in a major London shop, with thanks to Justin Garvanovic and JKL Micros of Uxbridge.

Transmuter

Codemasters

£1.99. Yet another Nemesis clone, and a bad one at that. Probably the worst sprite routine ever seen on the Amstrad. We can't see how anyone could actually release this and hold their head high. Terrible.

★ ★ ★

Dizzy

Codemasters

£1.99. From the authors of the excellent Grand Prix Simulator comes this mediocre multi room jaunt. Codemasters seems to have a serious case of sprite flicker this month. Take the tablets ready for next time.

★ ★ ★

Death Wish 3

Gremlin Graphics

£9.99. We're usually a fan of the In house Gremlin stuff but this is a bit of a let down. It reminds you a bit of the Marsport style games from Gargoyle. Good digitised title screen, and the Benn Daglish tune isn't all that bad.

★ ★ ★

Wizball

Ocean

£8.95. Conversion time again with this release from Ocean. You play a Wizball

and a cat (probably the Hairy Hacker's) and have to collect paint to bring colour back to the landscape. Some warped minds behind this.

★ ★ ★

Classix 1

The Edge

£6.99. Compilation of three games and two demos. The games are: Bobby Bearing, Brian Bloodaxe (with an Ingenious title screen) and Palitron. Demos for Shaolin's road and Shadow Skimmer are also included. Worth buying for Bobby Bearing.

★ ★ ★

Warlock

The Edge

£8.95 From the author of Palitron comes another 3D isometric effort. Plays almost identically to Palitron and so suffers from the same speed problem when there are lots of sprites on the screen. Above average graphics.

★ ★ ★

Core

Bug Byte

£2.99. Re-released at a budget price, originally released by A 'n' F. This is another example of a straight Spectrum conversion, monochrome sprites as far as the eye can see. Wander round oodles of screens, collect thzzzzzzzz.

★ ★ ★

Catch 23

Martech

£8.95. Vector graphics time again. This game reminds you of Mercenary. Includes some sprite graphics just to spice up this vector romp.

G A L L U P

SOFTWARE

C H A R T

Last month
Market strength

1		Paperboy Elite 8.95	This game was late out on the Amstrad due to strict quality control. Written by an ex-Vortex man, it is the best conversion of the arcade game, even if it has no sound at all.	3	100
2		Grand Prix Simulator Code Masters 1.99	The racing game for those who know their opposite lock from a four wheel slide. Super Sprint by any other name would still play as sweet. This is a bargain.	4	98
3		Cricket International Addictive 1.99	Bad timing to bring this out as the cricket season is bowled out. A good game, something to remind you of leather against willow until next summer.	NE	93
4		Milk Race Mastertronic 2.99	Good to see Mastertronic sponsoring sport. We would prefer to see more effort directed at the motor racing car sponsored by Mastertronic.	7	73
5		BMX Simulator Code Masters 1.99	Cycling simulator best played with a friend. A good, fun game with a low price. BMX may be on the decline, but the memory kind of lingers.	1	72
6		Destructo Bulldog 1.99	Falling almost as quickly as it rose, Destructo is overrated. Proof that a well distributed budget game will sell; a full price game has to be really good to chart.	2	70
7		Ghost Hunters Code Masters 1.99	A spooky game by the same programmers as Grand Prix Simulator. It will be interesting to see what happens with the full price games from Code Masters.	6	66
8		Run for Gold Alternative 1.99	Proof positive that the small-time software house can still make a good showing if the price is right. Making a new entry into this chart is some achievement with so many good new titles around.	12	63
9		Barbarian Palace 9.99	Showing that sexism is good for sales and a bit of decapitation doesn't hurt the bank balance. Well programmed, detailed graphics; no morals	5	86
10		The Living Daylights Domark 9.95	Follow 007 around the world in his computer caper. Well programmed with detailed sprites and smooth scrolling. You need to be sharp of eye and quick of wrist.	NE	42
11		Feud Bulldog 1.99	First game on Mastertronic's new label. Chunky sprites and a mystic plot go to make up this 2D arcade game. Long runner in the chart.	10	40
12		Six Pak Hit Pak 9.99	The Amstrad chart is usually dominated by compilations. This month things are different, only three in the top 20 and none in the top 10.	11	38
13		Ninja Master Firebird 1.99	Long in the tooth Oriental decathlon. Chop bits of wood, avoid flying stars and wince at the naff graphics. Even the theme is tired. Give it a rest.	NE	36
14		Mission Genocide Firebird 1.99	The best, the most incredible scrolling game ever. Written by Paul "Spindizzy" Shirley. Lots to shoot, bomb the Bad Stars. Worth more than £1.99.	NE	36
15		Mission Jupiter Code Masters 1.99	Ignore the fact that anything which tried to land on Jupiter would get crushed by atmospheric pressure, and that the planet is really a ball of gas. This is a scrolly-shooty-spritey game.	NE	35
16		Gauntlet US Gold 9.99	Quality pays. A wonderful program, great sprites, often copied never equalled. If you've got it buy the deeper dungeons.	RE	34
17		Park Patrol Firebird 1.99	Once a full price Activision title, now more realistically priced. Good fun, non-hostile. Keep the park clean on land and lake. You play parkie in search of coke cans.	NE	34
18		Konami's Coin Op Hits Imagine 9.95	Take the best from the arcades into your home. Green Beret, Ping Pong, Hypersports, Mikie and the splendid Yie Ar Kung-Fu. Looking a shade dated now, but a good blast all the same.	15	33
19		Big 4 Durell 9.95	Top notch compilation. Two excellent games, one good one and a totally new program. With this kind of value it is a surprise that Big 4 has tumbled so far from number 1.	17	30
20		Army Moves Imagine 9.95	The first Imagine game to result from a deal with the Spanish software house Dinamic. Bouncing buggies and 2D graphics.	18	30

Non-mover Up Down New entry

The facts of life - for CPC owners

There's birds...

'The Swift' — an uncommonly fast bird, often seen speeding past its more pedestrian feathered friends. Rather like Protext, an amazingly quick word processor that streaks ahead of its rivals. Its incredible speed is only matched by its amazing range of features. It works with any printer, has a comprehensive array of simple command options and contains a complete on-screen help facility.

£39.95 ROM / £26.95 Disc

There's bees...

'Spelling bees' — like miscellaneous, available, unnecessary and separate — they're easy to make and frustrating to miss. Prospell scans your documents in seconds to pick up wayward words. Anything that is unrecognised can be corrected, ignored or added to the dictionary. It works with any word processor that runs on the Amstrad CPCs. Its dictionary contains over 34000 words, with room to add thousands more of your own. And it buzzes through your files at around 2000 words every minute!

£34.95 ROM / £24.95 Disc

And there's Miss L. A. Nurchi of Dartford.

Miss Nurchi is a very important person — she's an individual and she doesn't like letters that begin 'Dear Householder', or 'Dear Customer'. She especially hates the ones that start 'Dear Sir'. Promerge Plus is a fast, flexible, mail-merge program that works with Protext to produce attractive, personalised letters. Using keyboard or file input, it combines specific details with standard drafts, based on your selection criteria. And with ROM-based Promerge Plus you're free to use an extra 64K on the CPC6128 and work on two files stored in memory. Arnor's disc-based Promerge is also available.

£34.95 ROM / £24.95 Disc

Remember that other fact of life — ROM software gives instant access to your application program and releases more memory for your work files. Arnor's Rombo — at £34.95 — is the ideal 8-socket ROM box.

Call 0733 239011 — 24 hr service



Releasing your Amstrad's potential...

Arnor Limited, Protext House, Wainman Road,
Peterborough PE2 0BU

ARNOR

MASTERFILE III

FOR THE AMSTRAD CPC 6128 (ALSO CPC 464/664 WITH DK 'TRONICS 64K RAM)

FIRMLY ESTABLISHED ...

MASTERFILE III is now firmly established as THE filing system for the CPC6128. It has received rapturous reviews and we could paper the walls of our new offices with our customers' letters of appreciation.

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 pre-formatted, 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 (e.g. 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 ...

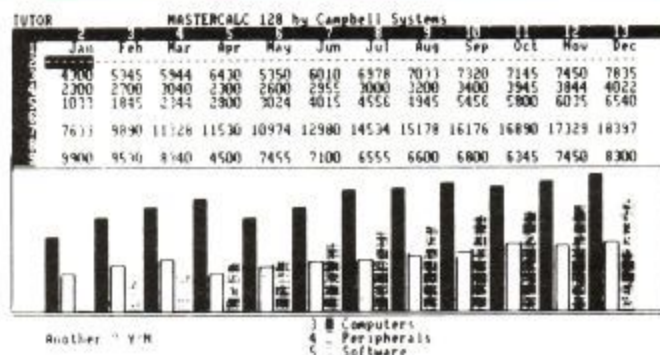
This is no toy thrown together in BASIC and half-tested, but real machine-coded computing power professionally constructed. We have had IBM and Apricot users beg us for a MASTERFILE for their machines — when they had seen the earlier CPC MASTERFILE. All this power is yours for ... £39.95.

For those who already have an earlier MASTERFILE, we offer updates; please telephone for details. You will be amazed at the performance improvements and extra functions.

★★★ PCW users: be patient, MASTERFILE 8000 will be ready early in 1987 ★★★

MASTERCALC 128 SPREADSHEET

We also have one of the fastest and friendliest spread-sheet programs around, MASTERCALC 128. Its special features include: individual tailoring of column widths and precision; relocatable formulae; split-screen option; automatic cursor advance; text output to printer, or to disc for interface with PROTEXT or TASWORD; hi-res graphic histogram of any three rows. MASTERCALC 128 runs on CPC6128, or CPC464/664 with DK'tronics RAM. The price is just £33.00



SPECIAL OFFER

You can save £10 by taking MASTERFILE III and MASTERCALC 128 for a combined price of just £62.95.

Prices include VAT and P&P to anywhere in Europe. Elsewhere please add 20% for air-mail service. ACCESS/VISA/MASTERCARD welcome, written or telephoned, quoting card expiry date. Make cheques payable to "Campbell Systems". Our normal response is return of post, 1st class.

CAMPBELL SYSTEMS Dept. (ACU)
7 Station Road, EPPING, Essex CM16 4HA,
England. Tel: (0378) 77762/3.

Summary of Business Assets			
Description	Maker	Model	Value
Microcomputer, 64K RAM + 32K ROM	Amstrad	CPC 464	£199.00
Microcomputer, 128K RAM + disc	Amstrad	CPC 6128	£299.00
Disc interface and 1st drive, 3"	Amstrad	DDI-1	£149.95
Dot-matrix printer 50cps 80col	Amstrad	DMP-2000	£159.95
Executive briefcase	Antler	ATB103	£42.00
Wire paper clip	British Steel	BMC	£8.01
Answering machine	British Telecom	BT2036	£185.00
Photocopier, single-feed	Canon	PC-10	£650.00
Executive jet aircraft	Lear	Cloud-Cuckoo	£5,200.000.00
Typewriter, electric	Olivetti	Leterra 36	£130.00
Dictation machine	Philips	510	£190.00
Coffee maker	Philips	HD5349	£30.00
Parcel scale	Salter	250P	£119.00
Microcomputer, 48K	Silicam	Trumpsac	£129.95
Letter scale	Waymaster	375KL	£10.00
Totals:			£5,202,294.26

Top record = 0001 (N) for menu
File FILE2 Records 0016 Selected 0016 Parents 0000 RAM used 02K from 64K

Hi, I'm Lance Davis, your letters editor. If there is anything you think Amstrad computer users ought to know about then drop me a line. I can't deal with individual problems and this isn't really the place for programming tuition but it is the place for bouquets and brickbats, views and opinions. Write to me at the address in the front of the magazine or on Telecom Gold System 72:mag012. Remember that some writers will be sent free software, so let me know which computer you have.



Getting the point

I AM beginning to find Basic a bit limiting as it does not allow me to use the full capability from my machine. I would like to move on to machine code and would appreciate some advice about this.

Which book or pack would you recommend that would give me as much information as possible on machine code, hints and tips on how to use it, listings of example programs and so on?

When machine code is talked about, the word Assembler seems to occur. I am still not really sure what an assembler actually is, as some books describe it as a "machine code translator for the computer", others as a "pack of programming utilities", and others just as a "ASM file changer".

What is an assembler? and, if it is necessary to have one to program in machine code, could you recommend one that isn't too expensive?

**Ben Breveton,
Melton Mowbray**

Missing the point

I AM writing with a question: I saw a program in assembly point in the August issue of ACU and tried typing it in. As soon as I pressed the Enter key after each line I got a Syntax error message. Do I need an assembler or special program to type in and run this listing? I have a CPC464.

**Simon Howe
Bournemouth, Dorset**

LD: Yes you do need an assembler, but I'd say that if you are as green as your letter would indicate then you are jumping in at the deep end with Assembly Point.

I'd recommend the Ed's favourite Amstrad User November 1987

machine code book - Dr Watson's Guide to Assembly Language Programming from Glentop Press. There was a discount voucher for it in last month's issue. That includes a simple assembler.

If you just want to buy an assembler then Maxam from Arnor is very easy to use.

Upgrade

I HAVE recently acquired the DKTronics 64k ram for my CPC664. Does this make my computer compatible with all the CPC6128 software? If so, would you recommend The Informer (from Treasure Island Software) as an art package?

**J F Smart,
Portsmouth, Hants**

LD: Due to the clever design of the DKT Ram pack an upgraded 664 should function in the same way as a 6128. The ENABLE command supplied with the ram pack will see to any program which doesn't.

Informer is a display package - you'd be better off looking at Rainbird's Art Studio or Treasure Island's Parrotty packages.

Future Shocked

IN my August edition of ACU I read the article with regard to the future of the CPC. The way I read it is that you intend scrapping Arnold and concentrating on that load of rubbish - the Spectrum, which was completely useless.

I am surprised at you doing this as your own Amstrad CPCs are the best on the market. Having purchased the Amstrad CPC464 with colour monitor, and more recently the DMP 2000 printer - not to mention all the software - I am anxious to know if this information is true.

And if it is, how do we cope in the future with repairs or whatever? Will you be replacing the items or will we have to purchase another computer?

As a student I use these items to further my education as I intend to work in computers in the future. Could you possibly put my mind at ease as to the future of the CPC?

**L.S. Roberts,
Wrexham**

LD: The article was the result of research, not really ACU's opinion. I felt that it reached the conclusion that

the CPC is still going strong thanks to the European market. Even if Amstrad were to stop importing the machine to Britain there would still be strong software support from those companies which sell worldwide. Amstrad hardware support is excellent, I had a 664 repaired recently and they usually have stock of parts for machines which have not been made for seven years.

Starry eyed

AS an amateur astronomer and 6128 owner I would welcome astronomical programs in Amstrad format. Apart from Amsoft Starwatcher I know of no available programs for Amstrad. They are available for Spectrum, IBM PC, Apple II and BBC Model B – so what about it?

**B.P. Hughes,
London**

LD: This is the old problem of minority interest software. A good game will sell around 10,000 copies at £10 each. If you sold a copy of your astronomy program to 20 percent of the people who regularly use a CPC and a telescope you'd be doing well.

I'd guess that 1,500 people might be interested. That means the program would have to sell at nearly £70 to be a worthwhile proposition, and then it all falls down of course.

Few people are willing to pay that, the price goes up, fewer still are interested and so on. It is the same problem as has been discussed in these pages about genealogy and flight simulation.

Lost Oasis

I RECENTLY purchased Ocean's Laser Basic to help with the sprite design and movement in some of my programs. I used it for a few weeks, finding it an excellent program with which to design sprites and enhance programs.

So far I have only one question to put

forward to Oasis; Do you need the Laser Compiler to compile your programs that use Laser Basic to be able to sell them, or can you buy a cheaper compiler to do the same job?

I wrote to Oasis asking this question, using one of their technical enquiry cards supplied. It clearly states that "Oasis believe in giving full technical support to all their products".

About a week later it was returned to me in a Post Office Returned Postal Packet with a line through the address and the words Gone Away scrawled beside it.

You are the only person I can think of asking to help with this problem. Please could you tell me if you have any idea where on earth (or off it) Oasis Software is?

**Conan Ablewhite,
Leicester**

LD: You certainly do need the Laser compiler to produce machine code from a program which uses Laser Basic commands, but Oasis went into liquidation nearly a year ago, and, as a result of this the program is no longer available. It is a shame because the Laser programs were excellent. Perhaps they spent too much time supporting the product.

Bit rot

Shock! Horror! Corruption at the highest levels among the ACU editorial staff! This, I am afraid is the only conclusion I can draw from the following sad tale.

November 1986 marked the start of a superb new feature, Assembly Point, part 1. By February 1987 we had reached part 4, and things were looking good. Then in March, a new issue, a new Assembly Point article, but, vot iz zis? Part 4 again?

Some sly guy had executed a RENUM command on the series and since then every article has been given a number less than it deserved. So, for example, part 9 in September's issue

should really have been part 10. This looks like an attempt to pay Mr Peter Green, the author, for one less article than he actually wrote. It's a disgrace! Irangate all over again, at ACU.

Or maybe the editorial staff are innumerate ... no, not in a computer magazine.

**Stephen Graham,
Chichester, West Sussex**

LD: Then last month Assembly Point disappeared altogether! This is not an attempt to defraud Mr Green, but I'll bribe you with a copy of Virgin's Election game.

Disc delay

WHY is it that when Amstrad brings out anything new which can be added to my CPC464, I have to go on a bl***y waiting list as the item I require has sold out?

I have been waiting for the DDI-1 Disc Drive since last October: And can I get one? Can I hell. Sorry about that, but I have really tried to get this DD so much so that I am now writing to you to see if you can put me in touch with a company that can supply the item I require, and don't have to go on a waiting list for another year ...

**Mike Southey,
Norfolk**

LD: When you say that you are on a waiting list I assume you belong to the user club. That is the best place to wait since they place the biggest orders with Amstrad and so get the largest proportion of drives when they are shipped. So if you are not in that queue then join it.

Monitor madness

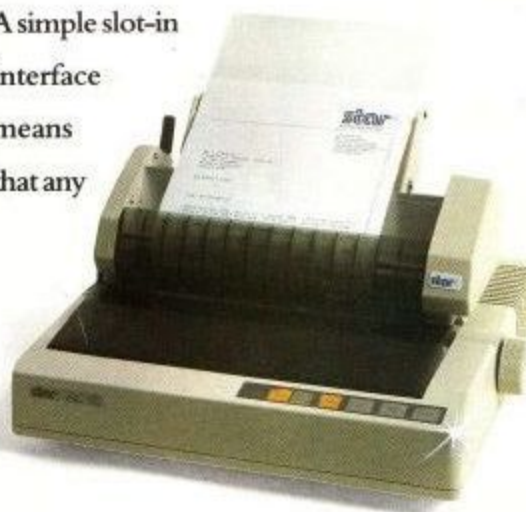
SIX months ago I bought a CPC6128: As I was not sure if my family would take to computing we only bought the green screen version. I soon realised how valuable colour would be so we purchased a modulator for use on the



Half a dozen steps to the right decision.

When you've seen one printer you really haven't seen them all. That's why, when you're trying to choose your first or your next, you really need all the help you can get. Here are a few steps to get you started.

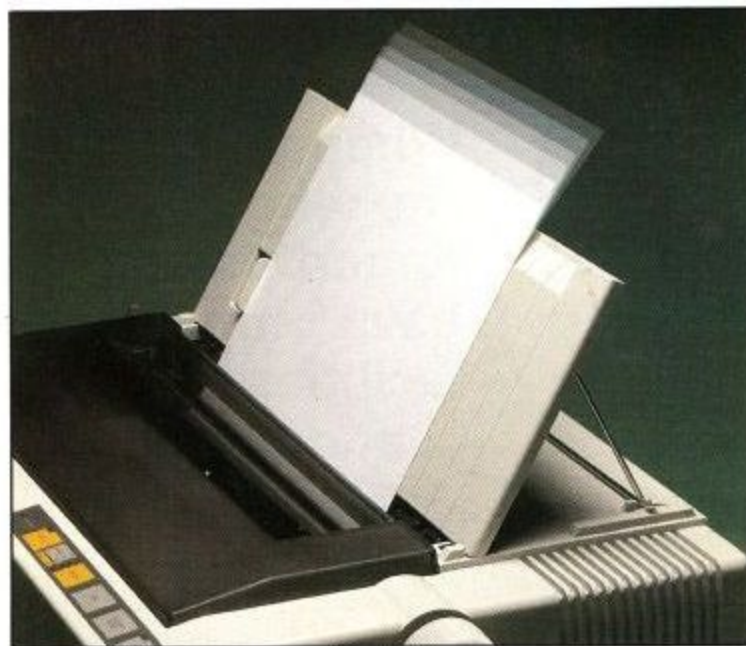
1 Compatibility. You needn't worry about matching any of our six 9-pin printers with your present system. A simple slot-in interface means that any



Star printer can be used with virtually any terminal or PC set up. And, equally important, the software command sets are switchable.

2 Value. Getting more doesn't mean you have to pay more. All our printers are proof of that. Whatever your budget, the Star 9-pin printers start from just £248 for the NL-10 going up to £589 for the NR-15.

3 Simplicity. The Front Control Panel on all Star business printers gives you total control at the touch of a button. Selecting draft or Near Letter Quality printing, print pitch, margins and paperfeed control are sheer simplicity. No mess, no fuss and no more fiddly DIP



switches for all your usual daily needs. All our machines have semi-automatic single sheet feeding too. Simply drop your page into the top, press a lever,



and the printer advances it to the correct position ready for printing.

4 Performance. Star's 9-pin range has a choice of two paper widths, either 10" or 15" (80 col or 136 col) and three performance levels 120, 180 and 240 cps for draft quality listings, state-

ments and spread sheets. They also have very respectable Near Letter Quality speeds of 30, 45 and 60 cps for correspondence and more important documents. In either mode, Star's print clarity is envied by our competition.

5 Support. When you buy a Star

printer you buy superb back up too. We've a National three-level support system which operates through all our registered Star dealers backed by the

finest distributors in the country, so you're in good hands. Should you need any help at any time, our dealers will give you all the friendly, knowledgeable assistance you need.

6 If you still can't quite make up your mind, fill out this coupon. We'll send you our brochure so you can discover even more about the remarkable Star range of printers for business. We'll also tell you about our range of 24-Pin printers too. Or just call Belinda on 01-840 1829.

Name _____

Company _____

Address _____

Postcode _____

Telephone _____

AU11

THE
Star
PRINTERS FOR BUSINESS

Star Micronics U.K. Ltd. Craven House,
40 Uxbridge Road, Ealing, London W5 2BS.
Telephone: 01-840 1800.

A division of Star Micronics Co., Ltd., Japan.

Link your Amstrad CPC to the outside world with...

MicroLink



Electronic mail – The cheapest and fastest form of communication possible. It costs the same to send a message to one mailbox as to 500!



Telex – Link up with 96,000 telex subscribers in the UK and 1.5 million worldwide. You can even send and receive telexes after office hours or while travelling.



Telemessages – Type in your message before 8pm and delivery is guaranteed by first post the next day (except Sunday), anywhere in the UK and USA.



Tele-booking – Reserve train and theatre tickets, check flight details worldwide, or order from a vast range of products – from flowers to floppy discs.



Advice – Call on a team of professional legal and financial advisors as and when you need them, for both business and personal problems.



Company searches – Obtain facts about any British limited company in seconds, and fully analysed financial information on over 100,000 major companies.



Typesetting – Send copy from your word processor together with details of type size and style, and you'll receive pages ready for printing within 24 hours.



News – Use the powerful search commands to pinpoint vital business information from the world's leading news services, newspapers and periodicals.



Radiopaging – If you also have a pocket radiopager you'll be alerted each time an urgent message arrives in your mailbox. So you're always in touch.



Gateways – Get through to New York in just five seconds – or key into the EEC computer in Luxembourg, which links you to 600 databases throughout Europe.

When you join MicroLink you've got the whole business world at your fingertips – 24 hours a day. You'll have immediate access to ALL the facilities offered by Telecom Gold ... and a great deal more besides.

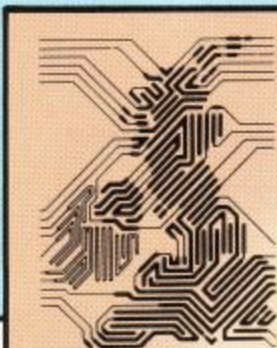


All you need – apart from your Amstrad – is a modem, which plugs into your telephone wall socket, an RS232 interface and suitable communications software.

We have provided a list of possible combinations (left), ranging from the very cheapest to ones which can automatically dial the MicroLink telephone number and connect you directly to the service – all you have to do is type in your personal security password.

Whichever equipment you use, you will be able to call MicroLink, open your mailbox, save to disc any messages waiting for you, and disconnect in as little as two minutes.

Typical comms packages	
A	Cirkit: Acoustic V23 modem + RS232 interface + tape or disc comms software (£35.40)
B	KDS: Minimax V21, V23 autodial modem + RS232 interface + comms rom (£99)
C	Pace: Nightingale V21, V23 manual dial modem + RS232 interface + Commstar rom (£159)
D	Pace: Linnet V21, V23 autodial modem + RS232 interface + Commstar rom (£213)



More than 90 per cent of subscribers can connect to the MicroLink computer at local call rates.

TO FIND OUT MORE
Fill in the coupon and send it to the address below. You will receive full details of services and costs, together with an application form. Complete this and within days you and your Amstrad will be able to use all the services of MicroLink and Telecom Gold.

Please send me full details about MicroLink, and information sheets about the following hardware and software options (please circle):

A B C D

Name _____

Address _____

Postcode _____

Send to: MicroLink, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY.

colour television.

I still feel at a loss though as the picture is not very sharp. Is there anywhere I can buy a colour screen only, or do I have to sell my computer and start again?

**S.Houlding,
Sutton on Sea, Lincs**

LD: The official Amstrad answer is to sell your mono system and buy a colour one. You can see the logic in this: You wouldn't expect to be able to buy an 1100cc Fiesta, decide you want a 1300cc one and expect Ford to offer an upgrade service. But you could do it yourself if you had the necessary skills.

In a similar way you can buy a colour monitor and connect it to your 6128: You will need a monitor with linear input and you will have to build a lead. The modulator will provide power to the computer and disc drive.

More screen screaming

HELP! I know this may sound daft, but I am a CPC464 owner with green screen. I was wondering where I could get a colour monitor, and roughly how much it would cost. I drew a blank in many high street chain stores, so in an act of desperation, wrote to my favourite mag.

By the way, if Vax and his lunchtime lubrication are going to publish more "space scoops", please eliminate mistakes, such as calling $C_6H_{12}O_6$ sucrose, when it is glucose. Oh, and by the way, regarding your Hewson interview, frogs aren't reptiles.

I've been reading this magazine for over a year now and it seems to get better and better. Oh well, sounds like a game's loaded on to my GREEN SCREEN (aagh), so I'd better go.

By the way, I do have a modulator, but every time I go to put the computer on the TV, Eastenders, Dallas or some other such rubbish comes on.

**George Menzies,
Ballindalloch, Scotland**

LD: For the answer to the screen problem I refer the honourable gentleman to the answer I gave to S.Houlding.

For your questions about sugar and frogs I congratulate you and wish you luck with your O level Biology. As a television critic you have admirable taste.

RTFM

PLEASE could you provide me with some information. I have a Silver Reed EX43N typewriter with a I/F 44 connected to an Amstrad CPC6128 com-



puter. I use Protext word processing.

How can I print a pound (money) sign. All I get is R#R when the key is pressed. Also, how can I stop the @ at the start of all printing.

I would be very grateful if you could help me to solve these small problems in an otherwise excellent set up for my needs.

**Colin Bond,
Lincolnshire**

LD: You need to configure the Printer driver: This is done using the PRINTER command - all the details are in the Protext documentation.

DMP doldrums

COULD you please explain a detail or two for me about the new DMP 3160? Very often the Amstrad News (when it gives details) begs the question. It states that the new printer will work with the 464 but has a PC printer lead. I presume it will work with a 464 printer lead.

It also states that it has a full IBM character set. What might a full IBM character set look like? And presuming it is the 8 bit printer port, will it give the full IBM character set if a KDS 8 bit port add-on is fitted to my 464?

**Mr. D. White,
Northampton**

LD: Centronics is Centronics is Centronics: This means that any printer with a Centronics port will work with any computer likewise equipped.

The seven bit limitation is at the computer end. By fitting a KDS 8 bit port to

your CPC you will get extra characters on any printer, be it a DMP 2000, 3160, an Epson FX86 or an Amstrad LQ 3500.

The letters in an IBM character set look the same, but there are some extra symbols like faces, hearts and boxes. As you have guessed you will need an 8 bit interface for these, but it will work acceptably on a 464 without an extra interface.

Disc expansion

I OWN an Amstrad 6128 and have now started to use several serious applications packages which use a large amount of disc space. However I am limited to the 3in drive that is an integral part of the computer.

I am now considering upgrading my system for a bigger disc capacity. Unfortunately I am not very knowledgeable about the current disc drive market and this is why I am writing to you for advice.

I am very interested in hard discs because of their greatly improved access times and large capacity, and I ask you to recommend several that have about 20Mb of storage, are fairly good value-for-money, but most of all are compatible with the Amstrad 6128.

**Barry Goodsell,
Maidstone, Kent**

LD: There are no hard disc drives available for the CPC. You can try Nine Tiles on (0223) 862125, which has a network which incorporates a hard disc, but this is expensive and little

faster than floppies. The floppy disc capacity is limited both by software and hardware. The PCW has a 720k drive but cannot be used with a CPC because the disc rom does not cater for it. The best solution would appear to be a 5.25in drive and the Rodos rom from Romantic Robot on (01) 200 8870.

Musical circles

IN the last few months I have been most impressed by the standard of The Advanced Music System and The Art Studio when run on my CPC6128. Rainbird has received rave reviews of its products, and rightly so. However, I have come across a few problems when using these programs which I am sure are of interest to ACU readers.

Firstly, The Advanced Music System appears to have no facility to cope with triplets – a fairly common item of musical notation where one crotchet is replaced by three quavers taking the same time period. Is there any way round this problem?

AMS also seems to have difficulty in its printer module when trying to print two consecutive pieces of music with different time signatures – the correct time signatures for the second piece are not printed as claimed in the manual.

When using The Art Studio to print a picture on my DMP2000 I have gone to more than a little trouble experimenting with the aspect ratio, as suggested in the user manual, trying to get circular circles on the printout – without success.

Can you give me any hints or is it a limitation of my combination of CPC6128, DMP2000 and The Art Studio? If that is the case then how does the print facility in AMX Art (supplied with friendly rodent) manage to produce circular circles at the click of a mouse?

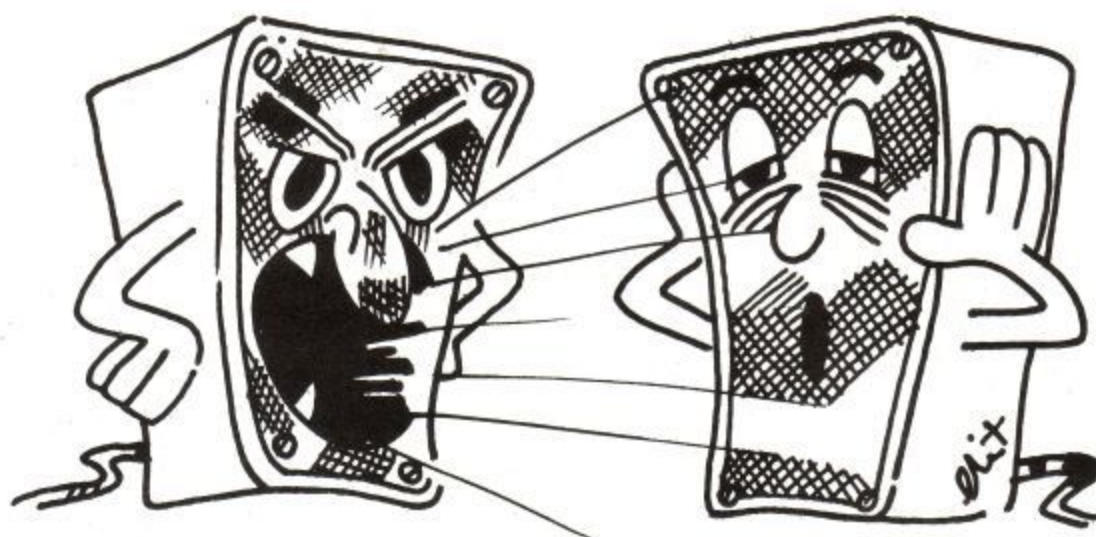
I am still extremely pleased with my Rainbird utilities, but would be grateful if anyone can point out where I'm going wrong.

**Richard Hall,
Rochester, Kent**

LD: Grahame at Rainbird proved exceptionally helpful with this one. You can't have triplets on the Amstrad AMS, but you could fiddle the time signature to simulate them.

He does not know of any problems with the printing, so I suppose it could be a bug. The aspect command is difficult to use, because there are so many different types of printers.

You have two options, either draw your circles oval, so that they print round, or persevere with the aspect adjustment.



Sound advice

IS it possible to print out music on a Kaga Taxan printer using the Advanced Music System? I presume this is not just an individual problem; the printer was well received in Amstrad magazines when it appeared, so there must be a fair number of CPC users with it.

The problem seems to be the old line-feed chestnut, but running a program to suppress the Amstrad's line-feed signals before loading TMS doesn't seem to work.

I for one would be keen to read the details of anyone's successful use of this printer – or, failing that, any printer – with the Advanced Music System.

**James M Brown,
Coleraine, Northern Ireland**

LD: The line feed problem can be cured with a scalpel: Cut the wire to pin 14 and all will be ok. The Kaga Taxan is no longer available, but you can still get the Cannon PW 1080. This has a slightly different rom but shares the same mechanism and exceptional print quality. My fave cheapie printer.

The winner

IN the August Edition of Amstrad Computer User, you had a competition – here is my attempt:

STORM was out walking one day, and he met THE APPRENTICE, who was searching for the JEWELS OF BABYLON. STORM said "FINDERS KEEPERS" so they searched the 180 CAVES OF DOOM. They went INTO OBLIVION everywhere. Then a NINJA came so STORM THRUST out leaving THE APPRENTICE to find a HELICHOPPER to a BREAKOUT.

STORM got lost, MOLECULE MAN came by and asked "who are you looking for". "I'm looking for STORM" said

THE APPRENTICE. He looked in RADZONE and there he was "I can see STORM II" said MOLECULE MAN. "I was looking for you" said THE APPRENTICE, "good job I never went into THE DEEPER DUNGEONS or I would have never have found you".

Then they turned into HOME RUNNERS and ran home.

**Michael Upchurch,
Alvaston, Derby**

LD: Well done Michael, a bundle of goodies should have plopped on to your doormat by the time you read this. No more entries thanks.

Budget and bungle

WHEN looking at the recent Gallup Charts, I notice that there are quite a considerable number of budget games. Last month in the September issue the first three games were budgets. I would like to congratulate Mastertronic and Code Masters especially, for bringing out budgets that are worth full price games.

What has happened to originality in the full price games? For example, Barbarian is a great release from Palace (yet again), but it is the usual combat game and virtually everyone probably has at least a couple.

In the September issue some of the prices of the games were wrong: Army Moves is a full price game and not £1.99, while Football Manager is now a budget game and 180 is not £9.95! It is of course £1.99.

My Amstrad is called Amy, because she is a little temperamental. What's yours called?

**Jonathan Cale,
Exeter, Devon**

LD: A strange thing happened with the chart prices: They started off as being correct but changed after leaving the editor's word processor. Still, I'll send you a copy of Leviathan as compensation.

FOR AS LITTLE AS £159 YOU CAN BE THE HOME SECRETARY.

There's more to home computers than fun and games. Just add a printer (and the necessary software) and your computer becomes a word processor. And you become a very efficient secretary.

If the printer you add is the Amstrad DMP 2000 your efficiency will even extend to saving quite a lot of money.

Because the DMP 2000 costs just £159 (incl. VAT).

Yet it will print draft quality text at up to 105 characters per second. And Near Letter Quality at up to 26 characters per second.

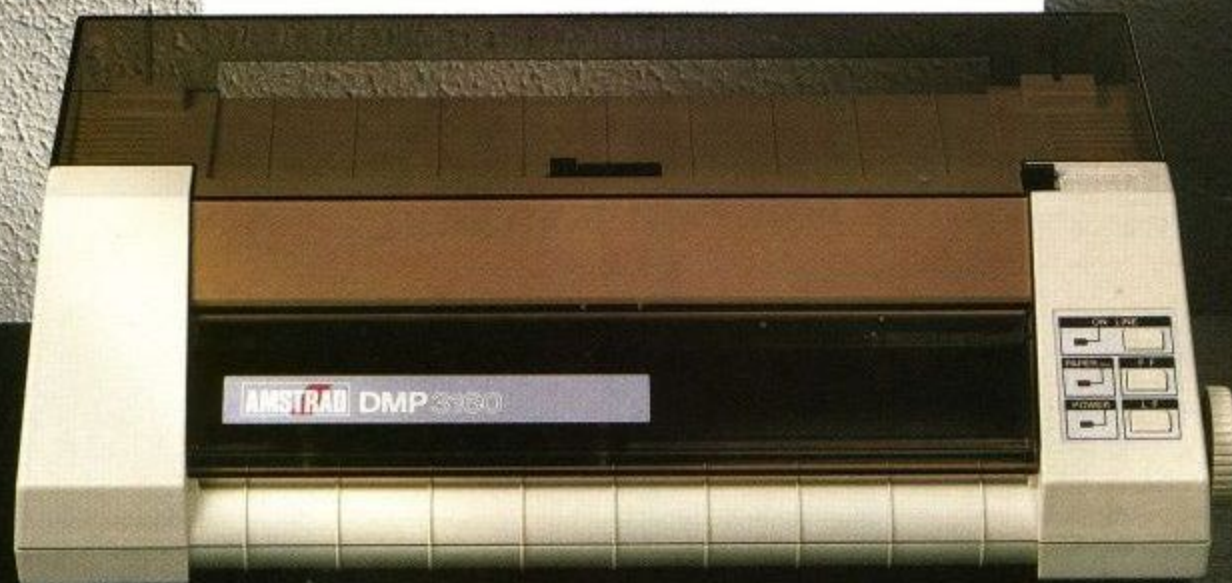
As you would expect it is compatible with all Amstrad home computers. But it is also compatible with Epson and any other make that has the same Centronics Parallel Interface.



If you've already graduated to a PC there's the new Amstrad DMP 3160 printer.

It's compatible with all Amstrad PC's as well as Epson and all other IBM compatible PC's. It costs just £199 (plus VAT)*.

Both printers have easy front loading and both will take ordinary A4 paper. One of them is bound to be right for your particular home office.



Please send me further information on the DMP 2000 ☐ and the DMP 3160 ☐

NAME

COMPANY TELEPHONE

ADDRESS

AVAILABLE AT: ALLDERS · COMET · CURRYS · DIXONS · LASKYS · JOHN LEWIS · AND GOOD INDEPENDENT COMPUTER STORES

*Recommended retail price including VAT, £228.85. Prices correct at 1-9-87 but may change without notice.



Amstrad plc., PO Box 462,
Brentwood, Essex CM14 4EF.
Telephone: (0277) 262326.

AMSTRAD
COMPUTER USER

Exclusive READER OFFERS

A·M·S·T·R·A·D A·N·T·H·O·L·O·G·Y

These two exciting compilations bring together the very best games listings which have helped to make *Amstrad Computer User* the best-selling Amstrad magazine in the country.

And we've kept the price right down to thank you our readers, for all your encouragement and support.

V·O·L·U·M·E

1



Roland Takes a Running Jump

**13
GAMES!**

Racer



Roland Takes a Running Jump

A colourful fast-action ladders and levels game which developed from the highly-praised series of articles on writing your own arcade game. Includes extra screen data.

Racer

Get behind the wheel of this Grand Prix racing car and take it for a spin round the tortuous test track. A nifty bit of programming.

PLUS

Life, Electric Eddy, Galaxians' Revenge, Trench Attack, 3D Maze, Missile Attack, Monsters Final Hour, Up the Beanstalk, Amthello, Frantic Freddie and Electric Fencing

V·O·L·U·M·E

2



Space Mania

**20
GAMES!**

Splatch



Space Mania

This machine-code megaprogram is worth the price of the compilation on its own. There's loads of screens to negotiate in a ladders and platforms extravaganza.

Splatch

Think you've seen this one before? Balderdash, we reply. Help the rabbit get to the carrots, and don't forget to drop an acorn on the squirrels. Great fun for all the family.

PLUS

Duck Dodgers, Rock Hopper, Froggie, Crazy Legs, Double Trouble, Up Up and Away, N-Sub, Pac-Caverns, Moonbase Alpha, Beat the Clock, Pinball, Battle of the Cars, Quoite, Sniper, Combat, Plumberdroid, Crawler (6128 only) and Frootee.

Tape (Each volume comes on two cassettes) **£7.95**

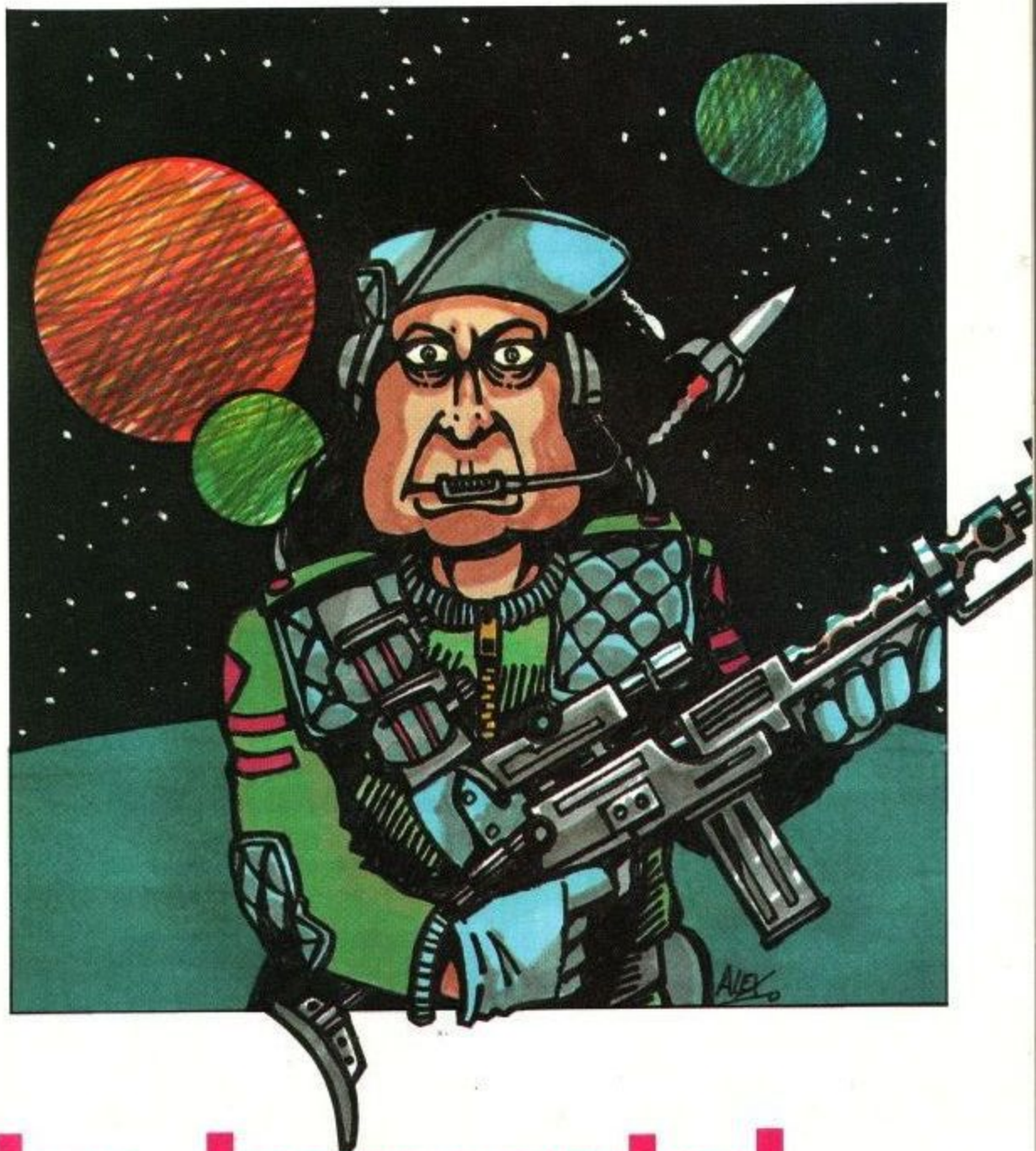
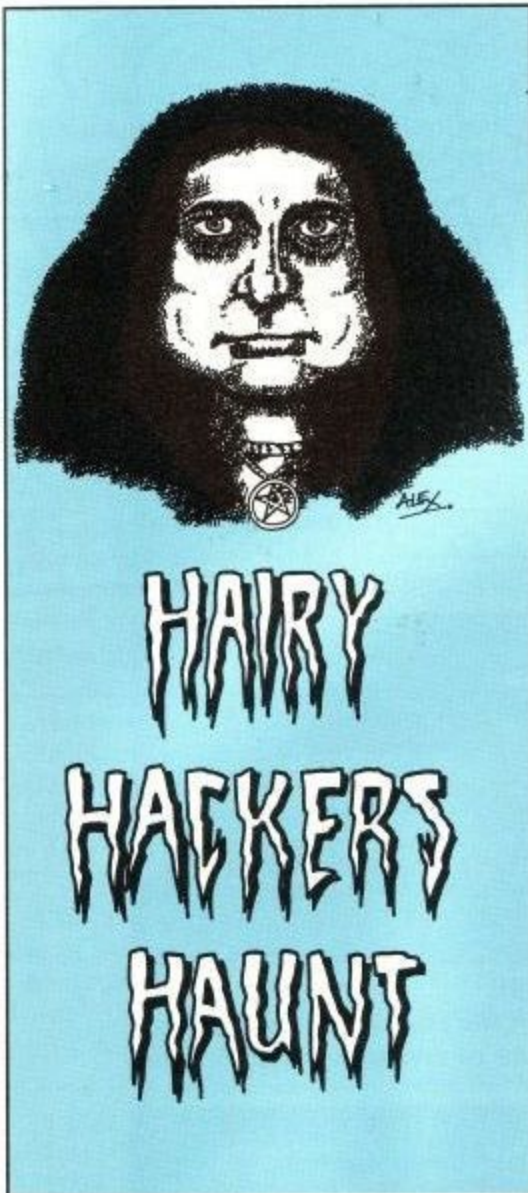
Only £2.95 with a new subscription or subscription renewal

Disc **£9.95**

Only £3.95 with a new subscription or subscription renewal

All games work on Amstrad CPC 464, CPC 664 and CPC 6128 computers unless stated otherwise. You can list and adapt all the Basic files – an excellent way to improve your programming skills.

To order
please use
the form
on page
71



Vax the immortal

ANOTHER day dawns in the ACU camp. The sun rises slowly in the east, spreading a warming glow over the land. Until it's blotted out by the stack of your complaining letters.

Well, we've got one or two bits in the mailbag, one of which has been hiding under a pile of rubble for a month or two. The crumpled communiqué is from Peter Millar, of sunny Aberdeen. He has one of these "Not a lot of people know that, Michael" bits about Grand Prix Simulator.

On the screen that asks you to press Esc to define keys and so on, you type in TRACK G or TRACK F, and you are magically teleported to the track when you start the game. Clever eh? How did you find out, Pete?

Jason Anderson of Swansea is also being driven round the bend by Grand Prix Simulator. He says that on screen B you can get stuck on the verge if you go round it before the drone car does. Watch out for that one folks, I would check it out, but our copy seems to have sprouted legs and moved off to

The intrepid band of Vax, Justin and Cliff hack through megabytes of program, seeking for the elixir of life, the sacred DEC (HL), then at last they found . . . infinite lives for Exolon.

somewhere where the coffee tastes better.

Oh yea Jason, in Raid by US Gold, there is no easy way out of the hangar. I think I was the first one in the office to do it, and that was a fluke. The secret seems to be to line yourself up with the hangar doors first, and then accelerate towards it. Trying to do both at the same time inevitably wraps your plane round the door frame. Take your time.

Time for a browse through the directory on Justin's latest disq (Disk? Disc? Spell it Disq and wind everybody up).

I hope you can remember the SLIP

(Speed Lock Infiltrator Poke) lock-picker routine by Justin Garvanovic, 'cos if you don't then infinite lives, ammo & energy for BOTH parts of Ocean's GAME OVER (tape type) will be lost to you. It knows which half you mean:

PASTE[R]

```
300 DATA 02,01,c3,bc,3a,00,20,fe
310 DATA 66,20,0c,af,32,64,23,32
320 DATA 54,08,32,3f,23,18,0a,af
330 DATA 32,79,21,32,56,08,32,54
340 DATA 21,c3,54,8e
350 DATA "end",17295
```

While using SLIP, you might be

Learning CAN be fun

- Use your Amstrad to teach and amuse your children at the same time.
- Three packages crammed full of educational programs – and so easy to use!
- Each program has been educationally approved after extensive testing in the classroom.

ONLY
£5.95 tape
£8.95 disc



CPC	✓
PCW	×

programs
for 5-8
year olds

Amstrad
CPC 464,
664, 6128

Ages 2-5

Alphabet
Colours
Counting
House
Magic Garden
Matchmaker
Numbers
Pelican
Seaside
Snap



PELICAN

Teach your children to cross the road safely at a Pelican crossing



HOUSE

Select the colours to draw a house – hours of creative entertainment

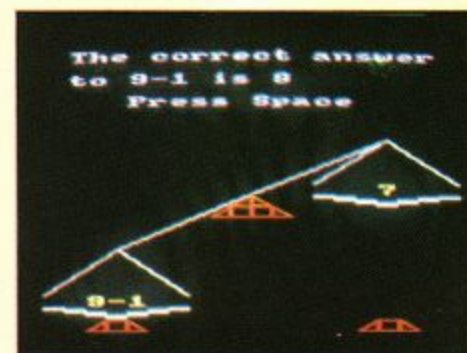
Ages 5-8

Balance
Castle
Derrick
Fred's Words
Hilo
Maths Test
Mouser
Number Signs
Seawall
Super Spell



NUMBER SIGNS

Provide the correct arithmetic sign and aim to score ten out of ten

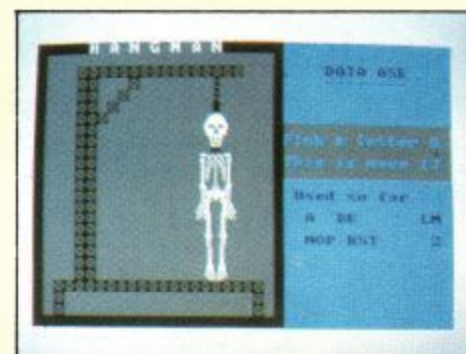


BALANCE

Learn maths the fun way. Type in the answer to balance the scales

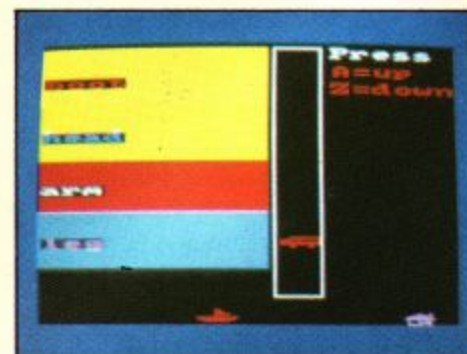
Ages 8-12

Anagram
Codebreaker
Dog Duck Corn
Guessing
Hangman
Maths Hike
Nim
Odd Man Out
Pelmanism
Towers of Hanoi



HANGMAN

Improve your child's spelling with this fun version of the popular game



ODD MAN OUT

Find the word that does not fit – before your time runs out

Send to: Database Publications,
FREEPOST, Europa House,
68 Chester Road, Hazel Grove,
Stockport SK7 5NY.

FUN SCHOOL

Age 2-5 6077/6078
Age 5-8 6079/6080
Age 8-12 6082/6083

Tape* Disc*
£5.95 £8.95

*Add £1 for Europe *Add £2 for Overseas

Order at any time of the day or night

Orders by Prestel:
Key *89, then 614568383

MicroLink/Telecom Gold
72:MAG001

Don't forget to give your name, address and credit card number

Payment: please indicate method (✓)

☐ Access/Mastercharge/Eurocard/Barclaycard/Visa

Card No. _____

☐ Cheque/PO made payable to Database Publications Ltd.

Name _____ Signed _____

Address _____

Tel: _____

Please allow up to 28 days for delivery

Expiry date
/

interested in infinite lives for both combatants in Imagine's Slapfight. Now you can keep it up all night (can I say that in this mag?):

```
300 DATA d1,00,a8,bc,21,00,00,22
310 DATA ca,50,22,cb,50,c3,f5,4e
320 DATA "end",16373
```

Remember Norman's indecipherable squiggle? Well, the squiggle said "Riches". I know that 'cos he sent in another letter (much more readable) with the following pokeykins for the 4-pack version of Karl's Treasure. A small improvement over the 75-life version of a month or two back. Thanks Norman:

```
10 MEMORY 5000
20 LOAD "KARL.BIN",4096:POKE 24749,0:
CALL 4096
30 REM That wuz inf. lives for Karls
Treasure
```

Public Notice: Proposed site for a listing of infinite lives for Elite's Gurianos (disc), as found on the new Hitpak. Insert disc etc. Yes, there isn't a line 10 and I don't know why:

```
20 MODE 1:MEMORY 12345
30 tot=0
40 FOR n=890 TO 89F
50 READ a$:a=VAL("&"a$)
60 POKE n,a:tot=tot+a
70 NEXT n
80 IF tot<>1272 THEN PRINT"ZUT! there
s a error in the data.":END
90 LOAD "gtd0"
100 CALL 890
110 DATA 21,99,00,22,20,99,c3,00
120 DATA 98,32,b1,0a,c3,00,01,4a
```

Funny, but I always thought that Gurianos was a South American ball game in which the balls were hit against a brick wall with a stout wooden bat until the prisoner confessed. Never mind. Have the tape version of the same. This is a PASTE[R] one:

```
20 MODE 1:MEMORY 12345
30 tot=0
40 FOR n=890 TO 89F
50 READ a$:a=VAL("&"a$)
60 POKE n,a:tot=tot+a
70 NEXT n
80 IF tot<>1296 THEN PRINT"UT! there
is an error in the data.":END
90 LOAD ""
100 CALL 890
110 DATA 21,99,00,22,35,a1,c3,00
120 DATA a0,32,b1,0a,c3,00,01,4a
```

As if the world hadn't learnt its lesson the first time round, they've brought out Airwolf II. Justin has endured it long enough to bring you infinite lives for the disc version of Airwolf 2 as found on Hitpak. Insert disc etc:

```
10 MODE 0:OPENOUT "d":MEMORY 699
20 BORDER 0
30 FOR n=0 TO 15:READ a:INK n,a:NEXT
40 LOAD "lair2.scr",49152
50 LOAD "laircode"
60 POKE 30828,0:MODE 1
70 CALL 26192
80 DATA 00,00,00,26,00,00,06,00
90 DATA 01,02,05,11,14,20,13,10
```

As they brought out a tape version, Justin has his own infinite lives for Airwolf 2. (Also from HITPAK). This one is a PASTE[R] job:

Prizes are currently being considered for those readers that DIDN'T send letters saying "Your 'Feud' map was downside-up!". We know. Probably pasted up by an Australian scalpel-wielder. Any other readers pointing this out will be invited along for a quick game of Gurianos. No ladies need apply.

Now a Justin special for infinite Oxygen, Nitrogen & Air Bottles in Elite's 3DC (As found on Hitpak. Lot of stuff on there). This is special 'cos it is one of the few pokettes that works on both cassette and disc versions. Either PASTE[R] or insert disc and run routine:

```
10 MODE 0:MEMORY 12345:BORDER 0
20 FOR n=0 TO 15:READ i:INK n,i:NEXT
n
30 PEN 2:tot=0
40 FOR n=800 TO 8BA
50 READ a$:a=VAL("&"a$)
60 POKE n,a:tot=tot+a
70 NEXT n
80 IF tot<>5482 THEN PRINT"Whoops, Be
tter check the datalines.":END
90 LOAD "13dc.scr",49152
100 CALL 880
110 DATA 00,00,02,26,15,06,03,11
120 DATA 01,24,22,18,09,12,13,10
130 DATA 3e,01,cd,6b,bc,21,b5,00
140 DATA 11,00,92,06,05,cd,77,bc
150 DATA 21,00,01,cd,80,bc,30,04
160 DATA 77,23,18,f7,fe,1a,28,f8
170 DATA cd,7a,bc,af,32,a6,28,32
180 DATA a2,0d,32,c9,28,3e,7e,32
190 DATA 4b,28,c3,00,01,41,2e,43
200 DATA 4f,4d,4a
```

And the Elite saga continues ...

Well, Stephen Roberts of Cardiff, the only way to blast Space Stations, Thargoids and other scum of the universe is to point a mining laser between their eyes and push the button. Unfortunately, while you're doing this, they're doing something else.

David Redwood has sent in a nice follow-up to the Blue Danube bit that plays away in the background. He calls it a "Blue Danubectomy". They cut the Tubas out. Sorry. Anyway the following program may prove interesting if you are the sort of half-crazed

visigoth that enjoys spoiling good music:

```
10 REM Perform a Blue Danubectomy on
Elite.
20 OPENOUT "D":MEMORY 85FFF:CLOSEOUT:
LOAD "MUSIQUEX.BIN":CALL 86000
```

After that, type in POKE &6028,0 to turn the waltz off, POKE &6028,&3A to turn it on, and POKE &6029,&FF for the disco quick-step version.

Enough elitism for one month, now lets see what Justin can do to Mission Genocide when the mood takes him. Not many people know that Mission Genocide was originally called Z.T.B. The name proved unpopular with the moral minority in the marketing department, and a more somber (!??!) name was stuck upon it. Anyways, ZTB or Mission Genocide, here's infinite lives for the tape version. PASTE[R]:

```
10 MODE 1:MEMORY 12345
20 tot=0
30 FOR n=8BE00 TO 8BE1C
40 READ a$:a=VAL("&"a$)
50 POKE n,a:tot=tot+a
60 NEXT n
70 IF tot<>3531 THEN PRINT"Data error
.":END
80 LOAD ""
90 CALL 8BE00
100 DATA F3,3E,c3,21,0f,be,32,26
110 DATA 86,22,27,86,c3,00,86,11
120 DATA C0,F1,CD,A1,BC,AF,32,C7
130 DATA A0,C3,2C,86,4a
```

Oooh! A lady. Miss Julie Boot is trying to find the weakness of the monster in Sultans Maze. Sorry, but I never stuck with it for long enough to find out. That was its weakness for me, and most of the Amstrad customer services dept. (who, incidentally, don't just play games all the time. Well, not all of them).

The following infinite lives for the tape version of Activision's Wonder Boy cheered Justin up no end. You see, hidden inside it was a message to Justin from the programmer. It's nice when things like that happen, Makes you feel wanted. PASTE[R]:

```
5 Thanks for the Ego boost Mr Parke
r.
10 MODE 1:MEMORY 12345
20 tot=0
30 FOR n=8BE00 TO 8BE27
40 READ a$:a=VAL("&"a$)
50 POKE n,a:tot=tot+a
60 NEXT n
70 IF tot<>4014 THEN PRINT"Oh Dear, y
ou'd better check the data.":END
80 LOAD ""
90 CALL 8BE15
100 DATA 3E,c3,21,0E,be,32,38,AE
110 DATA 22,39,AE,c3,00,AC,AF,32
120 DATA E2,52,C3,40,00,3E,8F,32
130 DATA 7F,41,3E,B3,32,CC,41,3E
140 DATA F9,32,2C,42,C3,05,40,4a
```

Is the world still in need of Jet Set

Willy II pokes? If a few of you write in, I'll publish them again. Meanwhile, I've got 'em coming out of my ears. Thanks for the response, folks.

This infinite lives for U.S. Gold's Saracen had a little message tucked on it from Justin saying: "Why hasn't this little game had any push from U.S. Gold? I personally think it's great and it just appears that U.S. Gold hid it so that Gauntlet would get all the limelight, A great shame methinks. So there you have it. Now play it. PASTE [R]:

```
10 MODE 1:MEMORY 12345
20 tot=0
30 FOR n=&BE00 TO &BE3F
40 READ a$:a=VAL("&"a$)
50 POKE n,a:tot=tot+a
60 NEXT n
70 IF tot<>6525 THEN PRINT"Better che
ck that thou data.":END
80 LOAD ""
90 CALL &BE1D
100 DATA DD,21,00,BF,11,50,00,CD
110 DATA 4E,BC,21,13,BE,22,4E,BF
120 DATA C3,00,BF,AF,32,51,6E,32
130 DATA 4D,7F,C3,40,6C,3E,C3,21
140 DATA 31,BE,32,E2,39,22,E3,39
150 DATA 11,40,00,21,FF,AB,C3,AF
160 DATA 39,3E,BE,21,6D,9B,32,00
170 DATA 02,22,01,02,F3,F1,C9,4a
```



Well, Bob Crawford, your letter has been passed to the Ed for his consideration, but meanwhile here is the response to the rest of the letter:

Justin beat you to the pokes again. No, the word "VAX" does not appear on my pay packet, but the letters KP do. I have tried Labatt, but prefer Theakston's Old Peculiar any day. Yes, the Post Office did eat the paperclip. No, you can't have the copy of "Mud Wrestling for Beginners" as the wife is currently reading it.

Now my favourite game for a long time. Not only great fun to play and write about, but great to play with on the emulator. Exolon. Did you know

that an invisible sprite is always being redrawn in the top left corner of the screen? You notice that when you screw the sprite data up.

Many thanks to Cliff, who spent many minutes cracking this one and many valiant hours with me testing it. Thanks to Justin for the loan of the loader):

```
10 MODE 1:MEMORY 12345: BORDER 0
20 INK 0,0:INK 1,6:INK 2,18:INK 3,26
30 tot=0
40 FOR n=&80 TO &99
50 READ a$:a=VAL("&"a$)
60 POKE n,a:tot=tot+a
70 NEXT n
80 IF tot<>1674 THEN PRINT"O'h dear. Y
ou'd better check the data.":END
90 LOAD "loader",16384
100 CALL &80
110 DATA 21,89,00,22,53,41,c3,00
120 DATA 40,af,32,59,11,32,7a,1f
130 DATA 32,25,2a,32,25,2b,c3,00
140 DATA 01,4a
```

To round off this month, an apology for a joke: How many Einstein users does it take to change a lightbulb? Both of them.

See y'all, Vax & Suz

ACU

Advantage

(U23) 33 Malyns Close Chinnor, Oxfordshire OX9 4EW
Telephone 0844 52075

OUR PRICES INCLUDE POSTAGE AND VAT



HIGH LEVEL LANGUAGES FOR PCW & CPC

Members may deduct £2 off each item below. Overseas please add £3 per compiler

MIX C COMPILER Full Kernighan-Ritchie implementation with tutorial	£29.95
MIX C SPLIT SCREEN EDITOR Useful companion to MIX C and any compiler	£19.95
MIX ASM UTILITY Integrate M-80 Assembler into C program	£8.95
MIX EXAMPLES All the tutorial source code typed in ready to compile	£8.95
NEVADA COBOL One step compile and run. ANSI-1974 standard. Full manual	£29.95
NEVADA PASCAL Floating point, sequential and random indexed file I/O	£29.95
NEVADA FORTRAN Trace facility. ANSI X3.9-1966 Fortran IV. With manual	£29.95
HISOFT C Popular compiler with GSX graphics library and ED80 editor	£36.95
PASCAL 80 An extensive implementation of Jensen.Wirth with ED80 editor	£36.95
FORTH Fast compact compiler with GSX graphics and screen editor	£19.95
ZBASIC Advanced and powerful BASIC compiler with debugging support	£64.95
DEVPAC 80 V2 The latest assembly language development tool from Hisoft	£36.95
KNIFE PLUS Disc sector editor, damaged disc recovery. Works on drive B	£18.95

DISC SOFTWARE FOR PCW & PC

The best from the Public Domain, tailored for Amstrad computers running CP/M+ and fully documented by Advantage. Each disc has MENU selection and sorted directory. Members may deduct £1 off the price. Overseas please add £1

APPLICATIONS

- ★ TEXT EDITOR Easy to use full screen editor with word wrap, pagination, margin setting, printer control etc. Ideal for writing compiler source code. Generates ASCII files and includes cursor key control £7.00
- ★ 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. Disc also contains Inventory Database £7.00
- ★ PCW DESK MASTER Desk-top appointments calendar, calculator, memo-writer, card-file database. Disc includes label printer, home accounts program, mortgage calculator, weather forecaster, unerase for drive M and window designer. £7.00
- ★ COMMUNICATIONS UKModem 7 for CPC or PCW, New Kermit, MEX and utilities £7.00
- ★ VIDEO CLERK Keep track of your video or LP collection. With 4 sort options and Forms Management System. Includes extensive on-disc documentation. £7.00
- ★ PCW GRAPHICS Simple user-designed graphic drawing program; Screen font designer with several ready-to-run font sets; Biomorph - fascinating, graphic demonstration of natural selection. £7.00
- ★ STD CODEBOOK UK codes in numeric order with corresponding exchanges. £7.00

The Advantage Policy:-

- ★ All advertised items are normally in stock
- ★ We aim to despatch all orders by the next working day
- ★ We refund payment if you are not satisfied for any reason

Order by post or telephone. We accept Sterling cheques, Access and Visa. Please send a SAE with all enquiries. Remember to state which computer you are using.



UTILITIES

- ★ COMPLEAT UTILITIES Newsweep - one key erase copy rename print; Superzap disc editor - edit by sector or file; Unerase erased files; DiskitA - multi choice disc formatter, offers 178k data format for PCW and 5.25" second drive formatting; Read/write PCW discs on CPC; Screen Dump; Password, Easy lister and more. £7.00
- ★ TEXT PROCESSING Sideways - prints text, eg spreadsheet, on it's side; Sort any ASCII list into alphabetical order; Word count; WSClean - removes higher order bits; Calendar Generator; Simple Spelling Checker with starter dictionary and editor; Scoring card generator; Banner printers, Typewriter Emulator. £7.00
- ★ DISC ORGANISATION Catalog your disc collection and produce printed index; Library Utilities for archiving and saving disc space; Date file dating system; Squeeze and Unsqueeze file compression for saving up to 40% disc space. £7.00
- ★ CP/M V2.2 SELECTION For CPC464 users. 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 and many more. £7.00

PROGRAMMING

- ★ THE Z80 PROGRAMMER Z80 Assembler/Disassembler, Z80 Debugger, Z80 Library, 8080 Disassembler, Z80 to 8080 translator and associated utilities. £7.00
- ★ THE C PROGRAMMER The Small C Compiler by Mike Bernson. Includes source code and 25k of documentation. Produces executable .COM files. £7.00
- ★ C TOOLBOX An assortment of C source programs, with their compiled versions, written for a variety of C compilers. £7.00
- ★ FORTH. STOIC & C Interpreter. For experimenters using these languages. £7.00

PROGRAMS FOR PLEASURE

- ★ GAMES COMPENDIUM Chess, Othello, Mastermind, Snake, Spellit, Awari, Life, Golf, Polish Pong, Maze, Biorhythms, Word Search Puzzle Maker, TicTacTo. £7.00
- ★ ADVENTURES The famous Colossal Cave Adventure plus two new games. £7.00
- ★ AMUSEMENTS AND DIVERSIONS 29 Games for PCW BASIC. Startrek, Whichword, Lander, 3D Noughts & Crosses, Merchant, Othello, Hangman, Baseball, Civil War, American Football, Maze, Nim, Horse Races, Blackjack, Spies, Crazy-8 & many more. £7.00

TERROR of the DEEP

An adventure simulation in the depths of Loch Ness.

Will you be the one to save Nessie's reputation — and the lives of the Loch Ness locals?

£9.95 tape, £14.95 disk

Spitfire



Your're a trainee Spitfire pilot in the summer of 1940, and the Battle of Britain is just around the corner.

Rise through the ranks of the RAF towards the coveted title of Group Captain, DSO, DFC, VC.

"A good balance, particularly if you're looking for something that'll be a challenge without being too difficult."

— Amstrad Computer User

£9.95 tape, £14.95 disk

STRIKE FORCE HARRIER



Full flight and battle simulation, designed in co-operation with British Aerospace to give you the ultimate in air combat on your Amstrad.

"A very impressive combination of simulator and fighting"
— Amstrad Action

"Highly recommended"
— Amstrad Computer User

£9.95 tape, £14.95 disk

CPC



CLASSICS

SAI COMBAT

Wield your Sai weapon against an increasingly skilled series of opponents,

"Excellent graphics, animation and a gameplan with a touch of originality make it a very desirable fighting game." — Amstrad Computer User

£8.95 tape, £13.95 disk

ICON JON

Find your way out of Arnold's insides before the power goes down and the lights go out on Icon Jon for good.

"Plenty of objects, puzzles, and humour that will keep you bashing away for many an hour."
— Amstrad Action

£8.95 tape, £13.95 disk

Available from your local software retailer or direct from us.

MIRRORSOFT LTD, FREEPOST (BS4382), Paulton, Bristol BS18 5BR.

Telephone enquiries to 01-377 4645/4644

Please send me the following:

☐ Free colour catalogue ☐ Free selection of posters

I would like to buy the following game(s) _____

I enclose cheque/PO for £ _____ payable to Mirrorsoft Ltd
OR Please charge my Access/VISA/American Express account no.

There is no charge for postage and packing.

Signed _____ Date _____

Name _____

Address _____

_____ Post code _____

ROMANTIC ROBOT *present*



WHAT IS THE ANSWER TO LIFE, THE UNIVERSE, AND EVERYTHING?

forty two = multiface two

???

YES, FORTY TWO POUNDS IS THE SPECIAL SUMMER PRICE OF THE MULTIFACE TWO.

Q: WHY WOULD I NEED THE MULTIFACE TWO?

A: Basically to make back-ups of programs on a CPC 464, 664 or 6128 and also to enable you to study, alter and customize them.

Q: OH, DO I NEED TO UNDERSTAND THE PROGRAMS OR EVEN ALTER THEM TO MAKE BACK-UPS?

A: NO! - NOT with the MULTIFACE TWO - it is in fact the ONLY product on the market which works FULLY automatically. You load any program as usual, run it for as long as you like and when you wish to make a copy you just press the MULTIFACE's red button and follow the menu and on-screen instructions.



Q: HOW DOES IT WORK THEN? IS IT EASY? USER-FRIENDLY? ERROR-TRAPPED? IDIOT PROOF? GUARANTEED?

A: YES! It works a treat and it could not be easier. The menu gives four basic options - to **SAVE** a program, to **RETURN** to continue it, to **JUMP** (say to your own routines - invaluable for hackers) and **TOOL** to access the MULTI-TOOLKIT set of built-in utilities. For example pressing **S** to **SAVE** will first allow you to **NAME** the back-up and then let you save a **PROGRAM** or just a **SCREEN** to **TAPE** or **DISK**. Before the saving itself, MULTIFACE compresses the program so that it takes the least amount of space on tape/disk and will re-load as quickly as possible. Once a program is saved, you can **RETURN** or **JUMP**, use the **TOOLKIT** to change it, **SAVE** it again, etc.

Q: DON'T YOU CORRUPT THE SCREEN WITH YOUR MENU, INSTRUCTIONS, PULL DOWN WINDOWS, ETC.?

A: NO. MULTIFACE TWO has its own memory (8K ROM & 8K RAM) and a lot more hardware - thus when it finishes its job or when you re-load your back-ups, everything is **FULLY** and **AUTOMATICALLY** restored. NOTHING else can do this and on all other devices you will need to try to restore the screen: its modes, colours, windows, etc. - this takes quite some time and effort and the failure rate is high...

Q: OK, SO MULTIFACE CAN COPY FROM TAPE TO DISC, BUT CAN IT ALSO COPY FROM TAPE TO TAPE OR DISC TO DISC OR DISC TO TAPE?

A: Of course it can. MULTIFACE saves either to tape or disc and it saves whatever happens to be in the computer at that time: it does not matter whether it was originally loaded from tape or disc or even typed in, so all combinations are possible.

Q: SO FAR SO GOOD. BUT CAN'T I DO ALL THIS WITHOUT THE MULTIFACE?

A: ABSOLUTELY NOT! First, you need a hardware device, a "magic box", to be able to stop and copy any program at any stage - no software-based copier can in principle ever do that. Any tape/disc copier will just try to copy a tape as it is - if there are unorthodox loaders, speedlocks, protections against copying, etc., you'll end up with a problem - but not with a back-up. If you wish to back-up any game at any point, be it upon loading or after going through the lenslock or half-way through, if you wish to poke infinite lives and then save, etc. - you just can't do anything like it with tape/disc copiers - you need the MULTIFACE!

Q: MULTIFACE IS NOT THE ONLY 'MAGIC BOX' ON THE MARKET - WHY SHOULD I BUY IT MORE THAN ANYTHING ELSE?

A: There are four devices on the market: Action Replay by Datel Electronics, Disc Wizard by Evesham Micros, Mirage Imager and MULTIFACE TWO. Each manufacturer would naturally argue his product is the best buy - fortunately (for you and us), MICRONET recently compared all four units and MULTIFACE TWO came out the best in literally all respects: the most successful one - 100%, the ONLY AUTOMATIC ONE, the FASTEST ONE both in LOADING AND SAVING time, the one taking the LEAST ROOM when saving - and you still get a couple of EXTRAS: a RESET button and an extensive and unique MULTI-TOOLKIT.

MULTIFACE TWO
SIMPLY MAKES
LIFE WORTH
LIVING
AGAIN!

The summary of MICRONET tests: "MULTIFACE TWO from ROMANTIC ROBOT wins easily on all features! It is faster, more convenient, more successful, uses less space and has more facilities!"

RESET **multiface two** STOP

MICRONET RESULTS	ACTION REPLAY	DISK WIZARD	IMAGER	MULTIFACE TWO
Success Ratio	20%	40%	50%	100%
Average Saving Time	33.4sec	44.5	38.8	32.5
Average Setting (Correction) Time	1.5min	17.5	6.8	zero
Average Loading Time	21.7sec	40.7	38.8	19.7
Average File Size	68k	88k	53k	49k

Tape-to-disk at the touch of a button. Ridiculous, you may say, but it works every time. Multiface can stop any program in its tracks and save the program from memory to either tape or disk. It's completely fool-proof. Similar products have had problems with screen size, colour and even sound; Multiface can handle all these without a second thought.

That alone would have satisfied many people, but Romantic Robot has gone one step further, incorporating a memory editor. No program is safe with this; everything is out in the open, including the Z80 registers, CRTC data and any part of memory.

Don't be fooled into thinking this will result in mass piracy, however. The Multiface unit itself must be plugged into your Amstrad to allow reloading of a program it saved.

Multiface II must be the cleverest hardware device at present - a necessity for disk owners who thought they were stuck with loading from tape every time.

AMSTRAD ACTION JANUARY 1987

The special price of £42.00 applies strictly to mail orders received with coupon below before the end of November, 1987.

multiface two THE ESSENTIAL AMSTRAD CPC COMPANION

Please send me a MULTIFACE TWO at £42.00 plus p&p - UK £1.00, Europe £2.00, Overseas £3.00
I enclose a cheque PO for £ or debit my ☐ ☐ No Card exp.....
Name & address

ROMANTIC ROBOT UK LTD 15 Hayland Close London NW9 0LH 24 hrs 01-200 8870

A FEW months ago you helped *ACU* by filling in a survey form. The results make fascinating reading, even if the main thing they prove is you can't please all of the people all of the time. Perhaps that is because we are such a varied bunch – I say we because I'm a reader as well as a writer.

Looking at the age range, shown in Graph I, we can see a fair spread, with the older readers making up a large percentage. Who says computing is a young man's game? Man? Isn't that a bit sexist? Well the sad statistic is that 95 per cent of our fellow readers are male. Thrust the magazine under your sister's nose, *ACU* doesn't want to be to blame if only half the population is computer literate.

Perhaps you are already doing that. Each copy is read by 2.1 people. That means that there are more 0.1 of a person going around than I thought, and if everyone who reads the magazine bought their own copy the magazine could buy me a Lotus as my next company car.

So how do we spend our money? Graph II shows what computer equipment we have, and it shows what an enthusiastic bunch *ACU* readers are. Over 99 per cent of readers have a CPC, and although a few – less than 10 per cent have another computer everyone seems to be very happy with their Arnold.

The intention to buy column – not pictured in the graph – showed that more people expect their next computer to be an Amstrad than anything else, and even those people who do intend to buy a new machine, be it a 6128, PCW or PC form less than 5 per cent of the readers. The flash 16 bit machines did very badly.

Not content with just the 464, over 60 per cent of readers own a printer, and half of those readers who don't yet have a printer intend to buy one. Discs are as popular. Over 54 per cent of us have a CPC with built in disc drive, 17 per cent have a disc on a 464 and a remaining 5.5 per cent intend to buy a DDI-1 add-on, when they become available. That means that over three quarters of us have been enlightened to the



GREETINGS

Thank you for filling in the *ACU* survey form. Simon Rockman takes a look at the results of all your work.

wonders of discs.

Other peripherals don't fare quite so well – yet. Under 20 per cent of readers own a modem or a rom board, yet for every one modem owner, two readers want to buy a modem. A similar story is reflected with rom boards, although the difference is less marked.

ACU readers are a loyal bunch, they get it regularly. In fact 87 per cent of readers had bought the last three issues, with nigh on 60 per cent having bought all 12 of last year's magazines. No wonder binder sales do so well.

What do we like? Well, this is where things start to get contentious. Graph III shows the topics with three bars for each. The first reflects the percentage of readers who want more of that topic, the second the number who want less and the third the number of readers who are happy with the mix.

Overall everyone wants more – that's not surprising. What we need to look at

is the ratio of more to less. In brief you wanted fewer games reviews, exactly the same number of maps, slightly more on other languages and a good deal more on Basic programming.

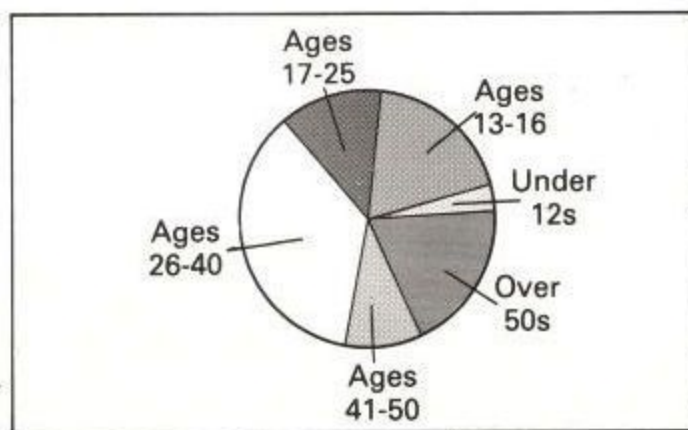
I was surprised at the lack of support for fewer program listings. A careful look at the forms shows that one type of reader likes games, maps and program listings, while another type likes reviews, business software and communications.

It is difficult to satisfy both schools of thought, but there does seem to be some common ground, notably in the area of programming.

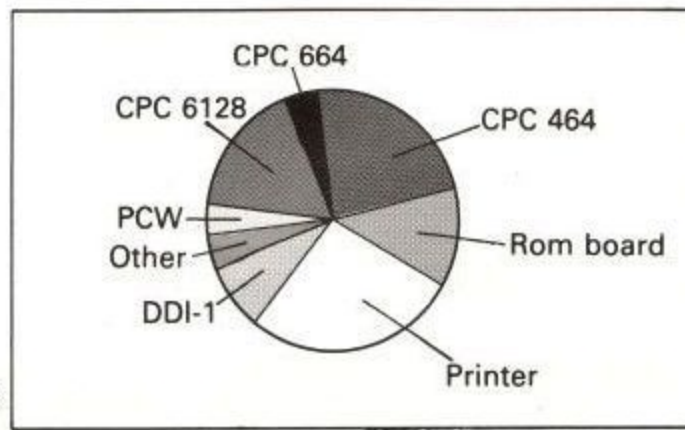
The question about educational software was to some extent a trick question. *ACU* has never carried an article on educational software, so those readers who ticked the "less" box must have strong feelings.

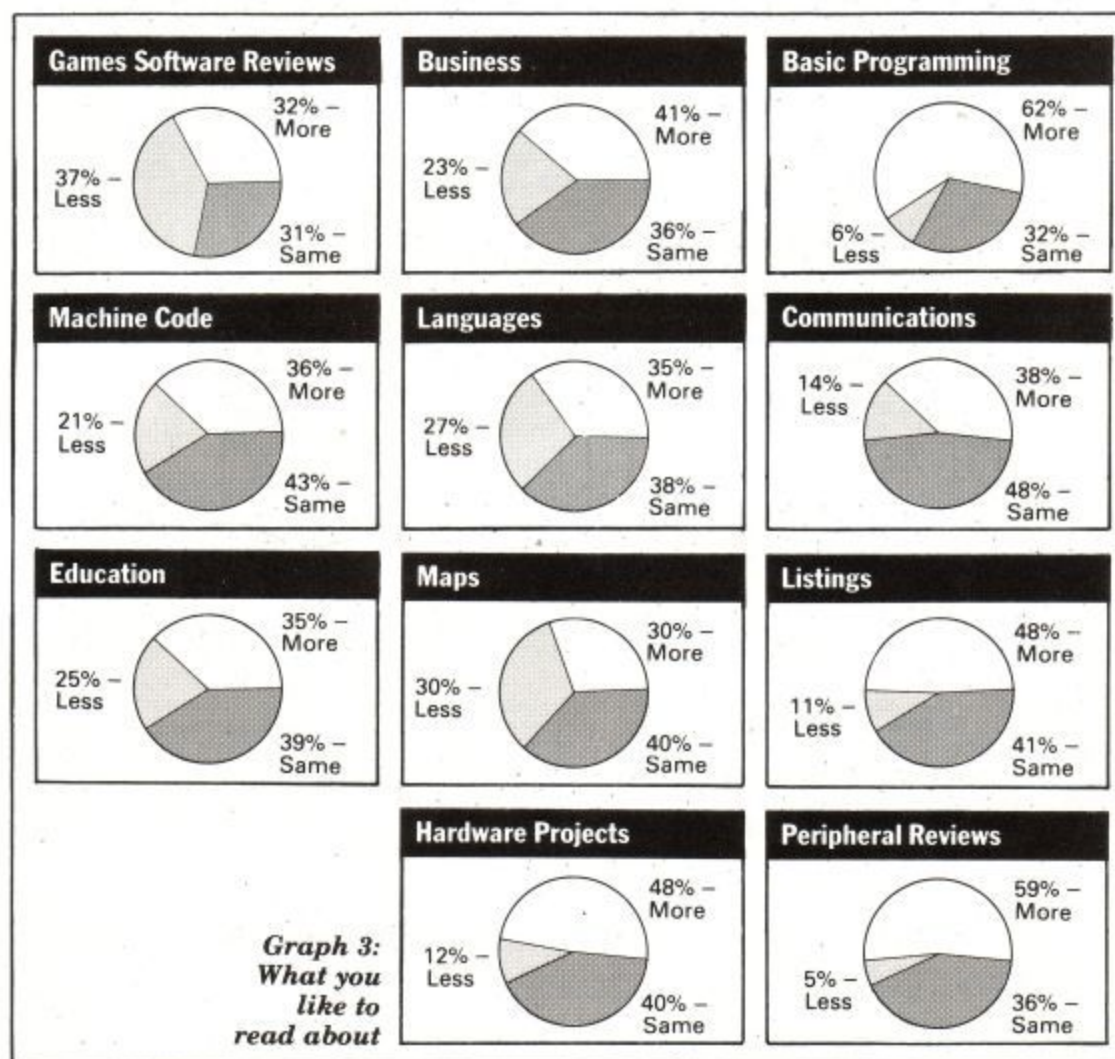
Still an article about educational software is in preparation – it should

Graph 1:
The age
range of
our readers



Graph 2:
Computer
equipment
you own





give you some idea why we have avoided this topic before.

There was strong support for peripheral reviews. We try to review as many peripherals as possible, and by looking at the figures for printer ownership it seems that printer reviews are a popular feature. This month's exclusive review of Amstrad's new LQ 3500 should go down well.

Looking at the software which is used most by ACU readers, I can see that Mini Office II is the most popular program, with Tasword not far behind. What is surprising is that these two are more popular than Protext by a factor of three to one.

Among the games, Gauntlet is the most popular, followed by Elite. Kane was the only budget game to make a substantial showing, all the rest being full price. This shows that although budget games sell better it is the full-priced titles which get played the most.

All in all it was a very instructive exercise. You will see some changes from this month onwards, all the result of your suggestions. But don't let it stop there, your views are always welcome, as are articles and listings. And once again, thank you for taking part.

ACU



ALL OUR PRICES INCLUDE CARRIAGE & VAT

HSV COMPUTER SERVICES LIMITED

23, Hampstead House, Town Centre, Basingstoke, RG21 1LG

Continuous Stationery

	250	500	1000	2000
9.5" X 11" 60 GSM Micro-Perf all edges	£2.95	£4.95	£8.95	£14.95
True A4 90 GSM Micro-Perf all edges	£5.25	£8.75	£14.94	
True A4 100 GSM Vellum Micro-Perf all edges	£7.25	£13.50	£25.50	
(White, Cream, Blue or Grey)				
Labels 3.5" x 1.5" (1 across)		£2.95	4.95	9.50
Labels 4.0" x 1.5" (1 across)		£3.25	£5.50	£10.50
Labels 4.0" x 1.5" (2 across)		£3.75	£6.50	11.95
Labels 2.75" x 1.5" (3 across)		2.75	£4.50	£8.50

Dust Covers

CPC 6128 2pce Set = £7.50
PCW 8256/8512 3pce set = £8.50

Strong water-resistant, anti-static nylon
Grey with Royal Blue piping.

AMSOFT 3" disks 1 = £2.70, 5 = £12.95, 10 = £24.95

NO EXTRAS TO PAY

Disk Storage Boxes

3" Hinged Lid - 10 cased
3" Lockable AMS20 cased

£5.95
£12.95

Printer Ribbons

PCW 8512/8256 Black	£3.95
PCW 8512/8256 Colours	£4.95
DMP 1 Black	£2.95
DMP Colours	£3.95
DMP 2000/3000 Black	£3.95
(colours N/A)	

Colours Available are:-
Red, Blue, Green, Brown,
Orange, Purple.

Credit Card

Hotline (0256) 463507 Faxline (0256) 841018





Seek and ye shall find...



WHAT should you pay for a good adventure? Prices of software vary enormously and sometimes it is not easy to see how the cost of the product can be justified. There are many factors to take into account but packaging, development costs, distribution and advertising costs are probably the most significant. A simple cassette box and standard inlay card are cheap. Larger, Rainbird-style boxes packed with goodies and comprehensive instruction books or supporting literature have to bump up the price.

A program written from scratch with a complex operating system and graphics is bound to cost more to produce than a program written using one of the adventure-creation utilities.

Some major outlets have in the past insisted on over 40 percent handling charges. Large advertising campaigns to hype up special products can cost many tens of thousands of pounds. In theory a larger number that are sold could mean a reduction of price to the consumer – but this rarely seems to happen.

Even knowing all the likely costs, it still seems strange that we can have such an enormous difference between the cheapest and most expensive programs. Adventures are very personal things, some you like, some you don't. But at the end of the day nearly all those that YOU like, are going to give you many hours of pleasure per pound spent.

Total madness

Alternative Software is a new software house to me and having found a couple of their £1.99 gems in my

local computer shop I thought you may like to hear about them. Wizbiz and Starwreck are both written by Charles Sharp and I am reliably informed that Charles is normally quite sane. Mind you, he must have been up in the middle of the night at the elderberry wine when he wrote these two, as they are as zany as any adventure games I have played.

Wizbiz is the slightly saner of the two and has you playing the part of a wizard called Ralph. Last night you spent a few happy hours down at the local with some wizard pals. Sadly you had one lager too many and practiced one of your party tricks on one of them. Mike did not take kindly to being changed into a pink and black spotted salamander! When he recovered, you were even the worse for wear and it is not surprising that you remember little of the way in which he transported you to one of his less pleasant dungeons to cool off.

Of course you must get out – who knows what is going on at your pad without you there to keep an eye on things? There is no way you are going to manage this on your own, you had better call on your familiar for help. With that hangover you can barely remember your own name let alone his.

Perhaps a hair of the dog may help, that usually loosens your tongue. It may loosen your memory too. Once you have his help things can start to happen. Of course they may not all be in your favour, but at least it beats rotting in a dungeon.

Wizbiz is written using Incentive's Graphic Adventure Creator, so the general format of graphics and parser are good without being excep-

tional. The text is generally short and to the point, keeping the atmosphere alive until the end. There are lots of objects to find – of which a fair number are red herrings. Unlike some programs where these ruby coloured fish have no purpose, these often appear to be doing something, but are in reality just driving you further up a gum tree.

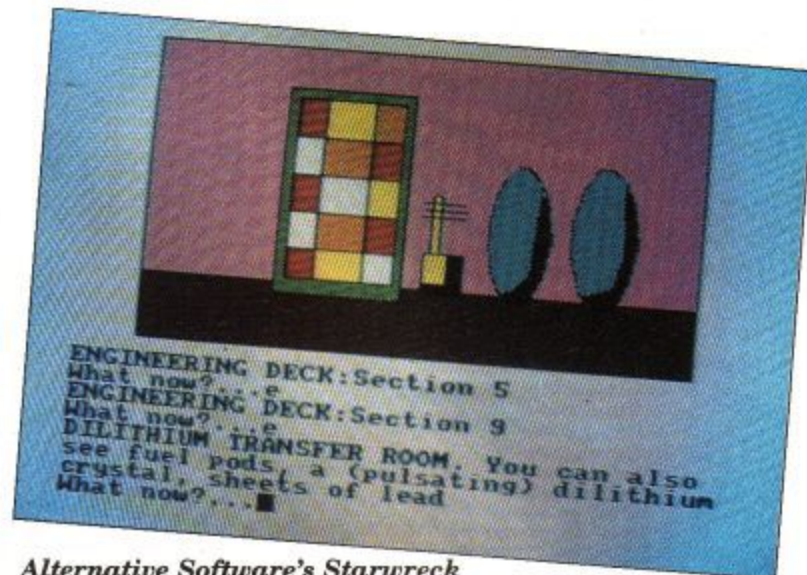
Make maps carefully as there are several pseudo mazes where you could easily get a little confused. At first the puzzles are not so much difficult to solve as hard to find. Examine everything you come across, no matter how mundane the object may appear to be. I found that at first I was ignoring some items because they seemed such simple and everyday objects. Examining them not only gives you more information about the object but also provides clues to potential puzzles.

Although I don't think that you can get killed in this program, it is still a good idea to save the game position fairly often. Not only does this enable you to return to critical locations more easily to try out your latest ideas, but some actions may prove to be more of a hindrance than a help and you may wish you had never tried them.

Wizbiz may not appeal to everyone, you do have to be more than a little crazy to enjoy it fully. If you have even the slightest hint of madness in your family, buy the game – you will enjoy it.

Where no one else dare go

Starwreck, the second budget title from Alternative Software, is really the story of a disaster looking for somewhere to happen. It is about the happenings aboard the starship Paralyse, of which you, James T Cake are the captain. Your mission would appear to be a simple transport job. You have aboard the Thracian Ambassador and a couple of strange creatures that have to be delivered to a research station. There is also a Krall, a potentially deadly being who lives off other organism's life forces.



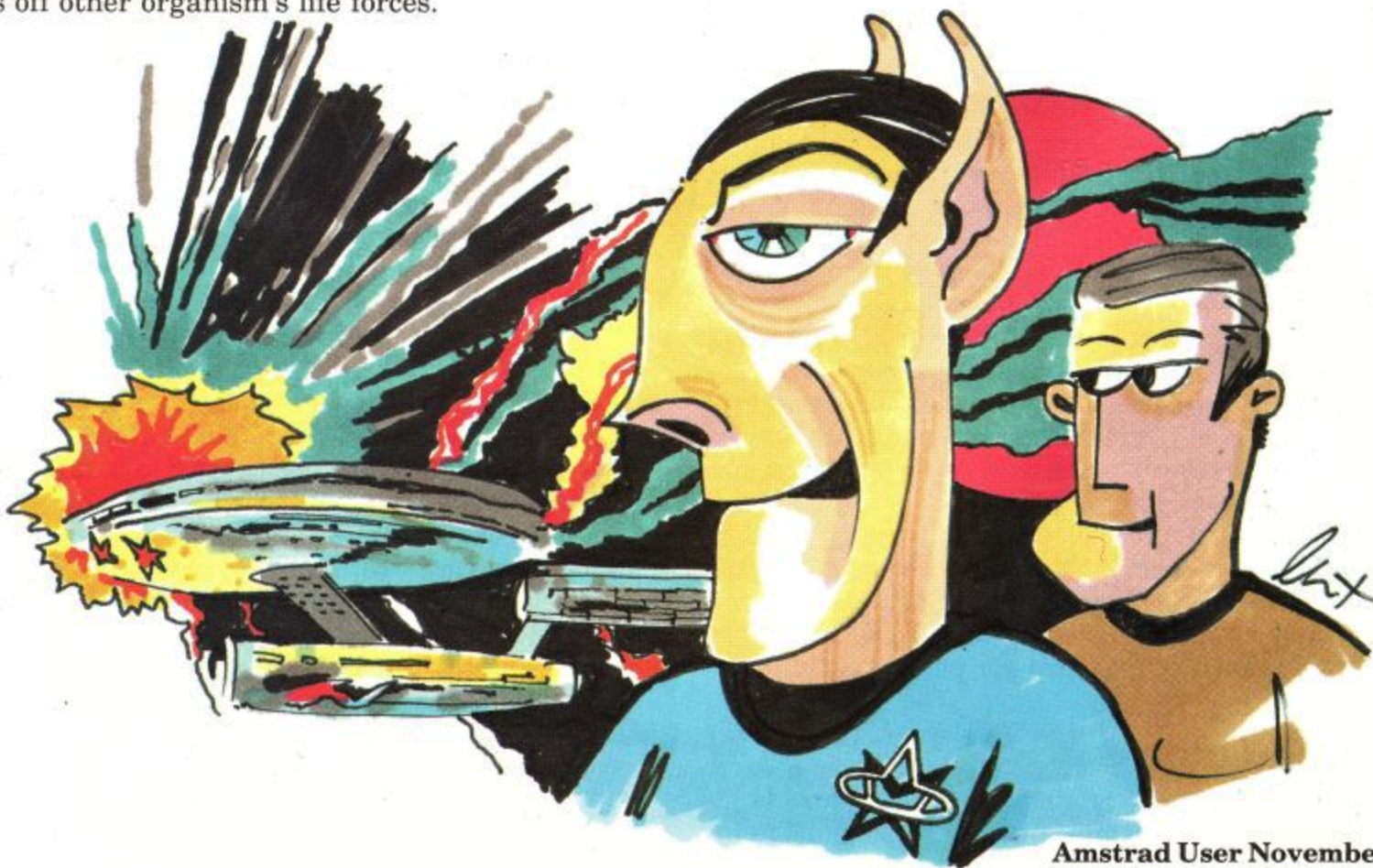
Alternative Software's Starwreck

Having wandered around the Paralyse for some hours, I am still not too sure what I am trying to attain. I think the whole idea is to encourage the total disaster of the voyage. Constructive actions do not seem to have much effect but destructive actions lead to yet more chaos and general mayhem.

There are a number of objects to find and puzzles to solve, but nowhere near the variety found in Wizbiz. The atmosphere is more aseptic than charged, which I suppose is in keeping with a starship, but I found this more conducive to frustration than excitement.

All your favourite characters are aboard, Mr Spark, Dr Leonard Decoy, Mr Zulu, Mr Checkout and the delectable Lieutenant Yahoo, plus the presumably disposable Ensigns Weevil and Guzunder. A communicator and phaser are at your disposal and a transporter system just begs to be energised.

Again, as with Wizbiz a certain madness will be needed to get the most from this game. I am all in favour of something out of the ordinary and a few more games like these can only help to lighten those



darker moments when the Stock Exchange is failing or the papers can find nothing better to tell us for days on end except Irangate or another secrets exposé.

Just to encourage you (and also to get a few clues myself!), I have some software waiting for the first correct solution to either of these two zany adventures. Write in to Bill Brock at *Amstrad Computer User* with YOUR final solution and the first one will have a pressie in the post – good luck.

Old but sound

Another cheap adventure that seems to have had little mention in its Amstrad reincarnation is *Kentilla*, from Mastertronic. This game had good reviews when it was launched on the Spectrum and proved to be not an easy game to conquer. The Amstrad version has been out for some time but little has been done to remind would-be players of its existence.

Nothing is said on the cassette inlay, or at the beginning of the adventure, about the background story or what you are expected to achieve. Death is constantly around the corner and this, together with the uncertainty of your final destination, could well put off many players – especially in such a complex and devious game.

Location descriptions are generally fairly short with any special objects seen, and what happens at that location, displayed in a scrolling window below. There are a number of graphics. These are simplistic and quite small, but keep an eye open for the clues included within the pictures.

Many input commands need only a verb/noun format, although there are a number of occasions where a longer sentence is required. For instance there are several keys to be found, and if you have more than one, you have to specify to which you are referring. Longer inputs are needed to interact with other characters.

Very soon into the adventure you will meet Elva. Having given this character a knife, Elva will follow you everywhere. You can only carry a very limited number of objects, Elva on the other hand must be more than somewhat muscular and can carry many



objects at once. GIVE XXX TO ELVA and SAY TO ELVA "GIVE ME THE XXX" are two of the most common commands you will be using.

You play a hero out of the past and your mission is to destroy the evil Grako across the water. Starting with nothing, you must first find *Kentilla*, a legendary blade that will return to the hand of its owner on command.

To get to Grako in his Black Tower you must first solve a number of devious puzzles. These involve the manipulation of lots of the objects you will find on your travels.

You will meet several different types of creatures, some of which are hostile and some not – take care not to kill the wrong ones. There are two mazes to solve, one in a forest and one amid swamps. Neither is too difficult if you keep your head and take care with your mapping.

In the forests, keep an eye on Elva and do not leave them until your aid has fashioned a bow and some arrows. You will need to persuade Elva to use them later. In the swamps you will find a lady in distress, save her and she will help you on your way.

Kentilla provides a fairly complex series of interlinked puzzles that must be solved in the right order. With death only a step away at all times, or an incorrect action fouling up your chances of success, it is wise to save your game position at fairly regular intervals. Examine everything you see (sometimes twice to find what you missed the first time!), and look into anything that may hold other items. You may also look east (or any other direction) to see what is in the next location. This Amstrad version varies very slightly from the original Spectrum game but not enough to change what was, and is, a very challenging adventure.

At £1.99 this is well worth spending some time to find – it will also take you some time to solve!



Mastertronic's *Kentilla*

Expensive but good

Infocom seems to be making up for its problems with the business side by giving us a steady stream of adventures. One that should have seen the light of day in this column some months ago is Moonmist. For one reason or another it has only now come to the top of the pile. A good thing too, as the latest game, The Lurking Horror, has just appeared – so you have that to look forward to in the near future.

Unlike the above games, Infocom ones are far from cheap, and Moonmist (on disc only) will set you back over £29. Only you can answer the question of whether it is over ten times better to play...

Like all Infocom games, the packaging is excellent with several bits of supporting documentation helping set the scene. You play an American private detective whose friend Tamara Lynd has recently become engaged to Lord Jack Tresyllian, and is staying at his castle in Cornwall. Her first letter was long and excited, telling you of her engagement, describing the castle, its resident ghost and some of the people she had met there. Her second letter was even more frenetic, in this she asks for your help because she believes that someone is trying to kill her.

You have always been firm friends and a plea for help just cannot be ignored. You catch almost the first available flight across the Atlantic. On your arrival at the castle gates, you are asked for your title, name and favourite colour. The title determines your sex, your name is what the guests will know you as and your favourite colour will decide which plot you will be acting out.

Colour keyed

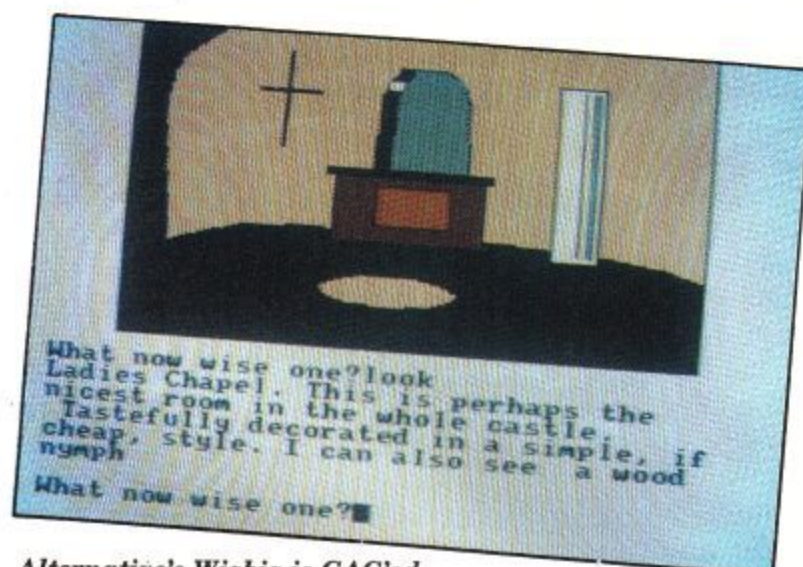
There are four specific plots – red, blue, yellow and green – and each will give you a different adventure with a different story line to follow. Some of the clues, the solution to the mysterious ghost and the castle's hidden treasure will be different. So having solved one adventure you can play another by just changing your colour preference.

Tamara has sent you the guide to the castle that is given to visitors when it is open to the public, so at least you have the basis of a map right from the start. Being old and with walls that thick, it just begs to have the odd secret passage. Could the ghost be travelling that way?

Lord Jack's previous girl friend came to a sticky end by falling down the castle well, and the ghost is said to have a resemblance to her – is there a more scientific answer to these more recent sightings?

Jack's father also died not so long ago, having contracted a strange disease somewhere along the Amazon. Sadly he died before he could pass on the whereabouts of the treasure he is supposed to have hidden in the castle. The Tresyllian finances are shaky to say the least and the finding of this treasure is becoming very necessary.

The adventure is classed as introductory level, so beginners and experts alike should be able to enjoy its puzzles and problems. Like all Infocom games, it makes heavy use of the disc drive and nearly all



Alternative's Wizbiz is GAC'ed

commands have the drive whirring away for 20 seconds or so.

I find this a bit of a bore, especially when you also have to type in all commands in full, very few abbreviations being understood. At least in this waiting time you have the chance to re-read some of the best descriptive text you will find in any adventure games.

Input commands may be quite complex, although the normal format of verb/noun will be all you need on most occasions. The parser used has improved over the years. It now looks for more in a sentence than most parsers, other than those from Magnetic Scrolls, whose Guild of Thieves and The Pawn are certainly in a position to give Infocom a run for its money.

Complex parsers are all very well, but the more complex they are the greater likelihood of some strange responses. The Infocom system is still not perfect, direction commands may be separated by commas to achieve a series of movements, but link together PUSH SWITCH, W and this will not be understood, SIT DOWN AND EAT DINNER gets the response that "there is a noun missing in that sentence".

There is no doubt that Infocom adventures are among the best in the world, but it is only fair to other software houses to point out that they are not the be all and end all in the adventure world. They have superlative text, excellent plots and puzzles that are both interesting and logical. But they also require all words to be typed in full, take a long time between input and response and sometimes make a hash of understanding what you have typed in. For all that, I would still recommend them to anyone so start saving up now...

ACU

RATINGS				
	Wiz- biz	Star- wreck	Ken- tilla	Moon- mist
Plot	68	61	68	80
Atmosphere	65	57	74	77
Addiction	65	59	72	80
Difficulty	72	75	80	72
Overall	69	59	71	79

MIDAS SOFTWARE

53, BUSH HALL ROAD, BILLERICAY, ESSEX CM12 0PU
FREE 20 Page Colour Catalogue includes software for IBM PC & Compatible machines

Orders despatched on day of receipt (subject to stock availability)

PCW Software

Special Offers

DISCS

10 3" CF2 DISCS

£23.00

10 MEMOREX OR 3m 5 1/4 D/S D/D DISCS IN A LIBRARY FILE

£13.45

LABELS

1000 3 1/2" x 1 7/16" 1 ACROSS

£5.75

LISTING PAPER

1000	Sheets	A4	85g	1pt	plain	with	micro	perforations	£14.95	£12.95
2000	Sheets	A4	70g	1pt	plain	with	micro	perforations	£21.45	£19.95
2000	Sheets	11" x 9 1/2"	60g	1pt	plain	with	micro	perforations	£15.95	£13.95

FINANCIAL MODELLING:		ACCOUNTS/PAYROLL:	
SUPERCALC 2	£37.95	CAMSOF (from £49.95)	
CRACKER 2	£37.95	CAMSOF INTEGRATED PSIL	£119.95
SCRATCHPAD PLUS	£37.50	M.A.P. (from £49.00)	
WORD PROCESSING:		MAP INTEGRATED ACCOUNTS	£119.95
NEWWORD 2	£51.75	SAGE (from £69.99)	
POCKET WORDSTAR	£29.95	SAGE ACCOUNTS/PAYROLL	£115.00
LOCOMAIL or		TRAINING:	
LOCOSPELL	£29.95	TOUCH 'N' GO	£19.95
MICRO COLLECTION		IANKEY Typing Crash Course	£19.95
(W/Processing, database,		IANKEY 2 Fingers Conversion	£19.95
Spreadsheet & labelling)	£37.95	AUDIO TUTORIALS (Supercalc,	
LOCOSCRIPT 2	£18.95	Locoscript, Newword or	
DAISY DISC (Prints Locoscript		CPM & Basic)	£7.95
documents on Brother Daisy		STEP BY STEP GUIDE TO	
Wheel Printers)	£11.50	LOCOSCRIPT	£4.45
PROTEXT	£59.95	DATABASE MANAGEMENT SYSTEMS:	
UTILITIES:		CAMBASE 2	£42.45
BRAINSTORM	£40.25	CARDBOX	£47.99
ROTATE	£19.95	CONDOR 1	£79.99
SMARTKEY	£29.95	dBASE II	£79.95
FLEXILABEL	£23.00	SAGE RETRIEVE	£57.50
GRAPHICS:		DELTA 1.25	£79.99
DR DRAW	£37.95	GAMES:	
DR GRAPH	£37.95	3D CLOCK CHESS	£12.65
COMMUNICATIONS:		BRIDGE PLAYER 2000	£15.95
DIAL UP	£84.95		
CHIT CHAT 'E-Mail' & 'Viewdata'	£89.95		



ALL PRICES INCLUDE VAT & POSTAGE



WHY PAY VAT ON YOUR SOFTWARE & SUPPLIES?

NOVAT SOFTWARE 1 has been established to cater for the needs of non-VAT registered customers. Prices include carriage.

SOFTWARE

FREE 20 Page Colour Catalogue available on request.
Full range stocked e.g.

PCW8256/8512

PC1512/1640

Pocket Wordstar	£30	Newword 2	£79
Supercalc 2	£36	Supercalc 3	£59
dBase II	£79	Reflex	£45
MAP Accounts	£129	Sage Accountant	£149
DR Draw	£36	Ability	£89

SUPPLIES

DISCS:		RIBBONS:	
10 3" CF2	£25	DMP2/3	£4
10 3M 5 1/4" D/S D/D	£15	PCW (Fabric or Carbon)	£4
3 1/2" x 1 7/16" LABELS:		DUST COVERS:	
1000 (1 across)	£6	2000 (2 across)	£10
LISTING PAPER (M/PERFS):		DMP2/3 Printer	£4
PC1512 or PCW8256	£9	1000 A4 90g	£13
2000 A4 70g	£18	2000 11" x 9 1/2" 1pt 60g Plain	£13

Send Orders to:



NOVAT SOFTWARE 1



P.O. Box 725, Boreham, Chelmsford CM3 3AT

TYPESETTING

with your

AMSTRAD COMPUTER

from **£1.50** per 1000 characters

Enter your data onto your computer and key in the data, tables etc. in the position you would wish the final typeset version to be, no need to enter special and confusing typesetting commands, our system requires raw text only.

The text is then sent to our page make-up facility where each individual page is made up to your specifications.

We have five years experience
typesetting from disk.

We specialise in
books, magazine typesetting, reports - especially
computer manuals and foreign language manuals.

For more information or if you wish to discuss a specific
job please contact

Kim or Milan at

KAMSET

34 Rayleigh Road, Hutton, Brentwood, Essex
Telephone (0277) 218676

FLOPPY DISCOUNTS.



If you're used to floppy discs with stiff prices, we have good news. Amstrad now sell 3" compact floppy discs for £2.99.

They're suitable for the Amstrad CPC 6128, PCW 8256, PCW 8512 and the new PCW 9512 and all other computers that have 3" disc drives.

Each disc carries up to 360K of data (on the 8512 and the 9512 this doubles to 720K).

Available through: ADL, Alders, Comet, Currys, Dixons, Eltec, Farnell, First Software, Laskys, John Lewis, Lightning, Norbain, Office International, O.S.T.A., Ryman, Northamber, P&P, Sandhurst, Wildings, and Hugh Symons.

Price correct at 1.9.87 but may change without notice.



Amstrad plc., PO Box 462,
Brentwood, Essex CM14 4EF.
Telephone: (0277) 262326.

From MR R SHUFFLEBOTHAM
THU 30 JUL 1987 20:30

Could you please tell me if there is a way of using macros, as depicted in Mastering CP/M (Sybex), with CP/M 2.2? In hacking some of the commands supplied with the disc. I discovered many LIB and MAC Ascii entries. Also, by accident a file called - ??????.LIB - was created. Could you please shed some light on the matter.

From ANDREW MARGOLIS
FRI 31 JUL 1987 18:23

If Mr. Shufflebotham gets either MAC (from Digital Research) or M80 (from Microsoft) he'll be able to use macros - MAC comes free with CP/M+ on PCWs, and supports macros but not INCLUDES - M80 supports both, but generates REL rather than hex files (so needs a linker) and only allows six character label names.

From BOB FRANCIS
SUN 02 AUG 1987 05:02

Re: Z80 macro assemblers - there is one in the public domain called ZASM.... Infotel has it, as do most CP/M based BBs..

From BOB FRANCIS
THU 30 JUL 1987 21:59

As I recall, a TTL monitor will work OK with a 6128 but you will only get eight colours max and they won't correspond to the Amstrad monitor colours - quite a few people have used Beeb monitors and they are TTL.

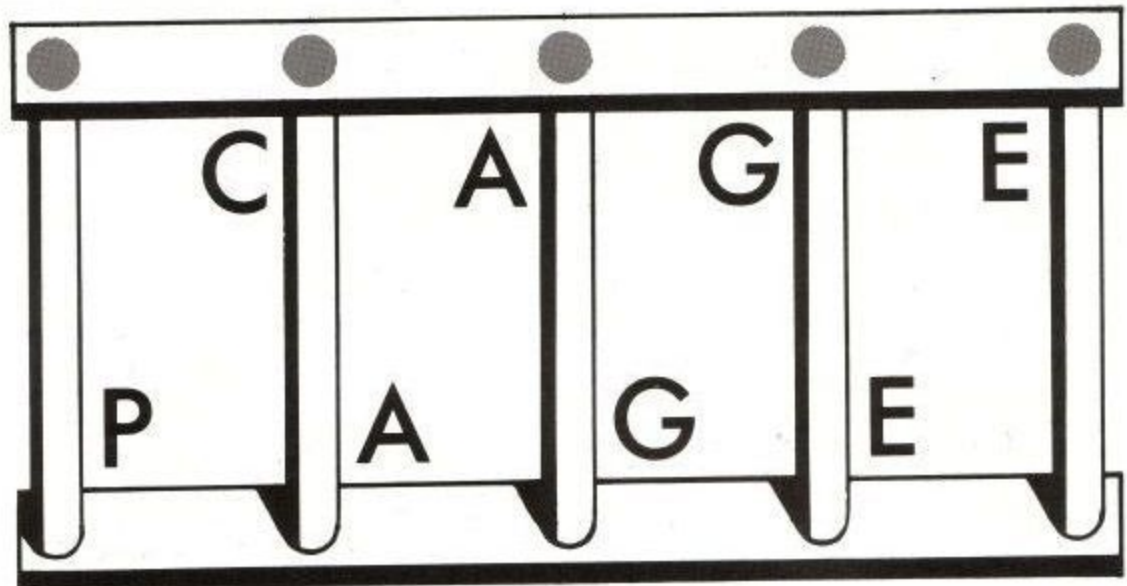
Problem with "standard" TTL RGB inputs is that there is no such animal. Acorn started all this hassle (I think) with the Beeb. TTL voltage levels depend on whether you are an input or an output pin.

If you're an input low = <0.8v Hi = >2v; if an output, Low = <0.4v, Hi = >2.4v. Giving at least 0.4 volts overlap between i/p and o/p, (hysteresis).

From MR P A MURPHY
SUN 02 AUG 1987 22:08

To expand the discussion on monitors, I have been successfully using my 6128 with a Philips colour TV which has an RGB socket. Unfortunately my Einstein will not work, although it has an RGB output.

I have since learned that the Einstein is a Linear RGB output so does not work to a TTL monitor. Any of you technical buffs explain the dif-



'AMSTERS Cage is the section on Micronet where users of Amstrad computers can help each other with problems arising from using every kind of Amstrad machine. PAUL NEEDS acts as referee.

ference between TTL and linear RGB outputs? Any way of interchanging the two?

I haven't a clue as to what the differences are, but I believe that it can be awkward to interchange without some sort of surgery. Any technobods able to help Pat and myself?

From MR T J THOMPSON
TUE 04 AUG 1987 00:03

Regarding the difference between RGB TTL and RGB linear, the TTL treats all signals below 0.4 volts as off (no red, blue or green signal) and anything over 2.4 volts as on (full red, blue or green).

Linear RGB works between 0v and 1.0v and will display shades of the relevant colour depending on the voltage between 0.0 and 1.0V. It is possible to convert an RGB TTL to a linear signal with a few resistors, but the other way (Lin to TTL) requires a handful of transistors.

Not too difficult to do if you're handy with a soldering iron, but not to be recommended to the absolute novice. Elektor did a TTL to Scart converter once (I think).

From AMSTRAD PLC
WED 05 AUG 1987 18:19

Right, TTL RGB, like TTL logic signals, conforms to the same standard where anything below about 0.5V is OFF and anything above 2.5V is ON. Given three lines which can be in one of two states you have $2^3 = 8$ different colours.

Linear RGB means the RGB lines can take any values between 0 and

about 1V. The CPCs drive them at 0, 0.5 and 1 to give OFF, half-ON and full-ON. This means you have three lines (RGB) which can take one of three values so you have $3^3 = 27$ different colours.

The 2/4/16 limits on colour of the various modes is nothing to do with this - those limits are set by the number of bits in which each pixel's state is stored.

As the picture is scanned the video hardware looks up each stored pixel state in a palette and then sets the RGB lines to one of 27 possibilities.

It is fairly obvious that if you take the TTL RGB output of something like a Spectrum (0.3 or 4V) and pump it into our monitor the system will work, but the ON signals will be too great.

As it happens, the Arnold monitor is pretty forgiving about this and the only "ill effect" is that the picture can be a little bright.

Going the other way, taking Arnold's 0.0, 0.5, 1V and pumping it into a TTL RGB monitor it is likely that both the 0.5 and 1 will appear as "ON"s - I know these signals are in theory below the ON threshold but I would guess that the impedance of the TTL inputs accounts for the effect though I don't profess to being a video engineer and I'm sure someone will know the exact reason.

Other reasons why other monitors might not work on the Arnold are to do with the length, level and polarity of the Sync signal. I have certainly seen at least one monitor (an unspeakably expensive Sony) where the SYNC signal had to be inverted.

From G N RIPPINGALE
WED 05 AUG 1987 18:59

A small contribution to the monitor

debate which has surfaced yet again . . . My Philips CM8533 monitor has RGB linear RGB TTL and a Scart input.

A simple lead plugs from the back of the 6128 into the Scart input on the monitor and supports all 26 colours. It also doubles as a colour TV if connected to the video tuner. All you could want for only £300!

£300?? OK if you have several micros, I suppose!

From MR GLYN CARRE'
WED 29 JUL 1987 21:18

COULD anyone tell me that 'CALL' which resets the ink colours to default? I used to know it, but have lost the piece of paper it was written on.

From BOB FRANCIS
THU 30 JUL 1987 22:04

Re: resetting inks, CALL & BC02 (SCR RESET) will do the job.

From MR S J DIBBLE
FRI 31 JUL 1987 21:29

I keep seeing interesting adverts for disc drives such as dual 80 track double density, double sided 5 1/4 in drive with Shugart interface, cased no power supply £99 + VAT. Can I hook one of these up to a 6128?

I will be getting Rodos which it would seem can handle such things but I am not sure about other interfacing. Any ideas?

With Rodos, yes. Otherwise, you'd only be able to use one side of a DS drive, and in 40 track mode only. I use one for archiving stuff on 5.25in - same drive as I use with the Beeb.

From MR D DORN(DE TEECHUR)
WED 29 JUL 1987 21:52

Shugart drive - I've got one, and it works. I'll take the back off and check the circuitry, but I'm sure that a microswitch strategically applied to the door to take pin 34 to earth when the drive is ready will do the trick.

From BOB FRANCIS
THU 30 JUL 1987 22:16

Thanks to Dave Dorn for offer of help with the drive. Drive is indeed a Shugart (400L). Any other help welcome!

From BOB FRANCIS
FRI 31 JUL 1987 23:22

Dave Dorn's mentioning that he had a

microswitch on the drive's front door got me thinking . . . several minutes later when I recovered, I realised that I needed to ground the ready line BEFORE booting the CPC. Ten mins fiddling with the DIP switches, and hey presto..one working 5.25in drive.

And yes you can use a DSDD 80 track disc on a 6128 - but in CP/M+ only - you can patch the extended disc parameter block to do so - and give yourself 128 directory entries . . . haven't tried it yet (no cash!) but details were in the CP/M U.G. Journal (and is in a text file on Infotel).

Now, can anyone help me with my next little project . . . I want to build a V22bis smart modem from two cocoa tins, three rubber bands and a World War Two surplus field telephone . . . snag is, having built it, I seem to have two valves left over: anyone any idea what I can do with them, I did ring Blue Peter but they thought I was trying to fiddle a badge out of them and hung up.

You need some sticky-back plastic and a corn-flakes packet. That's where the valves go!

From BOB FRANCIS
TUE 04 AUG 1987 02:01

Ah yes, if anyone is having troubles with a 5.25in drive - I found I had to set the head step time to 24 milliseconds to get reliable usage - in AMSDOS, just call SETUP DISC (CTRL-B) via KL FIND COMMAND and LOW:FAR CALL with HL pointing to a parameter block as described in the firmware manual.

For CP/M 2.2, SETUP.COM will do it and for CP/M Plus, a short proggy similar to the AMSDOS one but using the BIOS function USERF does the trick.

Ah, of course! Cheers Bob!

From AMSTRAD PLC
TUE 04 AUG 1987 18:33

Head stepping time for SLOW 5.25 (close) drives can be changed in AMSDOS and 2.2 using the SETUP DISC call at BE83 (although it must be called by the "usual" methods - RSX CTRL B in AMSDOS). In CP/M Plus the effect is achieved with the extended BIOS call DD SETUP at offset 0083h. If you need more details I can advise!

From REV B W TOMLINSON
SAT 01 AUG 1987 22:15

Help! I use Cambase and religiously copy my 8512 b: drive disc after use. Tonight I find that tracks 153-159 are corrupted and I wrecked the copy disc by having to stop disckit halfway through. Dir shows the files OK - how

can I copy a 378K file without using disckit? - or LS2? Suggestions welcome please!

NB I'm no great hacker, so keep it simple. Signed, Barry.

You have a problem. The directory is ok but that doesn't mean that the files are. Can anyone suggest anything?

From AMSTRAD PLC
MON 03 AUG 1987 18:05

If no one comes up with a clever solution (and I can't think of a way to do it offhand), then Rev Tomlinson could send me the disc as I have the technology to copy files from 720k to 720k using PIP (which you can't do on an 8512 cause one drive is 180k and the other 720k and you can't use "logical" drives when B: is installed).

From REV B W TOMLINSON

Re: the dud 'b' drive - I said a prayer (can help!) and opened up my disc drive. The head was bent out at an angle. Have straightened it and retrieved the file - all now working well and new backups made. Thanks for all helpful tips, and especially to Cliff for his kind offer of help.

Glad to hear you got it back ok! Wonder how the head got bent??

From MR S J DIBBLE
WED 05 AUG 1987 22:13

How many of you out there got DK 'T's real time clock? Well if you have take a word of advice. Don't use the POKERTC command on addresses 10,11,12, or 13. I was playing around with that tonight and disabled the clock somehow. In the end I had to open it, unsolder the battery and remove it so the clock reset. A lot of messing around, and not worth it.

One other thing, try the POKERTC and PEEKRTC on any other address over 9. If the computer crashes you have an early version of the s/w as there is a bug in it. I found this and have corrected it in my version and assume DK have done like wise.

For those who want to know, the bug is in the section of the code which sets return values. A POP instruction is missing and for any address over 9 two bytes of junk are left sitting on the stack so when the program does a RET it gets a nasty shock. I hope this gets you near enough, but if not mbx me and I will try to help further. The alternative is to contact DK.

Thanks Steve! I understand that, and I'm a self-confessed "code idiot"!

▲ JOIN THE CLUB . SCOOP THE SAVINGS ▲

AMSTRAD
USER CLUB
It pays to belong!

THE OFFICIAL AMSTRAD USER CLUB

BY JOINING the Official User Club you can buy a whole range of new software at fantastically low prices to make your Amstrad even more versatile and useful than ever.

By taking advantage of the savings you will recoup your membership fee in only weeks! Look what else you get:

- ▲ The widest range of branded Amstrad approved products stocked in depth all at substantial discounts.
- ▲ HELP HOTLINE for any technical advice you need.
- ▲ 12 MONTHS FREE subscription to Amstrad Computer User.
- ▲ 24 hour telephone ordering facility.
- ▲ FREE monthly newsletter, packed with hints, tips and reviews.
- ▲ Exclusive products for club members.
- ▲ Privileged previews of new products.
- ▲ Big prize competitions.
- ▲ Products delivered direct to your door.

CLUB MEMBERS ALWAYS SAVE

▲ CPC OWNERS ▲

We always have in stock a large selection of products at highly competitive prices including, the complete AMSTRAD range, dozens of AMNOR products, the Top 20 games, plus a huge catalogue of bargain games, and exclusive special offers at discount prices.

▲ HARDWARE & UTILITIES ▲

When it's time to widen your computing horizons—the club has printers, modems, leads, interfaces and complementary software at incredible discount prices.

RING FOR DETAILS

FREE INTRODUCTORY GIFT

When completing your application form below, please state your machine type and choice of ONE free gift from the following list which we will despatch along with your exclusive membership 'Welcome Pack.'

1. Two superb mystery tape based games
2. One superb mystery disc based game
3. One blank disc
4. Ten blank cassettes (for 464 only)
5. One general CPC computer cleaning kit
6. One CPC 464 cleaning kit

ORDER ACTION LINE – DIAL 091-510 8787 NOW!

For extra-fast attention, order now by phone quoting Access or Visa number.

Or fill in the coupon below and send to the

OFFICIAL AMSTRAD USER CLUB, ENTERPRISE HOUSE, P.O. BOX 10, SUNDERLAND SR4 6SN.

▲ HOW TO JOIN THE CLUB ▲

Simply fill in the coupon and return it to us at the address shown together with your remittance. We'll send you your special membership discount card, a 'Welcome Pack' and your FREE Introductory Gift.

FOR OFFICE USE ONLY

Yes, I want to enjoy the benefits of Amstrad User Club Membership—please enrol me today and send my welcome pack. I enclose cheque/P.O. or credit card No. for £19.95.

My choice of FREE gift is: (please write description)

Machine Type

Please send all details to:

Name:

Address:

Postcode: Telephone No.:



ACCESS/ VISA:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiry date: :

All offers subject to availability; all prices correct at time of going to press

• POST TO •

• OFFICIAL • AMSTRAD • USER • CLUB

• PO BOX 10 • ROPER STREET •

PALLION INDUSTRIAL ESTATE • SUNDERLAND • SR4 6SN

AMSTRAD
USER CLUB
It pays to belong!

ACUKP/11

All this in just

Line 0013114 0054 Words 16148 Free
Insert
State
3rd July 1986

Dear Douglas,

Further to our telephone conversation yesterday, I have pleasure in enclosing a pie chart showing the breakdown of our fixed costs for the year.

As previously discussed with yourself, I will be travelling down by train next Thursday morning.

I look forward to meeting you then.

Yours sincerely,

Jeremy Broad

WORD PROCESSOR

Compose a letter, set the print-out options using embedded commands or menus, use the mail merge facility to produce personalised circulars – and more!

Mini Office II Database - Database Software 1986
File: 1 Entry: 115 Size: 37 Record Number: 1

Name	Douglas
First name	Douglas
Address	111 Wood Lane
Address	111 Wood Lane
Town	Widport
Post code	WA 42
Mobile	1000
Extinct	20

Select from: + + + + + MEXCOP, WWA, H100, DOWDA, DOWDA, or OTHER

DATABASE

Build up a versatile card index, use the flexible print out routine, do powerful multi-field sorting, perform all arithmetic functions, link with the word processor – and more!

Mini Office II

Label Printer

Douglas, Heather
Hollywood House
Hollywood Road
Blackpool
L1 1 4LP

Use Cursor Keys To Move.
+ Followed By a Number For Field.
ESCAPE To Exit. TAB To List Fields.

LABEL PRINTER

Design the layout of a label with the easy-to-use editor, select label size and sheet format, read in database files, print out in any quantity – and more!

...and at a price

Mini Office II offers the most comprehensive, integrated suite of programs ever written for the Amstrad – making it the most useful productivity tool yet devised.

A team of leading software authors were brought together to devote a total of 26 man years of programming to the development of Mini Office II. What they have produced is a package that sets new standards in home and business software.

The sample screenshots above illustrate just a few of the very wide range of features, many of which are usually restricted to software costing hundreds of pounds. Most are accessed by using cursor keys to move up and down a list of options and pressing Enter to select.

Is it that easy to use? Several leading reviewers have

already sung its praises on this very point.

Yet possibly the best advertisement for Mini Office II is that it comes from the same stable that produced the original Mini Office package back in 1984.

That was so successful it was shortlisted in two major categories of the British Microcomputing Awards – the Oscars of the industry – and sold in excess of 100,000 units!

It was up to Mini Office II to take over where the first Mini Office left off, with 32 extra features, two additional modules, a program to convert existing Mini Office files to Mini Office II format, and a 60 page, very easy to follow manual.

This is the package thousands of Amstrad owners have been waiting for – and at a price everyone can afford!



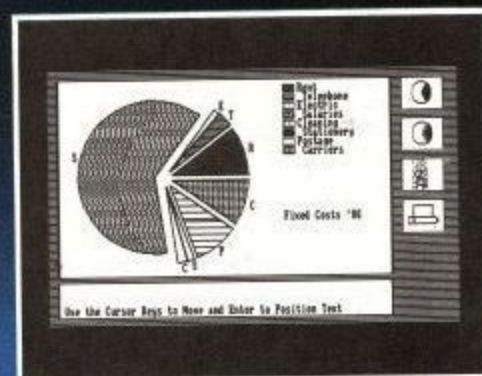
ONE package!

SPREADSHEET
Prepare budgets or tables, total columns or rows with ease, copy formulae absolutely or relatively, view in either 40 or 80 column modes, recalculate automatically – and more!

FreeSpace: 10872 Auto
Cell: B9 (locked)
Contents: B9:B20E7

	Jan	Feb
1		
2	Electric 60.00	50.00
3	Telephone 130.00	125.00
4	Salaries 2450.00	2400.00
5	Postage 375.00	360.00
6	Carrier 420.00	380.00
7		
8		
9	TOTALS: 3635.00	3695.00
10		

GRAPHICS
Enter data directly or load data from the spreadsheet, produce pie charts, display bar charts side by side or stacked, overlay line graphs – and more!



COMMS MODULE
Using a modem you can access services such as MicroLink and book rail or theatre tickets, send electronic mail, telex and telemessages in a flash – and more!

```

>br
*****
British Rail Service
Tickets / Fares / Timetable
*****

* Ticket Bookings
* Pullman/Steam Bookings
* Seat Reservations
* Sleeper Reservations
* Pullman Rail
* Steam Excursions
* Electric Express - Newsletter
* Timetable and Fares from Nov. 12th

* Go for HELP
1-B Redisplay Out
Select 1
    
```

that can't be matched!

DATABASE SOFTWARE

FREEPOST, 68 Chester Road,
Hazel Grove, Stockport SK7 5NY.

Amstrad CPC 464, 664, 6128

Cassette £14.95
3" disc £19.95

PC and PCW

Versions for the
machine out soon

Order at any time of the day or night

Telephone Orders:
061-429 7931

Orders by Prestel:
Key *89, then 614568383

MicroLink/Telecom Gold
72:MAG001

Don't forget to give your name, address and credit card number

ENQUIRIES ONLY: 061 480 0171 9am-5pm

Please send me **Mini Office II**

*Add £2 for Europe
*Add £5 for Overseas

Cassette £14.95* 6086
3" disc £19.95* 6087

Payment: please indicate method (✓)

☐ Access/Mastercharge/Eurocard / Barclaycard/Visa

Card No. _____

☐ Cheque/PO made payable to Database Publications Ltd.

Name _____ Signed _____

Address _____

Tel: _____

Please allow 28 days for delivery

ACU11

Out of the dumps

Harri Seldon reviews Amstrad's new LQ3500

AMSTRAD has a reputation for giving products really interesting and useful names. The LQ3500 keeps this tradition, but brings more initials on to the scene. The last series of printers were called something like DMPxxxx (pronounced "dump"). Now, the prefix is "LQ", like the old Epson range. The "LQ" part stands for Letter Quality, and it isn't kidding. This is one of those fancy machines carrying 24 pins on the print head. Every single one is used for the characters, and underlining is done on a separate pass.

The really clever bit is that the letter quality print scrolls off the roller at about 55 characters per second bidirectional.

Probably the most familiar LQ dot matrix printer that you could compare it to is the Joyce (PCW 8256, code named Joyce after Alan Sugar's secretary). Comparing it with the rest of the DMP range would be difficult, as they are flatbed design, and the LQ3500 is a more conventional printer.

Why the change from flatbed designs? I don't know. Perhaps the whole concept of a flatbed printer was a bit too novel for people who are now in management positions, but took their computing degree six years ago. More likely, though, only a limited number of 24 pin heads are available, and none fitted on a flatbed chassis. I think that flatbed printers are a great idea.

The LQ3500 prints out much better, and much faster than the Joyce or the DMP series, anyway. It's print quality is getting on for about as good as you could persuade a matrix printer to be, and all on the one pass yet.

The difference in quality is achieved, not by going over the same line twice, but by packing in more dots per inch on one pass.

As the print head does not need to shuffle back to the start of the line each

time, letter quality printing is much faster than on the older printers.

So much for print quality, what about other uses? Well, it goes like the clappers in draft mode. Not needing to put quite so many dots in the inch, it belts out text at about 160 characters a second, but slows down noticeably when you start mixing in italic characters.

This draft mode text looks very angular. It is legible, but it wouldn't win any awards for calligraphy.

To the outside world it looks like an Epson LQ1500, which is a shame as they stopped making them about 18 months ago. It is, however, as near to a standard as you are going to get, and it's a darned sight better than inventing your own standard.

As a sideline, it also looks like an IBM printer. There are three character sets: Epson (with international variations, IBM 1, and IBM 2. The difference between the two IBM sets is that number one interprets the first 32 characters in the second half of the character set as being control codes.

The unusual bit about the IBM sets is that the double lined graphics are really double lined. This may sound a bit daft, but for some strange reason not many IBM-compatible printers actually have IBM-compatible graphics.

In common with other printers, the graphics characters are produced in two passes, and don't quite join up unless you make the machine print only in one direction. Curiously, it does not seem possible to select IBM set 2 from the DIP switches on the back.

That's a point, the DIP (Dual In-line Package, for those who haven't heard yet) switches are relative easy to reach. They're hidden round the back, but you don't need to take the printer apart to get to them. In fact, all you need is a

biro with which to poke at them.

The printer coped well with screen dumps from a PC1512 using the shaded version of the Graphics program, though it did look a little faint. This is because only every third pin on the head is used when doing 8 bit graphics dumps.

When in high resolution 24 bit mode all pins are used, but overheating becomes a problem. After about 12 lines of **black**, a self-protection feature stops the print head for a while to let it cool off. It only needs a few seconds break, to stop it from vanishing in a puff of smoke.

On the front you will notice four buttons, in the manner of the DMP4000. These are labelled ON LINE, MODE, FF and LF. You probably know what most of them do, but the mode button allows fine feeding of paper, and also lets you feed paper backwards.

It is also possible to set either draft or LQ (it's no longer called near letter quality) modes with the FF and LF buttons. It peeps twice when you set LQ, and once for draft mode.

Another feature on this machine that I liked was the hex dump. Not many people use this, but when your program doesn't drive the printer properly, a hex dump of what you are sending to the printer comes in very handy.

The usual problem is finding out what part of the hex dump is the part that you are interested in. But, with this printer this proves no problem as the hex dump has a character dump by the side of it, much like a debugger program.

Everybody wants to know about buffers, so you'll want to know that the LQ3500 has a 7k one. This doesn't sound a lot, but this is the real size of the buffer, having taken into account

AMSTRAD LQ 3500 Printer

AMSTRAD

This demonstration page shows the range and style of characters available on the printer, together with a few examples of graphics. We cannot show here all the facilities available on the printer, but this ought to give you a fairly good idea of what it's capable of.

A very large range of special characters is provided in order to produce such effects as: «Naive» «Francaise» «München» «Mañana» «6½» «30°C» «π²» «21 An» «24+7≈3.14» «Q≥E»

... as well as *superscripts* and *subscripts* with *italics*, bold and double *strike underlines* etc.

There are, in fact, just over 200 different characters available, covering a wide range of European Languages (as well as Greek) and a wide selection of mathematical and currency symbols (including the simultaneous availability of £, \$, Pt, f, \$, ¢ and ¥).

This is in 17 pitch

This is in PS pitch

This is in 12 (elite) pitch

This is in 10 (pica) pitch

This is in 17D (8½) pitch

This is in 12D (6) pitch

This is in 10D (5) pitch

You don't need to use $\int_{-\infty}^{+\infty} f(x) dx$ to work out that this is clever.

In fact, it's just like Epson and IBM printers rolled into one, price tag excepted of course.

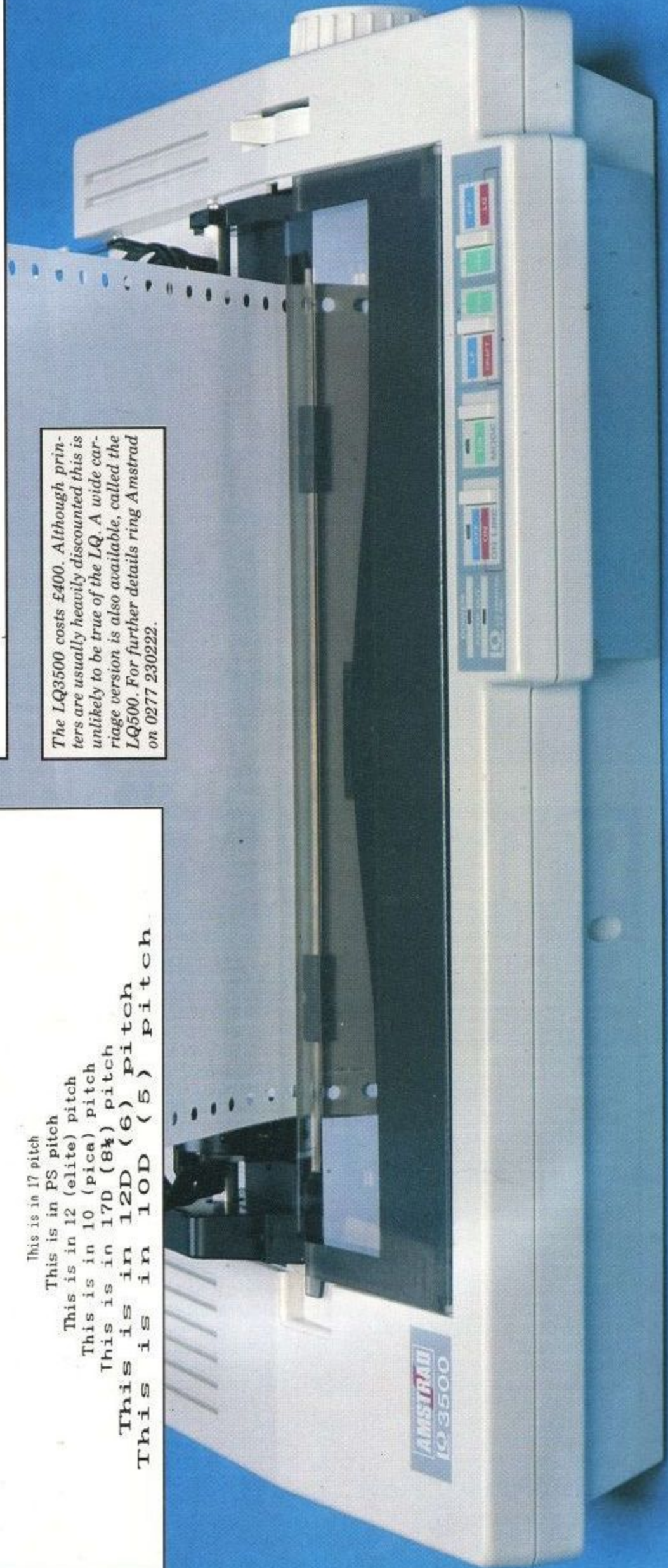
Letters, reports, tenders and contracts must reach true presentation standards. Matrix printers from Amstrad are designed to ensure that every document meets these exacting standards.

All delivered at 54 characters per second in letter quality print and 160 characters per second in draft print mode.

Φ This sample document was printed, including this footnote, using an Amstrad LQ 3500 printer.
(c) 1985/1986/1987 AMSTRAD plc. AMSTRAD is a registered trademark of AMSTRAD plc.

Unauthorized use of the trademarks or the word AMSTRAD, is strictly forbidden.

The LQ3500 costs £400. Although printers are usually heavily discounted this is unlikely to be true of the LQ. A wide carriage version is also available, called the LQ500. For further details ring Amstrad on 0277 230222.



◀ From Page 39

the memory used by the printer itself, downloaded characters and so forth.

The buffer is managed well, even while the machine is printing graphics, and so gives the appearance of being bigger than it really is.

Where this printer falls down is on paper feeding. The idea is sound enough. Put your paper in a slot in the top, pull lever to lift bail bar, and paper whizzes through the mechanism on its own like it does on a Joyce or Seikosha.

In a perfect world this would be fine. Unfortunately, if you wind the paper back a bit for that extra long document, and just happen to wind it back too far, you are in trouble.

Pulling the bail bar back a second time STILL makes it automatically paper feed. The paper then feeds up and crumples into the lid. The simple expedient of checking the paper sensor before feeding the paper would have prevented this, and I am surprised that it wasn't done.

After a sheet of paper has been sitting in any printer, it gets a curve ironed into it. This tends to wreak havoc by feeding itself back into the mechanism. On the LQ3500, the plastic guide is supposed to fix this, and does to

some extent, but the paper still sometimes ends up blocking the incoming paper.

I found the lid to be about as useful as an ashtray on a motorbike, and tended to leave the thing off anyway. It's not really that noisy a printer, so it didn't matter that much.

The tractor feed mechanism looks a wee bit flimsy. There is a warning in the manual to the effect that you shouldn't rip it out by the metal bits – or else. We haven't managed to break ours, and it does correctly fulfil its role of feeding tractor paper through the printer.

Paper is still held under slight tension by the roller, even when the tractor feed is being used. In fact, there does not seem to be any way at all of releasing the paper pressure, not that its that great to begin with.

The other bits in the box are a kit-of-parts for a separator (to stop the amazing self-feeding printer syndrome), a ribbon, an IBM-type printer lead, and a manual.

The ribbon is the same one that fits into the Joyce, so spares should not be a problem. Fitting them is fairly painless and ink-free. Mind you, Joyce ribbons seem to go on forever (I've used the

same one for about a year now) so you shouldn't need to change it too often unless you work for the Encyclopedia Britannica or somesuch. You can use the new carbon ribbons which give a blacker image, but they do smudge the paper.

The manual is a slight improvement on the old one, and no longer contains 25 pages on how to unpack the printer, followed by five pages for everything else. It explains things from the average punter's point of view, and is therefore a bit short on really technical content. But I say who wires up their own Centronics leads anyway? The manual is at least written in English, not Japanese or Japlish, and should prove adequate for most people.

So who is going to buy this printer? I suppose anyone who needs decent output, and high speed draft copies (the ed does this with a 300 cps matrix printer, a daisywheel, and a lot of floor space).

I can see quite a few of these being used as second printers on 9512s. The draft speed is very high, and it would make sense to spool off draft copies on an LQ3500 rather than the daisywheel.

ACU

MICROSNIPS

37 Seaview Road · Wallasey · Merseyside L45 4QN 24hr Ansaphone 051-630 3013

BIG RANGE OF SOFTWARE

AMSTRAD REPAIRS

HARDWARE

AMSTRAD 464 (GREEN)	£189.95
AMSTRAD 464 (COLOUR)	£289.95
AMSTRAD CPC 6128 (GREEN)	£289.95
AMSTRAD CPC 6128 (COLOUR)	£389.95
AMSTRAD PCW 8256 WORD PROCESSOR	£342.95
AMSTRAD PCW 8512 DUAL DRIVE	£457.95
PC1512 NOW INCLUDES MIGENT 'ABILITY' + 4 US GOLD TITLES	
PC1512 SD-MM AMSTRAD IBM COMPATIBLE Inc. 5 1/4" DS DRIVE WITH MONO MONITOR	£449.95
PC1512 DD-MM 5 1/4" DS DRIVE, 720K, MONO MONITOR	£569.95
PC1512 SD-CM SGL 5 1/4" DS DRIVE, COLOUR MONITOR	£629.95
PC1512 DD-CM DUAL 5 1/4" DS DRIVE, 720K, COLOUR MONITOR	£739.95
PC1512 HD20-MM SGL 5 1/4" DS DRIVE, 360K+20M HARD DISK	£979.95
PC1512 HD20-CM AS FOR HD20-MM BUT COLOUR MONITOR	£1149.95
PC1640 - WE WILL NOT BE BEATEN	POA
AMS ANTI GLARE SCREEN	£19.95
AMS PC1512 MONITOR/SYSTEM UNIT COVER	£12.95
AMS PC1512 KEYBOARD COVER	£6.99
AMS 464 DUST COVER	£5.99
AMS SCREEN (Green or Colour - please specify)	£6.99
DMP-2000/3000 DUST COVER	£6.95

POWER SUPPLY, LEADS AND EXTENSIONS

PCW 8256/8512 EXT LEAD SET (2m)	£15.95
CPC464 EXTENSION LEADS	£5.95
CPC 6128/664 EXT LEADS	£8.95
AMS 464 MODULATOR	£14.95
AMS664/6128 MODULATOR	£29.95
AMS PSU MONITOR EXT LEAD	£5.95

ACCESSORIES

AMS FD1 DISK DRIVE (additional)	£99.95
AMS DD1 DISK DRIVE (inc. interface)	£159.95
AMS DL2 CABI F	£8.95
PC 30Mg BYTE HARD CARD	£399.00
FD3 5 1/4" DISK DRIVE (AMS PC)	£169.95
DISK BOX (60 3" disks) (lockable)	£11.95
ANTI-GLARE SCREEN AMSTRAD (MONO)	£19.95
ANTI-GLARE SCREEN AMSTRAD (COLOUR)	£29.95
MULTIFACE 2 (Backup Device)	£44.95
CF-2 3" DISKS (PACK 10) (MAXELL)	£24.95
CF-2 3" DISKS (PACK 10) (AMSOFT)	£24.95
CF-2 3" DISKS (PACK 10) (PANASONIC)	£24.99
TOP QUALITY 3" WHIZ DISK (PACK 10)	£19.95
AMSTRAD 36W CENT/34W (1m)	£9.95
AMSTRAD 36W CENT/34W (2m)	£10.95
AMSTRAD CONNECTION (36W CENT/34W+Screen Dump)	£14.95
DMP 2000 RIBBONS	£5.95
DMP 3000 RIBBONS	£5.95
AMSTRAD 8256/8512 RIBBONS	£4.99
AMSTRAD CASSETTE 5 PIN to 3 JACK	£2.79

RAM PACKS AND EXPANSIONS

AMSTRAD DK-TRONICS 64K DISK OPERATING SYSTEM	£29.95
256K SILICON DISK for 464/6128	£75.00
PCW 8256 DK-TRONICS 256K UPGRADE	£29.95
256K MEMORY EXPANSION 464/6128	£75.00
64K MEMORY EXPANSION for AMSTRAD 464	£39.95
REALTIME CPC's	£34.95

GRAPHIC DEVICES

AMX 3D-ZICON (AMS)	£24.95
AMX MKIII MOUSE PLUS ART CONTROL (Tape+disk AMSTRAD)	£64.99
AMX MKIII PLUS STOP PRESS PUBLISHER (Disk AMSTRAD)	£74.99
ROM LIGHTPEN 464/6128	£27.50
DK LIGHTPEN 464	£18.50

PCW 8256/8512 LIGHTPEN inc. INTERFACE by ELECTRIC STUDIO £79.95

PCW KEMPSTON MOUSE (inc. WRITE HAND MAN by HISOFT)	£89.95
AMX MOUSE (AMSTRAD) (inc. AMX ART)	£59.95
KEMPSTON MOUSE with BLUEPRINT (AMS)	£64.95
AMX MOUSE (PCW) (inc. AMX ART)	£79.95

PRINTERS

AMSTRAD DMP 2000 CENT	£159.95
AMSTRAD DMP 3000	£189.95
AMSTRAD DMP 4000	£399.95
JUKI 6000 DAISY WHEEL	£199.95

We apologise for any alterations/omissions since going to press.

HOTLINE 051-691-2008
or 24hr Ansaphone 051-630 3013

ORDER BY PHONE WITH
spectrum Credit Card

PART EXCHANGE WELCOME

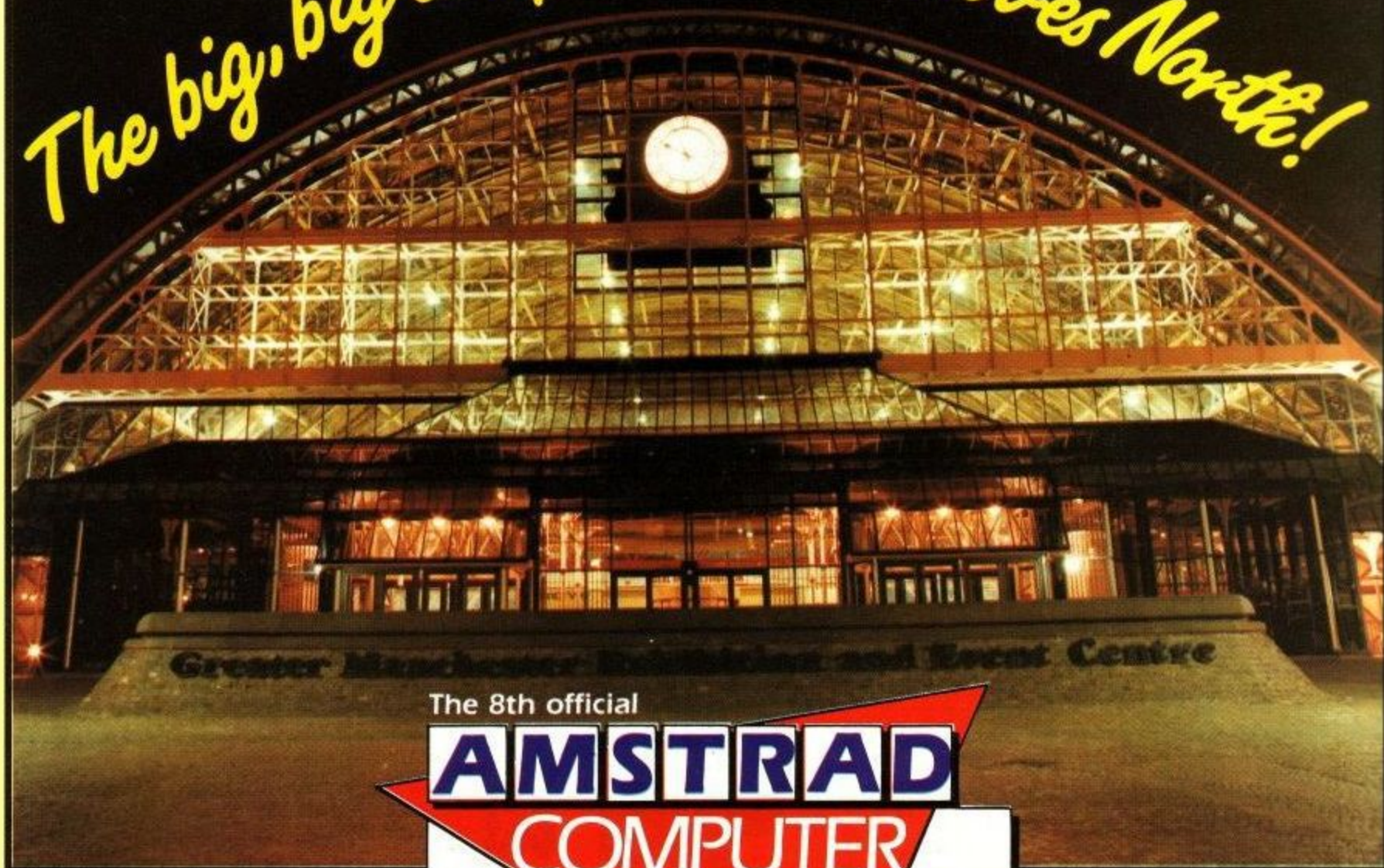
If it's available - we stock it! Please Phone

OPEN 6 DAYS

FREE 20 Page Price List with first order QUOTE/AUI.

Postage and Packaging
Items up to £20 add £1.00. Up to £50 add £2. Up to £100 add £5. For items over £100 add £10 for Group 4 courier ensuring delivery to you the day after despatch.
Overseas Customers: Full price shown will cover carriage plus free tax

The big, big computer show moves North!



The 8th official

AMSTRAD COMPUTER SHOW

Organised by
Database Exhibitions

10am-6pm Friday October 23
10am-6pm Saturday October 24
10am-4pm Sunday October 25

G-Mex Centre, Manchester

The fastest growing computer show of them all is now moving North – to the most innovative, prestigious exhibition centre in Britain.

This magnificent building will play host to all the major companies in the Amstrad market – including Amstrad themselves, showing the complete range of machines.

Whether you own an Amstrad CPC, PCW or PC – or just thinking of buying one – there will be lots for you to see and enjoy

FREE presentations in the Amstrad Theatre.
We've set aside a huge area to meet the heavy demand for seats during the non-stop presentations. You'll see demonstrations of new products, hear about all the latest developments, and be able to grill the experts.

This is YOUR chance to meet top people in the world of Amstrad. Among them will be experts from:

Amstrad
ABC Systems
Alfa Electronics
Amstrad User Club
Arnor
Autodesk
Bascrown
Business Graphics
Cambrian Software
Compact Software
Computer Manuals
Computer Training
Connect Systems
CPM
Database Publications
Diamond Business Software
Dictaphone
Direct Disk Supplies

Electric Studio
Electro Music Research
Evesham Micro Centre
Future Publishing
Garwood
GEM Distribution
Grafsales
Home & Business
HSV Computer Services
IQ
ITEC Marketing
Kador
KDS Electronics
KKS Electronics
Lightspeed Software
Logotron
Margin Maker
Metrotext

Micro Media Computer Supplies
Micronet
Mighty Micro
Minerva Systems
Nabitchi Computers
Pace Micro Technology
Peartree Computers
R & AJ Preston
Rombo Productions
RT Computer Training
Saxon Computing
Shareware Marketing
Siren Software
The Official Amstrad Magazines
Tirith
Twilstar Computers
1512 Independents

Bring this coupon to the Show to get 50p per person off the normal admission price of £3 (adults), £2 (children).

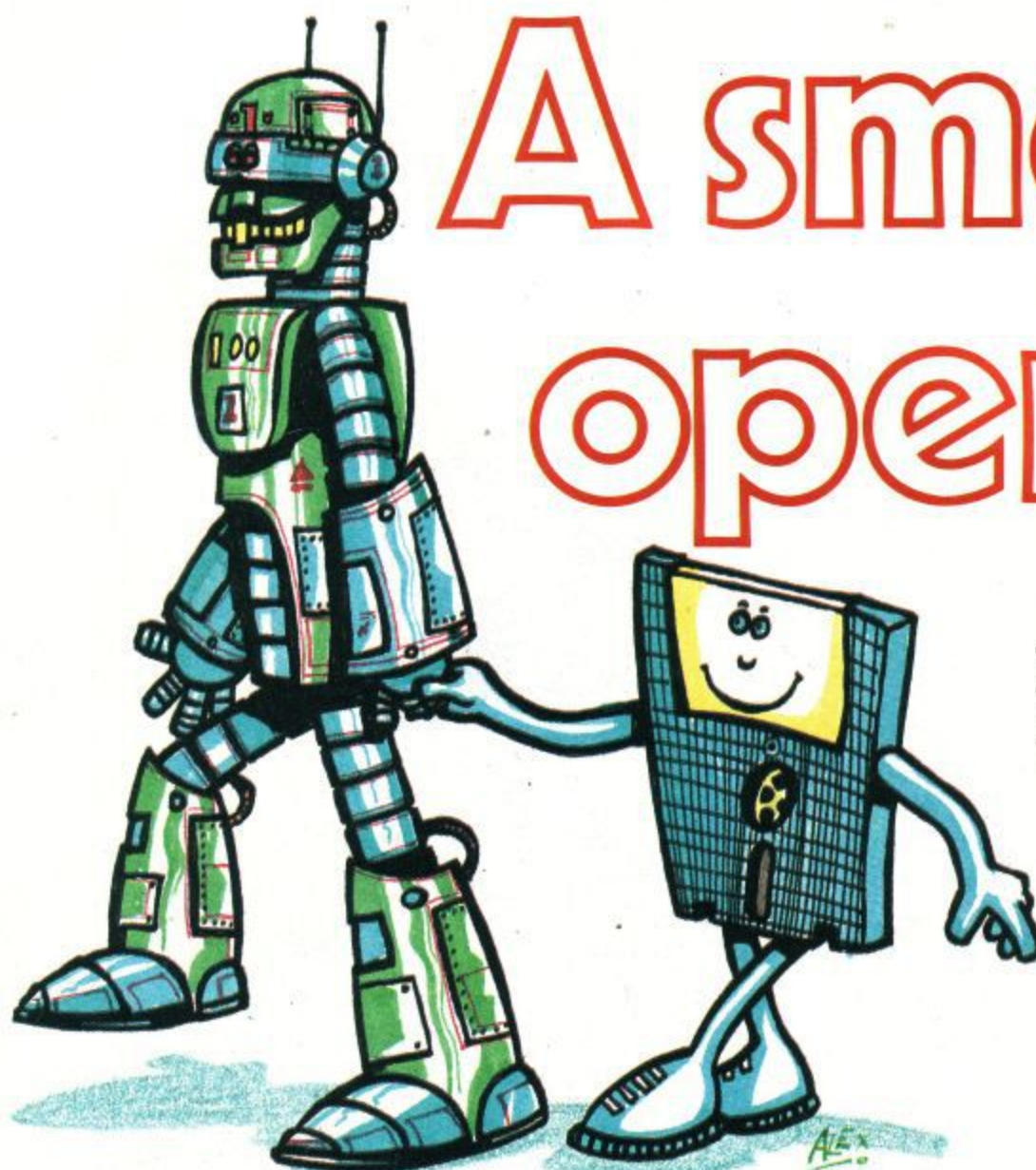
**AMSTRAD
COMPUTER
SHOW**

**50p
OFF**

Friday, October 23, 10am-6pm
Saturday, October 24, 10am-6pm
Sunday, October 25, 10am-4pm

G-Mex Centre, Manchester

How to get there: G-Mex is only one mile from the M602, and there's ample parking space beneath the hall. Within easy reach of Victoria and Piccadilly railway stations.



A smooth operator

**Jeff Walker reviews
the RoDos System
from Romantic Robot**

RODOS is a Disc Operating System. More specifically, it is an alternative disc operating system for the Amstrad CPC range of computers.

RECS is a rom extended command system, or in plain English, another bunch of RSXs that cut the sweat out of doing difficult jobs. RoDos and Recs together are known as "The RoDos System".

Just like the other alternative operating system we all know and love, namely CP/M (yawn), RoDos needs specially formatted discs to work with. Unlike CP/M (yawn), but like Amsdos, RoDos comes on a 16k rom with all the extra commands built-in. The thing to remember after inserting this silicon spider into your rom box is that it strangles Amsdos and completely takes over your machine.

Compatibility questions

Now that may sound obvious, but when you're using Amstrad IBM, Vendor, or Data formatted discs, RoDos does a quick costume change and starts acting just like Amsdos. So, in theory, RoDos is compatible with, but completely trans-

parent to, the Amsdos disc user. In practice, however, you may have to disable the RoDos rom in order to run some commercial software.

I found, for example, Mini Office II didn't like it. Neither did Cherry Paint nor Hisoft Pascal. To get the latter to compile without crashing, RoDos had to be surgically removed from my Superpower rom box, but usually a IZAP,x (where x is the number of the slot you've used for RoDos) is all that's needed.

I would estimate that about 85 per cent of software currently available for the Amstrad CPC will be unaffected by RoDos, or indeed any sideways rom.

I found that a commercial game (Trans-Atlantic Balloon Challenge) protected by one of the latest Speedlock disc protection systems ran perfectly with RoDos initialised, but any game that re-initialises all roms on running, like GAC adventures for example, will probably do strange things before eventually crashing. Note that these sort of games will crash with any external roms fitted, not just RoDos.

Another slight hitch is rom incompatibility. Sideways roms are notorious for this, and it's true that

some roms just don't like working with others.

I found that Utopia, Protext, Promerge Plus, Maxam and BCPL were mostly unaffected with RoDos initialised. I say "mostly" because RoDos had some strange effects on the Utopia IFIND, IHELP and ICOPY commands, and Protext went on a go-slow as far as loading and saving files was concerned. I hope these idiosyncrasies will be cured in later versions.

Getting started

To make the most of the system you must use RoDos formatted discs. Formatting is quick, and very simple: IFORMAT on its own does the job, but you can follow the command with up to 4 parameters if you like. The syntax is shown in Figure 1.

RoDos is very versatile. For a start, it can format, read from, and save to, 3.5in or 5.25in drives. It will even let you read, to an extent, discs formatted under a different operating system such as MSDos - as long as you've got a proper drive fitted, of course.

It will also format any extra banks of memory you have, which then become

drive C. On a 6128 this gives you a 62.5k silicon disc to play with, but IFORMAT,2,8 will automatically format all of your unused banks of memory.

The size of the silicon disc depends entirely on how much ram you've got hanging off the back of your machine, be it 464, 664 or 6128. And if you don't want to format all your unused memory you can specify how many tracks to format.

Playing with the 'track' parameter can do weird things to CF2 discs. RoDos will quite happily accept a parameter of over 40 and proceed to format the disc. A parameter of 80 results in 400k free under RoDos format. You haven't really got all this disc space, and trying to write to it will result in a "Disc corrupted" message when you try to write past track 40, or thereabouts. The track parameter is best forgotten when formatting discs; by default RoDos will format as many tracks as it legally can.

RoDos formatted CF2 discs use an extra sector per track, and as each track holds 5K of data you've got 200K free, minus half a K for the original, and each subsequent, directory entry.

What now?

Once you've RoDos formatted a disc you can enjoy the luxuries of setting up lots of directories and sub-directories. These are a little like the user sections under AmsDOS, but far easier to structure and manipulate.

Each directory is given a name, allowing you to sort your disc into orderly groups of similar files. You can name as many directories as you like, and each directory can contain as many files as you like. No more are we restricted to 64 files per disc; with RoDos the only restriction is disc space. Before setting up your directories, however, it is a good idea to give your disc a title. RoDos disc titles can be up to 16 characters long, and can also include control characters. So:

```
TITLE,CHR$(4)+CHR$(2)+'Games Disc
1'+CHR$(10)
```

would clear the screen to Mode 2 before printing the disc title, Games Disc 1, followed by a linefeed and the directory when either CAT or DIR is used. Let's say we've named our disc as above, and by way of a simple example we've arranged our disc so that Adventures, Arcades, and Strategies are each kept in their relevant directories of the same name. The result of this is shown in Figure II.

If we wanted a directory of all the adventures on our disc we would enter: IDIR,"adventures/". The slash at the

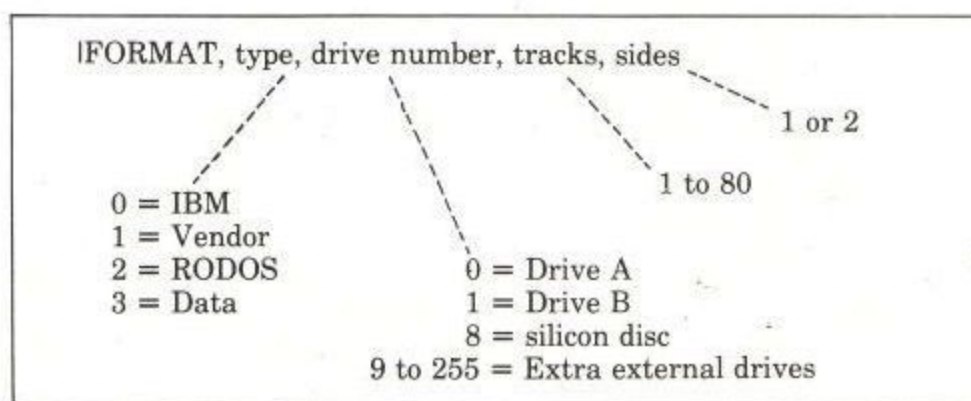


Figure I: RoDos Format command

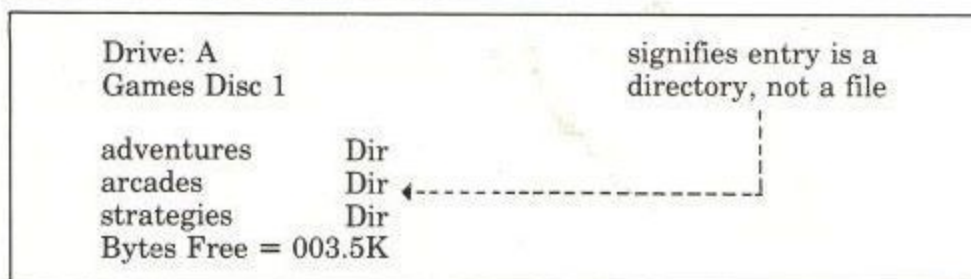


Figure II: Structured directories

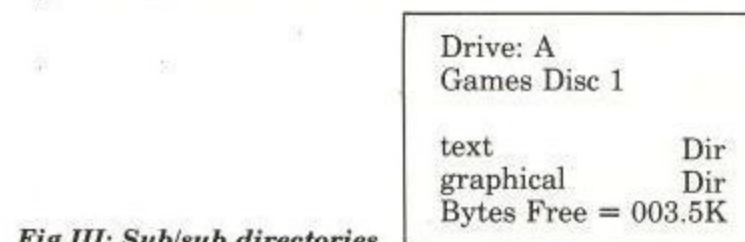


Fig III: Sub/sub directories

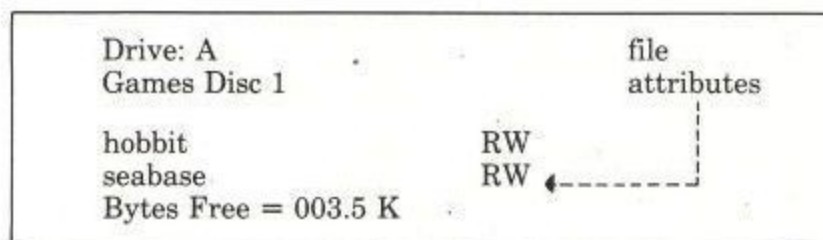


Figure IV

end lets RoDos know that we're talking about a directory here, not a filename. We could even split the adventures directory into further sub-directories, say text and graphical. IDIR,"adventures/" produce something like Figure III.

So to get a directory of all the graphical adventures on our disc we would enter: IDIR,"adventures/graphical/" which would result in something like Figure IV

The slash between the two directories in the DIR command line is known as a "path". It lets you fly around your disc following logical paths through directories and sub-directories.

To load or run a file you prefix its name with the directory path: RUN "/adventures/graphical/hobbit". Alternatively you could set "graphical" to be the current directory with: ICD,"/adventures/graphical", and then just RUN "hobbit". The directory name "." has a special meaning. It stands for the "parent" directory, in other words the one "above" the current one.

If we were currently in graphical

then "." would be adventures. If we wanted to get into text from graphical in a hurry then: ICD,"../text", which translates to "move up 1, then go into text", would do the trick. The name "/" on its own corresponds to the one and only directory you get when you IDIR an AmsDOS disc, and is known as the 'root' directory. ICD,"/" will always set the current directory to the root.

RoDos filenames and directory names can be up to 16 characters long, and are case-sensitive. Text, TEXT, text, and TeXt are all different names unless you use RoDos's OPT command to switch case sensitivity off.

The directory management commands, then, are the heart of The RoDos System. But they are by no means all you get.

Romantic frills

In total RoDos and Recs set up over 50 extra commands. Some of them are very powerful, most of them are very useful, and a few just duplicate AmsDOS commands.

One of the most useful new com-

SCHOOL SOFTWARE LTD.

ORDER DIRECT TO: School Software Ltd., Tait Business Centre,
Dominic St., Limerick, Ireland.

**FREE Catalogue Amstrad CPC, PCW, PC1512,
Commodore, BBC, IBM PC, MSDOS.**

Additional Dealers Wanted.

24 Hr. Visa/Access Hotline.

Ring UK 010353-6149477 (Office Hours) (Irl. 061-45399).

Direct UK 010353-6145399 (24 hr.)

ORDER NOW - See Below.

MAXI-MATHS (age 9-15). Amstrad PC, IBM PC,
Amstrad CPC, 1. Triangles, 2. Angles, 3. Sin Cos Tan.
4. Rectangles, 5. Circles.
provides a very stimulating learning environment.

MAGIC MATHS (age 4-8). CBM 64, IBM PC,
Amstrad CPC, PCW, PC.
Addition and Subtraction. "A serious challenger to similar BBC
programs and a good example of its type". PTM (UK).

MATHS MANIA (age 8-12). CBM 64/IBM PC/Amstrad
CPC, PCW, PC.
Multiplication and Division. "It appeals to the age group. My son
has been sneaking downstairs before breakfast to play".
BBC CEEFAX.

BETTER SPELLING (age 8-adult). All Amstrads/
CBM 64/BBC/IBM PC.
"Well Organised Lessons". "A proper course which approaches
spelling problems with specific exercises". E & T (U.K.).

BETTER MATHS (age 12-16). All Amstrads/CBM 64/
IBM PC.
Rated in the top five in an educational survey.

CHEMISTRY (age 12-16). CBM 64/BBC/IBM PC/All
Amstrads CPC, PCW, PC.
"Very ambitious in terms of the range of topics. High standard of
questions."

BIOLOGY (age 12-16). All Amstrads/CBM 64/BBC/IBM PC.
"A good excuse to play with your computer and have fun while
revising". Your Computer.



MAPWORK QUIZ (9-Adult). Amstrad CPC, CBM 64, BBC.
Excellent graphics and sound in this program covering most aspects of the Geography of
Britain and Ireland. Great fun for all the family.

PHYSICS (age 12-16). CBM 64, Amstrad CPC, PCW & PC 1512, IBM.
"A colourful way of revising for GCSE/O-Level examination". Your Computer.

PLAYSCHOOL MATHS (age 3-7). Amstrad CPC.
Six of the best programs for the pre-school and young children.

GEOGRAPHY (age 13-17). Amstrad CPC & CBM 64.
Comprehensive coverage of aspects of geography.

BUSINESS DYNAMICS. PC 1512, MSDOS, IBM PC.
Superb business simulation for student or adult. Be the boss, run
a company and learn while you relax. £19.95

ORDER DIRECT TO: School Software Ltd., Tait Business Centre,
Dominic St., Limerick, Ireland. Tel. (UK) 010353-6145399.

Education Discs £14.95

Cass £9.95 (£1.00 p.p.)

☐ Access/Mastercard/Eurocard/Barclaycard/Visa

Expiry date ☐

Card No.

☐ Cheque/PO made payable to School Software Ltd.

My Machine..... Titles

Name

Address

Code

ACU11

POOLSWINNER II

THE ULTIMATE POOLS PREDICTION PROGRAM

- **MASSIVE DATABASE** Poolswinner is a sophisticated Pools prediction aid. It comes complete with the largest database available - 22000 matches over 10 years.
- **PREDICTS** Not just SCOREDRAWS, but AWAYS, HOMES and NO SCORES.
- **SUCCESSFUL** SELEC guarantee that Poolswinner performs significantly better than chance.
- **ADAPTABLE** Probabilities are given on every fixture - choose as many selections as you need for your bet. The precise prediction formula can be set by the user - you can develop and test your own unique method.
- **SIMPLE DATA ENTRY** All team names are in the program. Simply type in the reference numbers from the screen. Or use FIXGEN to produce fixture list automatically (see below).
- **LEAGUE AND NON-LEAGUE** All English and Scottish League teams are supported, and also the non-league sides often used on pools coupons.
- **PRINTER SUPPORT** Full hard copy printout of data if you have a printer.

PRICE £15.00 (all inclusive)

NOW AVAILABLE

FIXGEN 87/8

AT LAST! No more struggling for hours to get the fixture list into the computer. FIXGEN has been programmed with all English and Scottish League fixtures for 1987/8. Simply type in the date, and the full fixture list is generated in seconds. Fully compatible with Poolswinner. Yearly updates available.

POOLSWINNER with FIXGEN £16.50 (for both)



COURSEWINNER V3

THE PUNTERS COMPUTER PROGRAM and occasional punters alike. You can develop and test your own unique winning system by adjusting the analysis formula, or use the program in simple mode. Coursewinner V3 uses statistical analysis of major factors including past form, speed ratings, course statistics, prize money, weight, going, trainer and jockey form etc. etc. It outputs most likely winners, good long odds bets, forecasts, tricast etc. The database includes vital course statistics for all British courses. You can update the database - never goes out of date. **FULL PRINTER SUPPORT.**

PRICE £15.00 (all inclusive) includes Flat AND National Hunt versions.

ALL PROGRAMS AVAILABLE FOR: AMSTRAD CPCs, AMSTRAD PCWs, PC1512, All BBCs, All SPECTRUMS, COMMODORE 64/128. Supplied on tape (automatic conversion to disc) - except PCW and PC1512 (on disc - add £3.00).

Send Cheques/POs for return of post service to...



phone 24 hrs



phone 24 hrs

37 COUNCILLOR LANE, CHEADLE, CHESHIRE SK8 2HX. ☎ 061-428 7425

(Send for full list of our software)

O. J. SOFTWARE FAST FRIENDLY SERVICE

ADVENTURE		Cass	Disc	ARCADE		Cass	Disc	BUS/UTILITIES		
The Pawn (128) Only		—	£15.95	Megamax		£7.50	£11.95	Disc		
Silicon Dreams		£11.95	£15.95	Road Runner		£8.50	£11.95	Advanced Art Studio		£20.95
Jewels Darkness		£11.95	£15.95	Slapshot		£7.50	£11.95	Mini Office II		£15.95
Hitch Hikers Guide		—	£21.95	Game Over		£7.50	£11.95	Plant		£15.95
Murder Atlantic		£11.95	£15.95	Sunstar		£8.50	£11.95	Pack/Protect (128+PCW)		£34.95
Passages on Wind		£10.95	£11.95	Barbarian		£8.50	£11.95	Advanced Music Sys		£24.95
				Paperboy		£7.50	£11.95	Art Studio for 128 only		£15.95
STRATEGY/SIMULATION				Hybrid		£7.50	£11.95	Protect Rom		£33.95
Champion Water Ski		£8.50	£11.95	Catch 23		£7.50	£11.95	Protect		£21.95
Champion Basketball		£8.50	£11.95	Sentinel		£8.50	£11.95	Prospell		£20.95
WCClass Leaderboard		£8.50	£11.95	wonderboy		£8.50	£11.95	Promerge		£20.95
Leaderboard Tourn.		£4.50	£8.50	Zynaps		£8.50	£11.95	Model Universe		£15.95
F15 Strike Eagle		£8.50	£11.95	Chollo		£11.95	£14.95	Masterfile II		£33.95
Slart Service		£8.50	£11.95	Deeper Dungeons		£4.50	£5.95	Pagemaker		£42.95
GFL Football		£8.50	£11.95	Centurians		£8.50	£11.95	Tasprint		£10.90
Acrojet		£8.50	£11.95	Gauntlet		£8.50	£11.95	Tascopy		£10.90
Tomahawk		£8.50	£11.95	World Games		£8.50	£11.95	Money Manager (+PCW)		£24.95
ST/Force Harrier		£8.50	£11.95	Deathwish II		£8.50	£11.95	PCW GAMES		
Spitfire 40		£8.50	£11.95	Living Daylights		£8.50	£11.95	Protect (PCW & 128)		£50.95
Convoy Raider		£8.50	£11.95	Quartet		£8.50	£11.95	Head Over Heels		£11.95
Scaletic		£8.50	£11.95	Asphalt		£8.50	£11.95	Fairlight		£11.95
30 Grand Prix		£8.50	£11.95	Exolon		£7.50	£11.95	Batman		£11.95
Cyrus II Chess		£8.50	£11.95	Ace of Aces		£8.50	£11.95	Cyrus II Chess		£12.95
Trivial Pursuit		£11.95	£15.95	Tro		£8.50	£11.95	Tau Ceti		£15.95
TIP Bay Boomer		£11.95	£15.95	Head over Heels		£7.50	£11.95	Tomahawk		£15.95
Conflicts 1		£10.95	£14.95	PSI 5 Trading Co		—	£11.95	Strike Force Harrier		£15.95
Armageddon Man		£10.95	£14.95	Elite		£11.95	£15.95	Academy		£15.95
High Frontier		£8.50	£11.95	Starglider		£11.95	£15.95	PSI 5 Trading Co		£15.95
Monopoly		£8.50	£11.95					Starglider		£20.95
Scrabble		£8.50	£11.95					Scrabble		£15.95
COMPILATIONS				Rombo Vidi Digloss		£79.95		Trivial Pursuit		£15.95
Classic Collections		£8.50	£11.95	Blank Disk Amsoft		£2.95		The Pawn		£20.95
5 Star Games II		£8.50	£11.95	Ribbon DMP2000/PCW		£5.50		Leaderboard		£15.95
Comp Hits 6 Vol II		—	£11.95	Cover Set 464/6128 Col mon.		£7.50		Frank Bruno's Boxing		£15.95
Comp Hits 6 Vol III		—	£11.95	Cover Set PCW		£11.95		PC1512 GAMES		
Comp Hits 5		£5.95	£9.95	Cover DMP2000		£4.50		Cyrus II Chess		£15.95
Star Games II		£8.50	£11.95	Disc Box 10 Discs		£6.50		Winter Games		£15.95
Big 4		£8.50	£9.95	Rombo Rom Box		£31.95		Summer Games II		£15.95
Sold a Million I		£8.50	£11.95	Multiface II		£43.95		Jewels of Darkness		£15.95
Sold a Million II		£8.50	£11.95	MP2 Modulator 664/6128		£27.95		Pistop II		£15.95
Sold a Million III		£8.50	£11.95	JOYSTICKS				Slart Service		£20.95
Hitpack Trio		£8.50	£11.95	Cheatah 125+		£8.95		Mean 18 Golf		£15.95
Amix Acoladas		£8.50	£11.95	Cheatah Mach 1+		£13.95		F15 Strike Eagle		£17.95
Hit Pack		£8.50	£11.95	Konix Speeding		£10.95		World Games		£20.95
Elite 6 Pack		£8.50	£11.95	Sunshot		£14.95		Trivial Pursuit		£15.95
Konami coin ops		£8.50	£11.95	Superpro		£15.95		Starglider		£15.95

PLEASE SEND CHEQUES/PO'S TO O.J. SOFTWARE (PRICES INCL P&P)

273 MOSSY LEA ROAD, WRIGHTINGTON, WIGAN, LANCs. WN6 9RN

MOST ORDERS DESPATCHED BY RETURN (OUT OF STOCK ITEMS USUALLY WITHIN 1 WEEK)

Write of phone (0257) 421915 for FREE LIST and LATEST RELEASES

OVERSEAS ORDERS AT NO EXTRA COST. (SOFTWARE OVER £10 VALUE)

CHEQUES DRAWN ON UK BANK PLEASE

** SPECIAL OFFER ALL SOFTWARE ORDERS OVER £30 FREE CALCULATOR **

mands is IEXEC. This executes a "command file" and is analogous to the SUBMIT command in CP/M (yawn).

A RoDos command file is an Ascii file whose purpose is to set up your system in a particular way on execution of the command: IEXEC,"filename". A typical command file could look something like Figure V.

Any line in the file starting with a bar character is sent to RoDos's command line interpreter. All other lines are sent to the screen.

So what's this command line interpreter? Well, 464 owners will love it because it rids you of the need to pass parameters to RSXs as string variables, and 664/6128 owners will love it because there's also no need to enclose strings in quotes.

Entering CLI gets you a bar prompt. You then type in the command plus any parameters needed. For example, after entering CLI:

```
REN newfile oldfile
ERA *.BAK
LIST textfile
```

Another nice one is IDO. How many times have you written a program like this:

```
10 INPUT a$
20 IF a$="CAT" THEN CAT
30 IF a$="TAPE" THEN TAPE
40 IF a$="DISC" THEN DISC
50 etc...
```

Using IDO you could simply write: 10 INPUT a\$:IDO,@a\$. The IDO command will even accept parameters with the RSX.

But the perhaps most powerful two commands at your disposal are READSECT and WRITESECT. The first allows you to read a physical sector from any disc into memory, even a 3.5 or 5.25in disc formatted under another operating system such as MSDOS. WRITESECT lets you write physical sectors to any disc.

Together these two commands should enable you to copy, say,

something from a MSdos formatted 5.25in disc onto a Amsdos formatted 3in disc. Of course, you'll need to have the relevant drives fitted and know how each drive works; RoDos only supplies you with the raw tools to do the job.

```
100 ' Example program using READSECT
    ' and WRITESECT to
110 ' copy a whole disc from Drive
    ' A to Drive B.
120 '
130 ' For the purposes of this exam-
    ' ple, both discs
140 ' must be the same format.
150 '
160 INK 3,20
170 first.sector=&C1 '&C1=data, &41=sys-
    ' tem, &81=rodos
180 last.sector=first.sector+8 '9 f
    ' or rodos
190 '
200 PRINT:PRINT"Insert SOURCE disc i
    ' n Drive A"
210 PRINT"Insert DESTINATION disc in
    ' Drive B"
220 PRINT:PRINT"Press Y to copy, any
    ' other to abort: ";
230 in$=UPPER$(INKEY$):IF in$="THEN
    ' 230
240 IF in$<>"Y"THEN 400 ELSE PRINT in
    ' $;
250 '
260 A
270 '
280 PRINT:PRINT:PRINT"Copying Track:&
    ' Sector:&";
290 row=VPOS(&0):PEN 3
300 FOR sector=first.sector TO last.se
    ' ctor
310 LOCATE 27,row:PRINT HEX$(sector);
320 READSECT,&8000,0,track,sector
330 WRITESECT,&8000,1,track,sector
340 NEXT sector
350 NEXT track
360 '
370 PEN 1:PRINT:PRINT"Copy completed"
    ' :END
380 '
390 PRINT:PRINT"Copy aborted":END
400 '
410 PRINT:PRINT"Copy aborted":END
```

Another nice command is ALIAS which enables you to customise bar commands to suit your mood. For example:

```
IALIAS,"HELLO","EXECstartup"
```

would make IHELLO execute the command file named "startup". ILOAD and ISAVE let you load and save files to and from banks of extra memory as well as normal ram. With IBGET and IBPUT you can get or put single bytes from or to an open file.

IACCESS lets you set the file protection attributes to read-only, write-only, go-away-and-get-permission, or any permutation of the three.

Lastly – and this is my favourite – when you first switch on RoDos will look for a file called DISC and run it if it finds one. No need to touch a key – simply insert your disc while your roms are signing-on and away it goes. I must be getting lazy in my old age.

Conclusion

The manual supplied with RoDos is messy, very short, and painfully lacking in realistic examples. Documentation these days is a major selling point, and in an effort to cut costs. Romantic Robot may have cut their own throats here.

However, the system is very robust and stands up well to the what-if-I-do-this style of experimentation. There are those who would argue that this is the best way to get to know a piece of software anyway.

And help will be arriving soon, I hear, in the form of an "example" disc which will have, among other things, a disc-doctor on it – and there is a "technical" manual planned as well. Both of these, however, will set you back a few bob more.

On the upgrade front, hopefully coming soon will be a ICOPY command to allow file-copying between drives, and a random access system, including the means to have more than one file open at any one time.

RoDos is undoubtedly a real alternative to Amsdos, and, with the promised random access, a possible alternative to CP/M (yawn) too. Its named directories filing system is far superior, and very easy to get used to.

A silicon disc is one of those things that you can't live without once you've got one, and the fact that it will work with proper disc drives, and lots of them – you can have up to 256 drives fitted – will no doubt appeal to the Three Inch Knockers Club.

If your ROM box is full up, then at £29.95, even with a bad manual, I think this is the one that might make you pull your keyboard a little further away from the monitor.

RoDos is available from Romantic Robot,
15 Hayland Close, London NW9 0LH.
01-200 8870.

```
| CLS
| Morning, Jeff. How's the hangover?
| OPT,1,0
| Loading messages off.
| OPT,4,2
| File overwrite set to create backups.
| PRBUFF
| 16K printer buffer available.
| Setting up silicon disc...
| FORMAT,2,8
| DRIVE,"A",8
| A
| Okay, working in silicon disc as Drive A.
| And go easy on the keys, eh? I'm not as
| young as I used to be!
```

Figure V

G-TEN LIMITED

THE MAIL ORDER COMPUTER SOFTWARE HOUSE

Amstrad Range	Tape	Disc	Crystal Castles	\$8.25	\$12.25
Express Raider	\$8.25	\$12.25	Six Pak (Hits Pak)	\$8.25	\$12.25
Enduro Racer	\$8.25	\$12.25	Five Star Games 2	\$8.25	\$12.25
Pulsator	\$6.75	\$12.25	Saracen	\$6.75	\$12.25
Leviathan	\$6.75	\$12.25	Army Moves	\$6.75	\$12.25
World Games	\$8.25	\$12.25	Konami Coin-Op	\$8.25	\$12.25
Barbarian	\$8.25	\$12.25	Star Raiders II	\$8.25	\$12.25
Green Beret	\$6.75	\$12.25	Tension	\$8.25	\$12.25
Top Gun	\$6.75	n.a.	Samurai Trilogy	\$8.25	\$12.25
Stallone Cobra	\$6.75	n.a.	Living Daylights	\$8.25	\$12.25
Ghost 'n' Goblins	\$6.75	\$12.25	Fifth Quadrant	\$6.75	\$10.25
Miami Vice	\$6.50	n.a.	Slapfight	\$6.75	\$12.25
Infiltrator	\$8.25	\$12.25			
Marble Madness (Deluxe)	\$8.25	\$12.25	AMSTRAD PC	PRICE	
Gauntlet	\$8.25	\$12.25	Destroyer	\$22.25	
They Sold Million	\$8.25	\$12.25	Bureaucracy	\$32.25	
Bomb Jack 2	\$8.25	\$12.25	Balance of Power	\$27.25	
Nemesis	\$8.25	\$12.25	Great Escape	\$17.25	
They Stole A Million	\$8.25	n.a.	Infiltrator	\$22.25	
Super Cycle	\$8.25	\$12.25	Solo Flight	\$17.25	
Sentinel	\$8.25	\$12.25	Star Glider	\$17.25	
Head over Heels	\$6.75	\$12.25			
Paperboy	\$6.75	\$12.25	PERIPHERALS-add \$1.50 P&P per item)		
Shockway Rider	\$6.75	\$12.25			
Silent Service	\$8.25	\$12.25	Price		
Arkanoid	\$6.75	\$12.25	Cheetah 125 Joystick	\$7.50	
Leaderboard	\$8.25	\$12.25	Cheetah Mach One Joystick	\$12.50	
			AMX Mouse	\$67.50	
			V21/23 Modem	\$94.50	

Send \$1.00 (inc P&P) for our catalogue redeemable with your first order. Please specify machine. Please allow 14-28 days delivery after receipt. Add 75p P&P per item (inland/BFPO orders only). European orders add \$1.50 P&P per item (inc N.I./Eire). Elsewhere add \$2.50 P&P per item. Please make cheques or postal orders (sterling only) payable to G-Ten Limited.

Send your orders to:
G-TEN Limited
Dept AMU11

FREEPOST (no stamp needed in UK/BFPO)

146/150 Commercial Street
London E1 6BR

Order Line Tel: 01 377 2630 (24hr Answerphone)



From NEMESIS (The Original Meddlers) BONZO SUPER MEDDLER (FOR ANY CPC)

THE dedicated TAPE TO DISC utility

NOW including the devastating

BONZO'S HACK PACK

BONZO hits 500!

BONZO SUPER MEDDLER is GUARANTEED TO TRANSFER MORE GAMES THAN ANY OTHER PROGRAM; THE FIRST PERSON TO FIND A MORE SUCCESSFUL PROGRAM WILL RECEIVE TREBLE THEIR MONEY BACK!!

Sounds familiar? BONZO always could transfer more!

THE BIG QUESTION

We give details of how to transfer OVER 500 top games. Why cannot our only competitor reach even half that total?

THE BIG ANSWER

BONZO SUPER MEDDLER is the SUPREME utility, and ALSO includes the answer to the "hitherto impossible" SPEEDLOCKS! BONZO SUPER MEDDLER does NOT use a massive "host" program to run the transferred games. ALL transfers "stand alone".

BONZO uses LESS memory, transfers MORE, COSTS LESS and gives REAL support to the user.

We'll allow you £2.00 for your old D.P. disc in part exchange!

BSM tapes upgraded to BSM+HACKPACK DISC... £8.00 (send inlay)

BSM & HACKPACK DISC £11.50. Only

NEW! BONZO'S DOO - DAH

"This is the best I've seen in a long while... I recommend it"

- Amstrad Action, June 87

BIGBONZO FORMAT

Features

A REALLY USABLE 203K per SIDE FORMAT, complete with the essential disc file transfer facility without irritating restrictions - files of over 42K READILY transfer between any mix of FORMATS. FORMATS RAPIDLY including all standard.

A "NOTHING HIDDEN" FULL CATALOGUE, COMPLETE DIRECTORY EDITOR, TRACK/SECTOR EDITOR - in HEX or ASCII. (A FULL SECTOR or DIRECTORY displayed to the screen, with easy EDIT mode).

FILE LOCATIONS by TRACK/SECTOR, RAPID DISC SEARCH - HEX-ASCII.

A WIDE RANGING DISC to DISC COPIER, PRINTER OUTPUT etc. etc.

ALL WORK ON NORMAL, ENLARGED, AND most "funny" formats.

FULL USE OF DRIVE A/B where fitted - no problem with one.

MANY UNIQUE FEATURES. Supplied on **DISC £11.50**

NEW! BONZO BLITZ - NEW SPEEDLOCK's to DISC !!

A TOTAL utility for SPEEDLOCKS, straight to DISC from TAPE!

NO RE-NAMING. SCREEN INCLUDED. ABSOLUTELY NO "JUGGLING."

Arkanoid, Army Moves, Xevious, Top Gun, BMX Sim, Donkey Kong, Mikie, Gpr Sim, Mag Max, Slapfight, Leaderboard, Daley S/test, Gameover, Scalextric etc.

DISC Only - just **£10.00 Inc.**

ALL WITH FULL INSTRUCTIONS. We give FULL after sales support and a regular NEWSLETTER.

Overseas please add £1.00 to total. ORDERS with cheque/postal, sent by return post:

NEMESIS (ACU)

10 Carlow Road, Ringstead, Kettering, Northants NN14 4DW.

LEEK COMPUTER CENTRE, 7 BALL HAYE STREET, LEEK, STAFFS, ST13 6JN

New Amstrad PC1640/MM From .. £489 Ex
New Amstrad PCW9512 From £489 Ex

Phone Now

TELEPHONE
(0538)
387859

Wordprocessor Range-

PCW8256 System (Dot Mat) £289 Ex
PCW8512 System (Dot Mat) £389 Ex
PCW9512 System (Daisy) £489 Ex

PC (IBM Compatible) Range-

1512 Single Drive/Mono Mon £389 Ex
1512 Single Drive/Colour Mon £539 Ex
1512 Dual Drive/Mono Mon £489 Ex
1512 Dual Drive/Colour Mon £689 Ex
(*All PC1512 Inc. Ability + Games pack*)

PC (IBM Compat.) Enhanced Graphics

1640 Single Drive/Mono Monitor ... £489 Ex
1640 Single Drive/Colour Monitor ... £639 Ex
1640 Single Drive/Enhanced Col ... £789 Ex
1640 Dual Drive/Mono Monitor £589 Ex
1640 Dual Drive/Colour Monitor ... £739 Ex
1640 Dual Drive/Enhanced Col ... £889 Ex
1640 20Megabyte/Mono Monitor ... £889 Ex
1640 20Megabyte/Colour Monitor £1049 Ex
1640 20Megabyte/Enhanced Col £1189 Ex
(*All 1640 inc. Free box 10 Discs*)

Peripherals-

Dmp 2000 Nlq 80 Col
Printer/Cable/F/T £135 Ex
Dmp3160 Nlq 80 Col
Printer/Cable/F/T IBM Compat. £189 Ex
Dmp 4000 Nlq 15" 132 Col
Printer/Cable/F/T IBM Compat £335 Ex
PC Modem Card/Auto Answer/Dial Free
Software and MicroLink Sub £165 Ex
30 Megabyte Winchester Card
Complete £299 Ex
20 Megabyte Tape Backup £399 Ex
PC 2nd 360Kb 5.25" Drive £152 Ex
PCW 2nd 1MB 3" Drive £152 Ex
PC RAM Upgrade (to 640K) £25 Ex
PC RAM Upgrade (to 512K) £25 Ex

** SPECIAL HOME MICRO PRICES**

Amstrad CPC464/Gm (Cass Pack) £195
Amstrad CPC464/Col (Cass Pack) £295
Amstrad 6128/Gm (Disc) £295
Amstrad 6128/Col (Disc) £395
Spectrum 128+2 Pack (Cass) £135
Spectrum 128+3 Pack (Disc) £195
(All 464/6128 inclusive: Monopoly, Cluedo, Scalextric, Trivial Pursuit, Scrabble & Joystick)

Peripherals-

CPC Range RS232 I/F Software £55
DDI-1 Disc Drive & I/F For
CPC464 Computer £149
FD-1 2nd Disc Drive For 6128 Computer £89
Box (10) CP2 3" Discs £25
Box (10) SS/DD 5.25" Discs £9.50
Box (10) DS/DD 5.25" Discs £12.50

MP1 Modulator for CPC464 £14
MP2 Modulator for CPC6128 £28
CPS 8256 RS232 I/F (PCW) £62
CPC AMX Mouse Pack £65
PCW AMX Mouse Pack £75

PCW Software Selection 8256/8512/9512

Pocket Wordstar £45
Supercalc II £45
Cracker + £50
Caxton Cardbox £55
Sage Retrieve £60
Sage Accounts £89
Sage Accounts + £135
D.R. Draw £45
D.R. Graph £45
Sage Payroll £65
Locoscript II £18
Locomail £40
Locospell £40
Chitchat £99
Newsdesk Int. £49
Fleet St. Editor £60
PCW Light Pen £75
Mial/Data Flow III £45
Touch 'n' Go £22

PC LEISURE SOFTWARE

Star Glider £15.50
World Series Baseball £19.95
Five A Side Soccer £8.50
Pitstop II £15.50
Cyrus II Chess £15.50
Mean 18 Golf £15.50
Winter Games £15.50
Forth Protocol £15.50
Shogun £13.50

PC SOFTWARE SELECTION-

PC1512/1640 £85
Deikte 4.3 £95
Ability £175
Ability Plus £175
Account Ability £55
Supercalc 3.1 £49
Reflex £55
Wordstar 1512/1640 £125
Fleet Street Editor £85
Autosketch £90
Chitchat £89
GEM Comm £25
Sidekick £80
PC Four £95
Sage Bookkeeper £145
Sage Accountant £195
Sage Accountant + £285
Sage Financial Controller £90
Sage Payroll £80
VP Planner (1-2-3 Clone) £80
VP Info £109
dBase III Plus £16.50
DXBL (DBIII Clone) £12.50
Smart £16.50
Symphony £12.50
Wordstar Professional £16.50
Languages £11.95
Cross Talk £15.50
PCW LEISURE SOFTWARE
Tomahawk £15.50
Trivial Pursuits £16.50
Colossus 4 Bridge £19.95
The Pawn £16.50
Strike Force Harrier £12.50
3D Cyrus Chess £12.50
Head Over Heels £16.50
Leaderboard £11.95
Boulder £15.50
Tau Ceti £15.50



All goods subject
to availability

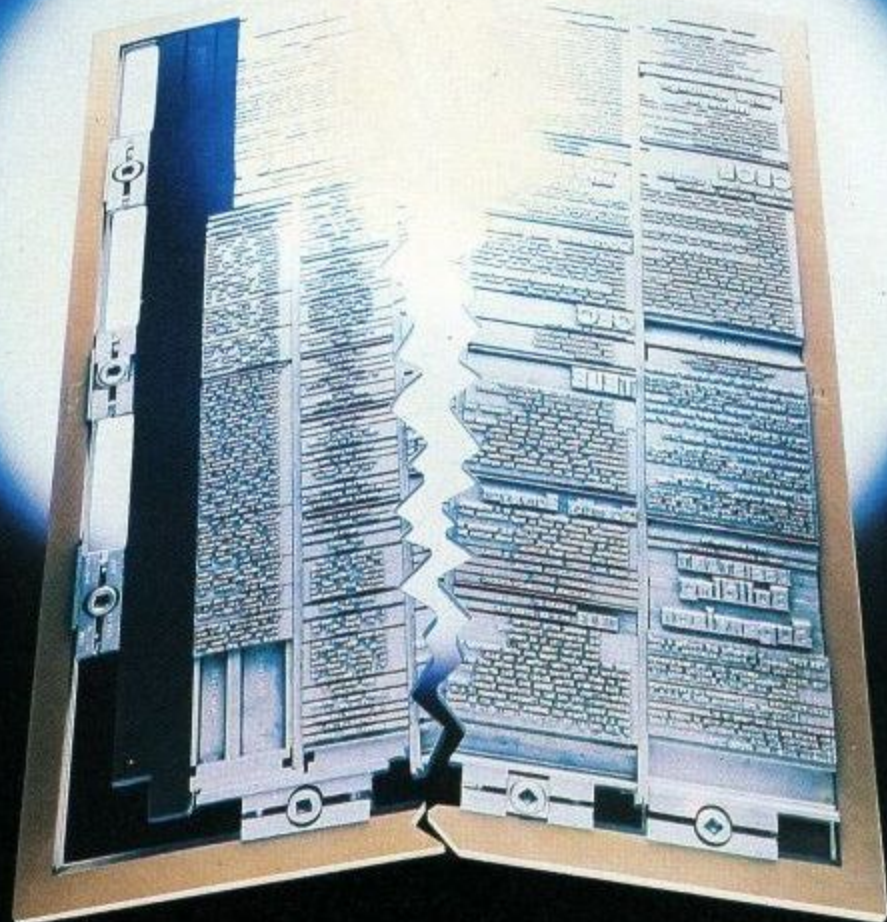
All prices include VAT
& Mainland Delivery -
Except where otherwise
stated

Educational &
Government Est
Enquiries/Orders
Welcome.

Order By: Visa/Access (Phone)
Cheques/PO (Post)
Official Orders (Post)
Personal Callers Welcome

The old technology is dead.

Join the revolution!



The printing industry has been rocked to the core by an ever-growing series of developments in the exciting new field of Desktop Publishing.

Traditional ways of producing the printed page have been revolutionised.

Now anyone can use a home or office micro to design and typeset anything from books and newsletters to advertisements and company reports.

With the latest methods it can all be done at a fraction of the conventional cost. And much quicker and easier than ever before.

Here's a unique opportunity to find out more about this bustling new industry – the first Desktop Publishing Show. All the major companies will be demonstrating their latest products. And there will be seminars throughout each day to tell you exactly how you or your company can benefit most from the Desktop Publishing revolution.

In addition, each visitor will receive a free copy of the Desktop Publishing Yearbook, worth £5 – packed with facts and figures on the most fascinating development in print technology since Caxton.

Desktop Publishing 1987 SHOW

October 15, 16 & 17

**Business Design Centre
Islington, London N1**

Organised by Database Exhibitions



*Sponsored by Pira, the UK technology centre
for the printing and publishing industry*

No admission charge. Admittance by ticket or by business card.
Save time by pre-registering – ticket orders must be received
by 9 October.

**Post to: Norah Hodgson, Database Exhibitions,
Europa House, 68 Chester Road, Hazel Grove,
Stockport SK7 5NY.**

Please send me _____ FREE tickets to
The Desktop Publishing Show 1987

Name _____

Position _____

Address _____

Postcode _____

NO PERSONS UNDER 18 ADMITTED

SHOW HOTLINE: 061-480 0171

A143

GARY ZOR

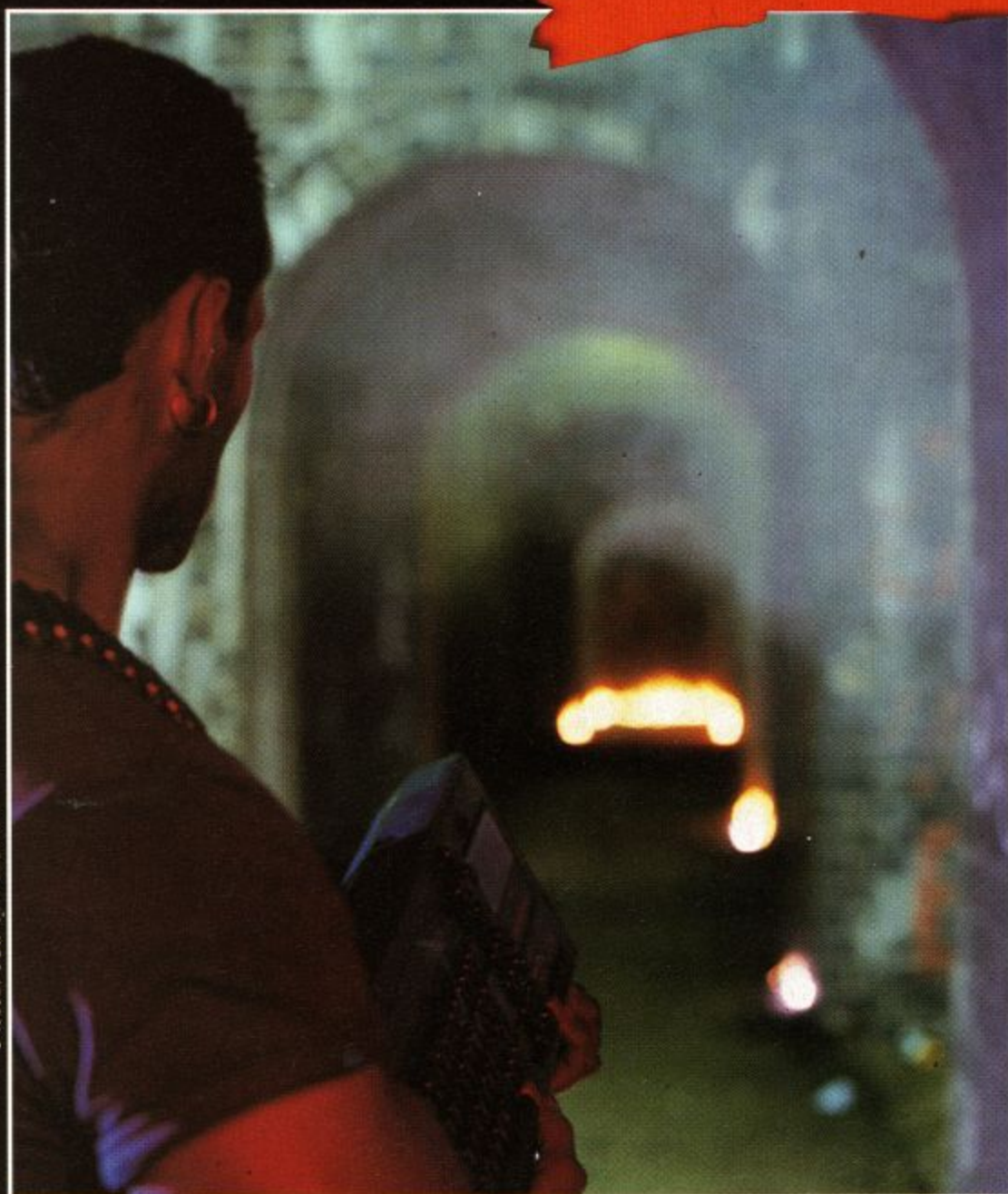


Photo: Martyn Howell

Konami's arcade hit has been converted with panache by John Brandwood with graphics by Mark Jones to make it one of the smoothest games we have seen in a long time. Simon Rockman trekked to Imagine for a special sneak preview – the game he saw was not yet complete.

One man and his gun. That is all you have to save the planet from a ravenous alien creature. Gryzor casts you as either Lance or Bill, a headbanded, mean sonofasprite. You have to invade a futuristic alien fortress, dispose of various guards and enter the chamber.

Things don't even start off gently. Working across a two dimensional scrolling landscape, a horde of aliens and robots confront you. They can be shot, but you'll need to be agile to avoid their bullets, which fill the air like rain on a bank holiday.

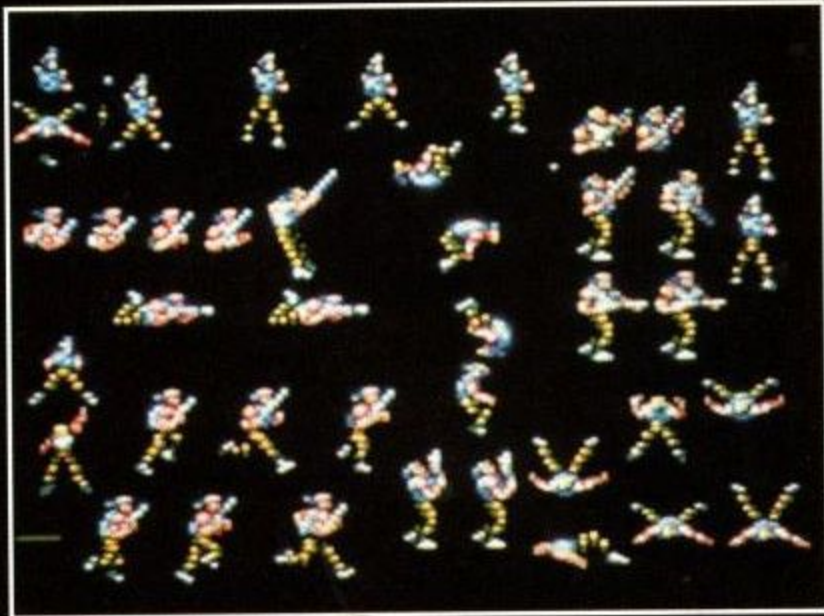
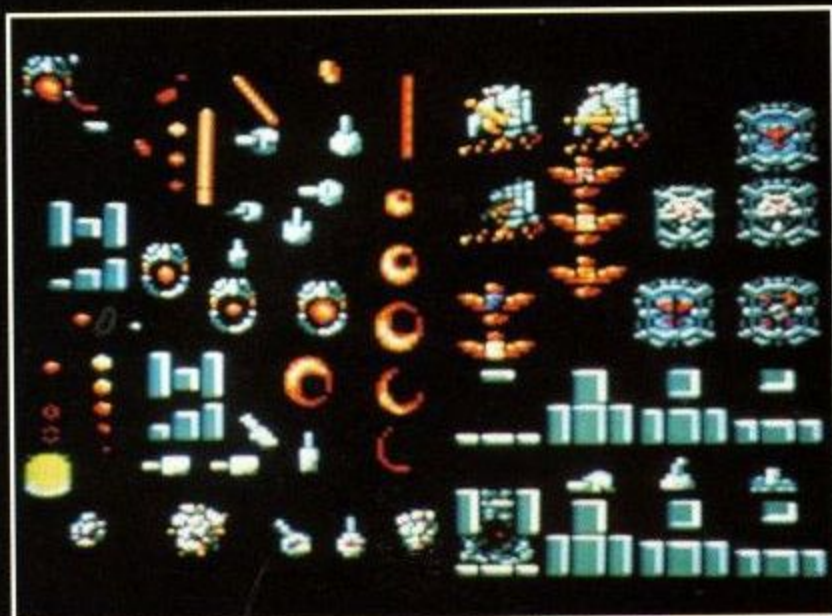
Your sprite is a flexible friend and will bounce at the joystick's behest. Some of the better armoured foes require a repeated onslaught before they perish.

As you blast a path forward it is wise to hit some of the tame emplacements. These produce enhanced weapons, a flame-thrower type laser, shield, and, best of all, a spread gun. This fires forward at three angles, not exactly accurate but bound to hit something, and in this game that something is certain to be nasty.

The landscape consists of mountains, rocks and bridges. You have a fair degree of freedom of movement which allows you to run along the rocks at between one and three levels depending on where you are.

At the end of the first level you meet the fortified door of the alien silo. This is heavily defended both on the inside and outside. In my experience it is best to remove the gun which lives at the top of the stronghold.

Watch out for the man in the bushes while you are doing it though, shoot him if you get the chance – or he'll get you. Then avoid the big gun for the moment,



jump down to the bottom emplacement and fill the rotating gun full of lead, plasma or microwaves.

Once this goes the way of the CPC 664 you are fairly safe. Move up to the middle ledge, lie down and blast away at the big gun. It will fire over your head. Keep going until the thing explodes.

Then it is into the metal corridors. The security forces come out like kleenex men (*Trekkie term for the security guards, they come out once, get killed and are thrown away*). The blue sprites stand at the far end of a corridor and shoot at you. You look down at them and, if you are wise, shoot back.

Once again extra weapons are to be had as you shoot their projectiles. Wipe out all the men and you run down the corridor to another battle of a similar nature.

Progress through these caverns is depicted on a small display in the top right-hand corner. An electrified forcefield stops you from running down the corridor too soon, and once again you need to be nimble on your tootsies. Weapons are lobbed at your feet and torso. The former have to be jumped, the latter ducked. A good tactic here is to keep on jumping up to the right.

The arcade game shows the corridor getting bigger as you run down its length, in a programming compromise the Amstrad version shows your man getting smaller.

At the very end of the corridor lies the scene depicted in the screen shot printed here. A big emplacement armed with spread guns takes pot shots at you. You can dash into position, loose off a few rounds and then dive away from the machine's retaliation.

When you disable a spread gun a big eye appears. It will hurl

fireballs which you must dodge, not to mention shots from the remaining spread gun. Take aim at the eye. Not easy, this is where I give up in the arcade.

Amstrad users will fight on. Having destroyed the eye you jump onto a lift which runs along the length of one of the vertical bars bordering the screen. This takes you to an area outside the complex. The scene is similar to that at the beginning of the game, except that the movement is up, up and away. Jumping from level to level there are more emplacements – with a store of better weapons, and more humanoids to blast.

Once again you are confronted by a mega-machine, this time with mandroids attacking from the sides to spice things up. You will have to defeat this to carry on.

The final scene is unlike any of the others. It doesn't really fit into the game very well, but then that is not Mark and John's fault, the design comes from Konami, the Japanese games wizards.

Wandering through the bowels of the space complex there are half biological, half mechanical traps to avoid. In the final conflict you have to confront a monster which looks like the mother out of *Aliens*. She has a weak heart, and must be shot, not with cupid's bow, but the meatiest gun you can lay your well-built hands upon. Then sock it to her right in the heart. The organ beats faster and finally blows. The game is won.

John Brandwood and Mark Jones work in-house at Imagine. This is not their first joint venture, *Gyrfors* was preceded by *Renegade*. The style shows, and there is no doubting that they make an exceptionally good team.

Mark works on the graphics.

Imagine video the arcade game and Mark uses the tape to examine the sprites. Konami have very little involvement with the conversion.

The sprites are designed using Amsoft screen designer. This has been especially modified by David Looker – the program's author – to save small sections of the screen. A couple of the screen shots here show what a screen full of sprites looks like. It is amazing how close they are to the original.

John writes the code to move Mark's sprites, scroll his backgrounds and play the game. Until recently all the programming was done on a 6128 with virtually everything DK'Tronics has ever made hanging off the back and a copy of Devpac.

The object code was sent down wires to a second 6128 which ran the program. This allowed John to play the game and edit the code at the same time.

Now Imagine/Ocean have a new system, based on an Atari ST, which assembles the code very much faster. It is Ocean's own software exclusively developed for in-house use. Until recently it suffered from being a little buggy, but now it is pretty stable.

Programs can be developed for Z80 and 6502 machines at present, with 8086 and 68000 to follow. This makes conversion very much simpler – essential for keeping a big software house profitable.

I used to think of Imagine as producing poor conversions. Having seen *Gyrfors* and *Renegade* I have changed my mind. I eagerly await the forthcoming releases which include *Rastan*, *Athena* and *Combat School*. John says he would like to work on the ST next, and take a holiday. I think he deserves it.

ACU

R.S.D. WILL SEE YOU'RE WELL CONNECTED

AMSTRAD

Printer Cable	
664/464/6128 1m	£8.95
2m	£9.95
Extension Printer Cable	
1m plus power. (PCW)	£9.95
Monitor Extension Lead	
664/6128 1m	£8.50
PCW Cable from Interface to	
Centronics Printer	£12.75
Expansion port extension lead	
6" Single F/M	£10.50
6" Double F/2m's	£14.75
Suitable - 664 & 6128	
Second drive lead	
1m 664 & 6128	£6.95
Cassette lead	£2.20



NEW
PC 1512
PRINTER LEAD

1.8m
£8.75

RS232 GENDER CHANGERS

Avoid modifying or
replacing incompat-
ible cables. m/m,
f/f.
Our Price only £8.50

RS232 CABLES
MODEM LEADS
MADE TO ORDER
FOR ALL TYPES
OF COMPUTER
AND MODEMS

All above items available from our Australian agent: tech-soft, Shop 37, Grove Plaza, 460 Stirling Highway, Cottesloe 6011 W. Australia

DATA SWITCHBOXES



This new range of slimline switchboxes enables you to switch quickly and easily between micros and printers

RS232 (Serial) metal cased	25-way 'D1' to 2-way	£40.00
	25-way 'D1' to 3-way	£50.00
	25-way 'D1' to 4-way	£60.00
Centronics (Parallel) metal cased	36-way Centronics 1 to 2-way Para	£38.00
	36-way Centronics 1 to 3-way Para	£48.00
	36-way Centronics 1 to 4-way Para	£58.00
	36-way Centronics 2 to 2 change-over Crossover	£52.00

All cables at discount prices when purchasing Data Switchboxes

TELEPHONE EXTENSION CABLE



Plugs into your phone socket enabling you to take your phone up to 50ft away - no need to pay for extensions! Enclosed in neat case with moulded carrying handle. Approval No. NS/2236/3/F/450927. British made.
£9.95

TELEPHONE CONNECTORS

Surface master jack socket	£3.75
Surface Extension socket	£2.50
Dual outlet adaptor	£4.25
Line jack cord 3m	£1.85
4 core cable per metre	.15
BT plugs	.48

DISK HEAD CLEANERS

5.25" Wet type for use with single or double-sided disks, including 6 cleaning sheets £8.95

AMSTRAD

NEW... JOYSTICK SPLITTER

Play with a friend! Splitter enables 2 joysticks to be used independently
ONLY £6.95
Twin port Joystick £6.50

DUST COVERS

PC1512	£9.50	All covers
6128	£7.25	clear with
PCW sets 3	£9.50	Grey piping

MONITOR LEADS

Fidelity (Scart) to: BBC/QL/Commodore/	
Sony/Spectrum 128 & Plus 2/Amstrad	£4.95
Micro/tec to: BBC/QL/Spectrum 128 & Plus	
2/Amstrad	£2.75
Ferguson to: BBC/Commodore 64/MSX/QL/	
Spectrum 128 & Plus 2/Amstrad	£3.50
Hitachi to: BBC/Commodore 64/QL/Spectrum 128	
& Plus 2/Amstrad	£3.50
Sony Kaga to: BBC	£5.95
Green screen to: Commodore 64/BBC	£2.95
Green screen to: QL	£1.95
Green screen to: Commodore 128	£4.95
Phone to Phone	£1.50
Philips to: BBC/Commodore 64	£2.95

DISTRIBUTION SOCKET

4-WAY MAINS
TRAILING SOCKET
ONLY £9.50

RIBBON CABLE (per ft)

10-way	15p	20-way	30p
26-way	45p	34-way	60p
40-way	70p	60-way	£1.10

CASSETTE HEAD CLEANERS

Wet type. Set includes Pin-wheel demagnetizer & full instructions
£2.50

75p P&P IN UK, Access & Visa accepted. Please add 15% VAT to all orders. Cheques made payable to:

R.S.D. CONNECTIONS LTD Dept AU11, PO Box 1, Ware, Herts



Trade, Educational & Export enquiries welcome Tel: 0920-5285/66284



Utilities Unlimited!

We've brought together the very best non-games programs culled from past issues of *Amstrad Computer User*.

These clever programs cover animation, business, music, games hacks, and much more. Whatever your interest, there's something here for you - and at a very special price.

In some cases you will need to refer to the issue of ACU in which the programs appeared. In the list below these are shown by ★ followed by the month. You can send for the eight issues at the special price of £6.60 by using the order form.

Elite Disc Hack - add millions of credits or Elite status to your commander.

Justin's Scroll - discover how the experts program a scrolling landscape.

RSX Lister - list all RSXes including those which have been soft loaded.

Printer Spooler - carry on using the computer while the printer is working.

Epson Dump - produce hard copies of the screen display on the DMP2000/3000.

Organ - turn your micro into an impressive musical keyboard.

ZX Loader - load Spectrum binary files into your CPC.
★ July 1986.

Homespread - prepare your budget with this simple but flexible spreadsheet. ★ May 1986.

Amgraph - produce bar graphs, pie charts from a table of numbers. ★ November 1985.

Diary - bring some order to your busy lifestyle (disc only). ★ May 1985.

Mode 3 - Mode 0 with four colours in only 8k, with accompanying demos. ★ January 1986.

Animator - become the new Walt Disney. Built-in 'tweening' facility. ★ April 1986.

Trace - re-direct the trace output to a window or printer. ★ December 1986.

Sorcery Plus Hack - modify the sprites and increase your survival chances. ★ January 1986.

Chord Finder - learn the difference between a suspended and flattened chord. ★ September 1985.

Jet Set Willy Hack - infinite lives and a magic teleport facility. ★ September 1985.

Double Height Print - expand your horizons with these tall characters. ★ September 1985.

Tape price £7.95 Only £2.95 with a new subscription or subscription renewal

Disc price £9.95 Only £3.95 with a new subscription or subscription renewal

All programs work on Amstrad CPC 464, CPC 664 and CPC 6128 computers. You can list and adapt all the Basic files - an excellent way to improve your programming skills.

TO ORDER PLEASE USE THE FORM ON PAGE 71

Spacing and your micro

David Foster continues his hints and tips on using the CPC seriously

AS promised last time, this month I shall give one or two tips about using the Masterfile Database and shall also attempt to answer the first of the problems sent in by readers.

R.E. Hobday of Bedford is experiencing problems getting microspacing to work with his Quendata DWP1120 printer when using Protext and Promerge Plus. He defies anyone to make sense of that part of the Promerge manual. Fortunately, or unfortunately, depending on the viewpoint, he has come to the right place for help, as I just happen to be the person who wrote the Promerge manual.

Before describing the solution, it is probably worthwhile briefly describing exactly what microspacing does. When using a word processor with right justification on (to give straight right and left margins), the standard process is for the program to insert extra spaces into some of the gaps between words, so that the last word finishes at the right margin.

These are always full character width spaces, and the end result when printed is that the gaps between some words may be greater than others, depending on the number of spaces that had to be inserted.

While this is quite acceptable for most purposes, it is not as effective as full proportional spacing and justification. Proportional spacing, where each character only takes up the width required for that character, is only available with printers that have proportional printing ability, which excludes a lot of the less expensive machines.

Microspacing is a process that attempts to achieve, as far as possible, a similar effect with printers that cannot produce proportional output. It cannot alter the width of each character, but what it can do is even out the spaces between each word, so that when printed, all words will have an equal space between them.

Using Promerge

Back to Mr Hobday's problems. Promerge, by default is arranged so that microspacing will work with any Epson-compatible printer, but it also includes the facility to configure it to work with most other printers. This is what is causing him his problems.

The Quendata printer is not Epson-compatible, so it is necessary to use the

>MC (microspacing code) and >CW (character width) stored commands to configure Promerge.

When Protext prints with microspacing it calculates the number of microspaces required between each word, and every time it comes to the end of a word, it sends the codes (specified by >MC) the correct number of times to advance the print head the required number of 1/120in microspaces, so we must arrange the >MC code to send exactly one microspace.

The >MC command requires the printer codes necessary to advance the print head by 1/120 of an inch. Now this is where the fun starts and where Mr Hobday is critical of the manual. The problem is that with non Epson-compatible printers there is very little standardisation. Each machine tends to not only use different code values, but also to offer different facilities, which makes it all but impossible to describe the process for all models.

For example, most dot matrix printers will give the required 1/120in advance if put into double density graphics mode for one character, as described in the Promerge manual, but daisywheel printers do not have any double density graphics ability, so that things have to be approached slightly differently.

The Quendata does have a set of codes (ESC US n) which will set the amount that the carriage advances for each character to the amount specified

by n and we can make use of this.

Figure 1 gives the sequence of codes required by Protext for the Quendata. The sequence of codes is created as follows:

ESC US n - 27 31 2 - sets the spacing pitch to 1/120in SPACE - 32 - prints a space

ESC US n - 27 31 11 - resets the spacing pitch to 1/12in

The Quendata manual details the method used to calculate the values of n for different pitches. It can be seen that first of all the printer is set to advance only 1/120in, then a space is printed, which will only advance the head 1/120in, and finally the spacing pitch is reset to that required by 12 pitch printing. This sequence will be sent repeatedly until the required space has been created.

Figure 1 also details the codes for 10 pitch and it will be seen that the only difference in the >MC code is the value to reset the spacing to 10 pitch. The character width, >CW, is also adjusted to reflect the wider characters. The method described above may be used with many printers.

Masterfile tips

Masterfile, the database by Campbell Systems, has been around for almost as long as the CPC. It has now progressed through a number of versions, the most recent being Masterfile 3. This has

Codes required by Protext to microspace in 12 pitch with a Quendata.

```
>MS ON ; turns microspacing on
>MC 27 31 2 32 27 31 11 ; codes to send one microspace
>CW 10 ; sets character width to 1/12
```

Codes required to microspace in 10 pitch.

```
>MS ON ; turns microspacing on
>MC 27 31 2 32 27 31 13 ; codes to send one microspace
>CW 12 ; sets character width to 1/10
```

Figure 1

been substantially rewritten to simplify its use, extend the functions available and increase the maximum size of database that may be created.

Masterfile 3 makes use of the second bank of memory on the CPC6128, but may also be used on the other models in conjunction with the DKTronics 64K add-on memory, which greatly increases the size of database to over 60k.

Someone was asking recently on the Amster's Cage section of Prestel whether it was possible to import data back into Masterfile, having once exported it, so that parts of it could be altered using the Find and Replace functions of the word processor.

The simple answer is yes it can. But there is probably no need to do so. Masterfile 128 and Masterfile 3 both provide a "User Basic" facility that enables you to do just that sort of thing. The original Masterfile 464 can also be used in the same way as long as a copy of the Masterfile Extensions is purchased.

User Basic allows you to extract the contents of specified fields from the database, manipulate them using the normal Amsdos Basic and then return them to the database in their modified form. The facility is also provided to insert new data into an existing database.

This feature of Masterfile is extremely powerful, yet is one which is rarely used by most people, perhaps because they are afraid of losing valuable data if they get it wrong.

As long as you make sure that you test it out on a copy of the data file, you can't cause any damage, so there is nothing to worry about.

User Basic provides you with the facility to do such diverse things as per-

form calculations on the contents of two or more fields in a record and to put the result into a different field, globally remove the contents of certain fields in a database, to selectively remove them (or even complete records).

If I used a database to keep the membership records of a club, at the end of the year I would want to amend all the records so that they no longer showed the amount of subscription paid in the previous year, nor the date paid. To go through each record and alter it would be a slow and painful process, though one which must frequently be carried out with many databases. With a few lines of User Basic, it is only a matter of minutes' work.

Similarly, part way through the year. I would want to go through the records and remove the records for those people who had not paid their subscriptions. See Figure II for an example of how to delete the contents of certain fields.

Users of earlier versions may also do the same thing, but will have to use the extra commands required to open and close the files with the Extensions program. Figure III gives the extra lines necessary to import new data into an existing Masterfile 3 database.

Pretty in print

Qualitas is a utility program to provide near letter quality printing on printers not normally capable of handling NLQ. This is not the whole story, however, as it also provides a number of extra fonts and facilities.

Qualitas runs under Amsdos and works by redirecting output that would normally go to the printer port to its own routines. It is therefore suitable for use with any of the CPC range of computers.

The manual is heavily angled towards the use of Qualitas with Tasword and to a lesser extent with Protext. It can actually be used with a number of other programs and from Basic.

Disc and tape versions are available supplied in a hard videocase type of box with an eight page manual. An additional sheet gives details of how to use the special version provided on the disc for use with Tasword 6128.

The sheet also gives details of a short Basic program to be used if Qualitas is to be used with Promerge. If eight pages doesn't sound a lot, then fear not, because all the details required to customise the program are there, as are instructions on how to use both the program and the supplied font editor. Concise, but not missing anything

vital, would describe it well.

The manual doesn't directly make any mention of the fact that Qualitas is only suitable for Epson-compatible printers that are capable of quadruple density graphics output, though this is mentioned on the back of the box.

Most modern dot matrix printers are capable of quadruple density graphics, and the vast majority of the better known ones are sufficiently Epson-compatible to be used with Qualitas.

As most people will be well aware, the Centronics printer port on the Amstrad CPC is only a seven bit port, which means that it isn't possible to send codes higher than 127 to the printer. One of the effects of this is that with some of the supplied fonts it is not possible to have proper descenders on characters. Descenders are the bits of characters like q and y that normally hang down beneath the line.

Eight bit printer ports are available as add-ons and Qualitas will make full use of these, if present. Two complete sets of fonts are provided, one for 7 bit ports and the other for 8. The best results will obviously be obtained with an 8 bit port, although the 7 bit fonts are well designed, and the lack of true descenders is not very obvious.

Before you use Qualitas you have to create your own working copy of the program and customise it to suit your printer. The procedure is to run a program called CUSTOM and answer a number of questions. Answers usually

Extra lines required in loader to delete fields from a Masterfile 3 database.

```
200 LOCATE 13,10:PRINT "Erasing Amount paid and Date paid fields - Please wait."
210 REM fields to be erased have data references P and D.
220 n=1:ind$=""
230 WHILE 1
240 CALL getr,n,@ind$:n=n+1:IF ind$="E" THEN 100
250 REM alter data references in following line according to data reference names and add more calls if more than two fields are to be cleared.
260 d$="P":CALL erad,@d$:s$="D":CALL erad,@d$
270 WEND
270 PRINT CHR$(7);:RETURN
```

Figure II

Extra lines required in loader to import new data into a Masterfile 3 database.

```
200 CLS: INPUT "Enter name of Import file",import$
210 CLS:LOCATE 13,10:PRINT "Importing data - Please wait"
220 OPENIN import$
230 WHILE NOT EOF
240 CALL insr: REM insert a new record
250 LINE INPUT#9,a$: REM read first line (name)
260 LINE INPUT#9,b$: REM read second line (address)
270 INPUT#9,c$: REM read blank line between records
280 REM add further LINE INPUT lines for more fields
290 REM N and A in the two following lines are the data references in the database for the name and address fields
300 a$="N"+CHR$(32)+a$:CALL putd,@a$: REM insert field
310 b$="A"+CHR$(32)+b$:CALL putd,@b$: REM insert field
320 WEND
330 CLOSEIN
340 PRINT CHR$(7);:RETURN
```

Figure III

NEW LOWER PRICES AND... EVEN BETTER SERVICE!

Now ALL Goods Despatched SAME DAY by 1st CLASS POST-FREE!

PRINTER RIBBONS

Genuine AMSTRAD Printer Ribbons...
Better Quality-Lower Price!

- NEW PCW CARBON £5.95
- STANDARD PCW £4.95
- DMP 2000/3000 £4.95

All Ribbons-POST FREE!
Please Specify Printer when Ordering

PAPER

- High Quality 11"x 9 1/2"
- 60gsm Weight
- Micro-Perf all Round
- 2000 Sheets -

ONLY
£14.95
Post Free!

PCW SOFTWARE SPECIALS

- LOCOMAIL (Amsoft) £34
- THE MAIL MERGE PROGRAM £34
- LOCOSPELL (Amsoft) £34
- THE SPELLING CHECKER £34
- NEWSDESK INTERNATIONAL
(The Electric Studio) £44
- THE DESKTOP PUBLISHING SYSTEM £44
- SUPERCALC 2 (Amsoft) £44
- THE SPREADSHEET £44
- MASTERFILE 8000 (Campbell Systems)
THE DATABASE £44

FREE! Blank Disk with each of the above
Software Specials.

PCW STARTER PAK

- 10 CF2 Disks
- 1 AMS 20L Box
- 2000 Sheets of Paper
- 1 PCW Carbon Ribbon

'Special Pak Price'
£49.95

SAVE ALMOST **£9!** Post Free!

NEW IN STOCK

High Quality PVC
Dust Cover Set (for PCW) **£9.95**

How to Order...



• Simply list your order, name and full address with a cheque or postal order (made payable to Compumart) and post to our address opposite or:-



• Phone any of our 3 order lines (24 hours) and order using your credit card. Please give your full name and address, daytime Phone number, details of your order and the name of the magazine you are ordering from.



• All goods are usually despatched same day - 1st class post - FREE OF CHARGE!



• For SPEEDY GUARANTEED NEXT DAY DELIVERY by SECURICOR, Please add JUST £5 to goods total.



• We welcome official written purchase orders from plc's, government and educational establishments etc. Goods will be despatched on receipt of order, 28 day invoice will follow.



• Overseas orders:- please deduct VAT (15%) then add 25% for air mail and insurance. (All payments in £ sterling).



• All prices include VAT. Prices and delivery subject to availability. All goods fully guaranteed.

3" DISKS

New Low Price!



5 Pack
ONLY £13.95

10 Pack
ONLY £24.95

Post Free!

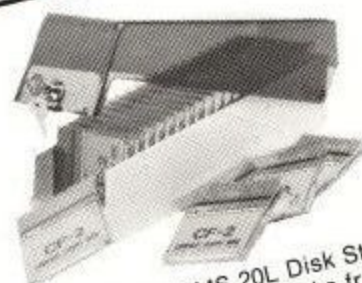
Genuine AMSOFT CF2 3" Microdisks from the U.K.'s largest supplier.

(CF2 Disks are for CPC & PCW Machines).

- CERTIFIED 100% ERROR FREE
- LIFETIME GUARANTEE
- INDIVIDUALLY CASED
- USE IN 1st and 2nd DRIVE (on PCW)

Excellent Value ONLY from Compumart
Phone for Quantity Discounts.

DISK STORAGE



ONLY
£12.95
Post Free!

The superb AMS 20L Disk Storage Box.
Save your Valuable Disks from spill drinks, dust etc.

- HOLDS 21-3" DISKS (Cased)
- HIGHEST QUALITY PERSPEX
- HINGED, LOCKABLE LID (with 2 keys)
- PRECISION MOULDED - No Disk Rattle

Excellent Value ONLY from Compumart

Compumart

A GREAT DEAL MORE-FOR A GOOD DEAL LESS!

**COMPUMART-Dept AMU - Unit 8 - Falcon Street
Loughborough - Leics - LE11 1EH**

☎ 0509 - 262259 / 233893 / 266322

SPEEDLOCK PROGRAMS - NO PROBLEM

GOLDMARK SYSTEMS present

* * * SPEEDTRANS PLUS * * *

AMSTRAD CPC6128 (or 464/664 with DK Tronics additional Memory)

SIMPLY THE BEST TRANSFER UTILITY FOR SPEEDLOCK PROTECTED PROGRAMS

FROM THE LEADERS IN TAPE-TO-DISC TECHNOLOGY

SPEEDTRANS PLUS will transfer more Speedlock protected programs to disc than any of its competitors
SPEEDTRANS PLUS transfers all the programs we say it will—unlike others who make unsubstantiated claims

These are some of the features:

- *PLUS* Totally automatic tape-to-disc utility—just one keypress.
- *PLUS* Only one program to run which finds the Speedlock type automatically.
- *PLUS* Program transfers original and many later Speedlock programs.
- *PLUS* No fiddling/meddling, written with the amateur in mind.
- *PLUS* Automatic disc filenames.
- *PLUS* No wasted disc space—saves the correct amount of game code.
- *PLUS* Saves 99% of opening screens.
- *PLUS* Screens saved in their correct colours.
- *PLUS* Compresses screen code to save even more disc space.
- *PLUS* Faster loading times from disc because of shorter file lengths.

SPEEDTRANS+PLUS will transfer over 60 programs to disc — look at these titles:

Batman	Dambusters	Impossible Mission	Daley Thompsons
Bruce Lee	Samantha Fox	Frankie Goes to	Decathlon
Gyroscope	Desert Fox	Hollywood	World Series
Nomad	Green Beret	Rescue on Fractalus	Baseball
Scrabble	"V"	Hunchback II	It's A Knockout
Match Point	Space Shuttle	The Way of the	Mission Jupiter
Match Day	Ping Pong	Exploding Fist	Brain Ache
Cluedo	Hacker	Rambo First Blood II	Short Circuit
Spy Trek	Monopoly	Barry McGuigans	Silent Service
Raid	Mikie	Boxing	Konami Golf
I Spy	Goonies	Brian Clough's	Grand Prix
Mindshadow	Saracen	Football Fortunes	Simulator
Xevious	Tenth Frame	Leaderboard	BMX Simulator
Arkanoid	Gunfight	Tournament	Vampire
Metrocross	Bounty Bob Strikes	Head Over Heels	Dizzy
Pulsator	Back	Transmuter	Top Gun
Jet Set Willy	Winter Games	Crystal Castles	Legend of Kage
Kung Fu Master	Kong Strikes Back	Yie Are Kung Fu	

From They Sold A Million No. 3: Fighter Pilot/Ghostbusters/Daley Thompson Decathlon

Why waste your money on inferior products (Splocktrans) when you can buy SPEEDTRANS PLUS, the best Speedlock transfer utility on the market programmed by the leaders in Tape-to-Disc utilities and routines

AVAILABLE ON DISC ONLY £12.99 (UK). EUROPE ADD £1.25. REST OF THE WORLD ADD £2.00

Please send your cheque (£ Sterling), Eurocheque or UK P.O. to
GOLDMARK SYSTEMS, 51 COMET ROAD, HATFIELD, HERTFORDSHIRE, AL10 0SY, ENGLAND
Please write or telephone 07072 71529 for further information

NEW!

MONEY MANAGER PLUS

£39.95

Incl VAT, P&P

For all PC compatibles, such as Amstrad PC1512 Also available for Amstrad PCW computers.

Financial management software

For Small businesses
Sales Executives
Company Departments

Self-employed
Journalists
Expense accounts

Doctors
Clubs
Home accounts

Farmers
Charities
Etc, Etc.

Money Manager Plus is an easy-to-use yet powerful accounting system. It will enable you to record and analyse all your financial transactions, so that you know exactly where you stand and can make sensible and informed financial decisions. Check bank statements, monitor cash flow, analyse sources of income and expenditure, make budget forecasts, prepare financial statements. Keep one step ahead of your bank manager, convince tax and VAT inspectors, avoid nasty surprises!

Money Manager Plus is very much easier and more direct to use than other accounting systems costing many times more, and provides features that would be difficult or impossible to program using sophisticated database/spreadsheet/graphics packages. Indefinite telephone support is included free of charge, because even novice computer users require so little!

To run the system you just switch on, load **Money Manager Plus**, select a data file, make new entries in any order that suits you (or amend existing entries), produce a few reports to check the current financial situation, and then save the data for the next time you need to use it. You may have any number of data files (or sets of accounts) and store several on one disc. A data file contains 12 months of data, which may be rolled forward month by month.

Up to 300 separate transactions may be entered per month.

Each entry consists of:

- The day of the month, eg, 23rd of June
- Account number, one of up to 9 defined by you to suit your circumstances eg 1= Barclays, 2= Visa, 3= Cash etc.
- Cheque or reference number, eg ABC123
- Class code, one of up to 50 defined by you to suit your circumstances eg 01= Overheads, 01= Rent, 02= Heat/Lighting, 02= Stationery etc. or m0= Motoring, m1= Petrol, m2= Road Tax, m3= Maintenance etc.
- Descriptive text eg, "Tax Rebate", "Refrigerator", etc.
- Optional single-character mark as an extra identifier, eg, b= business, p= private, etc.
- Account reconciliation marker.
- The amount of the transaction, debit or credit.
- Optional VAT indicator, eg exempt, zero, full or part rated. If VAT is not relevant it may be ignored.

You may select categories of entries according to account, class and mark (eg all bank account entries, or all motoring expenses, or all cash account business expenses etc.) and produce reports on the screen or printer as follows:

- Detailed statements covering any period, showing each qualifying transaction with a running balance.
- Quarterly VAT statements showing input and output transactions separately with columns for exempt, zero rated, VATable, VAT paid and gross amounts, and a summary with all the relevant totals.
- Tables showing the total amounts for each class month by month, and totals for the whole year.
- Tables showing the totals for each class in each account.
- Tables showing the monthly maximum, minimum and average balances, turnover and cash flow month by month and for the whole year.
- Bar graphs of any category month by month.
- Pie charts covering any period for various categories of entry (PC version only).

Plus: Standing Orders
Comprehensive Manual

Entries optionally sorted into date order
Two sets of realistic practice data

Item search facility
Indefinite free telephone support

Money Manager Plus is a development of the successful **Money Manager** system, of which over 6000 have been sold. It is faster, has a greater capacity, and includes many extra features suggested by existing users. The original **Money Manager** for Amstrad CPC/PCW computers is still available at £24.95

Send cheque or credit card number or phone for immediate despatch (Please specify computer model)

Connect Systems

3 Flanchford Road, London W12 9ND 01- 743 9792 8am-10pm 7days a week



only require the selection of a number or a yes/no answer. When complete, the modified code is saved on to your disc. All that you then have to do is transfer the correct font sets to the disc as well.

Five fonts are provided with the program. All are of NLQ quality. Classic Pica is a version of the traditional printer font and is 10 pitch (10 characters to the inch). Classic Elite is the NLQ equivalent of the usual Elite 12 pitch typeface. Piazza is a 12 pitch italic typeface, while Mercury is described as an electric typewriter typeface and is 10 pitch. The final font, Clarion, has a proportional typeface intended to give a typeset appearance.

I understand that further character sets are available, which extend the range of characters that may be printed in the various fonts, rather than increase the range of fonts available.

A font editor is provided as a separate program and given time and patience you could create your own fonts, or modify the supplied ones to suit your needs. If you want accented characters, this can be done by modifying one or more of the rarely used characters, which you would then use in the document where you wanted the new character to appear.

When you first run Qualitas you have to specify the font you wish to use and, optionally, an alternative one. You may not have more than two fonts loaded at a time, but you can still use any of the normal fonts and typestyles of the printer.

The order in which you have to load Qualitas, any 8 bit port software and Protext or Tasword varies according to the version being used and these are all detailed in the manual.

When used with Tasword or Protext, you must also define a number of the printer control codes to send the values to turn Qualitas on and off. You should also specify a code for double height Qualitas. Once done, you can save the codes in the normal way (as part of the printer driver in Protext and as part of the program save option in Tasword).

At this point you can create a document, and if you print it out all the normal typestyles that your printer can handle will be available. If you want to use the Qualitas font you must turn it on with the control code you specified for the purpose.

The codes to turn Qualitas on and off must be the first characters on a line, or unpredictable results may be obtained. From this point, until you turn it off, or specify the alternate font, all output will be in the main Qualitas font.

The alternative font may be called

This is a sample of Epson LX80 standard draft mode, which is typical of the default output from most dot matrix printers.

This is a sample of Epson LX80 Near Letter quality mode and is the example with which the Qualitas fonts should be compared.

This is Classic Pica, which is a font provided with Qualitas. It is 10 pitch and equivalent to the Epson NLQ mode.

This is Mercury, another of the Qualitas fonts and is also 10 pitch. It is described as being 'Electric typewriter style'.

This is Classic Elite, which is a Near Letter quality example of the Elite typeface and is 12 pitch, which is why it appears narrower.

This is Piazza, which is the Qualitas version of an italic typeface. It is also 12 pitch.

This is Clarion and is the Qualitas Proportional font, which means that narrow letters take up less space than wide letters.

This is Double Height Pica. Double height may be used with any of the Qualitas fonts.

Double Height, Double width Pica.

Qualitas/Epson typestyles compared

into operation by using the printer codes for italic to turn it on and off. In addition, most of the other typestyles normally available will still be available in the Qualitas font, such as condensed and enlarged.

There are some restrictions, however. Amongst the things you cannot do, are using condensed, superscript or subscript at the same time as Qualitas double height, or mixing double height and normal height on the same line.

Not only does Qualitas provide you with NLQ fonts, but it also microspaces the text. Normally you will find that when right justification is in use, some spaces between words are larger than others, as spaces are all in multiples of a character width.

With Tasword microspacing also has the advantage of correcting the misalignment of the right margin that can occur when printer codes are inserted into the text.

I haven't come across any bugs in Qualitas and it is convenient to use once you have got the hang of it. One thing which does puzzle me about the program is that in operation it gives the impression of being professionally produced, but the initial configuration somehow lacks the same polish.

It is an easy job on the CPC for the software to determine whether a disc drive is installed, yet every time you want to load or save anything you have

to specify whether to save to tape or disc, which can get a bit monotonous.

You also have to confirm every menu selection by pressing Return, even though virtually all of the options only require a single keypress. These are small points though and what matters is how well it works.

Well you can judge for yourself from the samples above. I use an Epson LX80 printer which has NLQ, so an example of the standard NLQ is shown as well. I think the results compare well with the normal NLQ and you have the benefit of being able to use alternative typestyles.

If your printer does not have an NLQ capability and you would like one, then Qualitas is ideal. If you do have NLQ then you might still consider it worthwhile for the additional fonts and the double height styles.

There is a cost of course, apart from the money. Printing is much slower than draft printing and somewhat slower than normal NLQ, though not desperately so.

Please keep your problems coming in, to Applications Advice, Amstrad Computer User, 169 Kings Road, Brentwood, Essex CM14 4EF. I am sorry but I am unable to deal with individual enquiries directly.

THIS month's program is for disc users only, I'm afraid, but it fulfils a basic need which isn't entirely satisfied by the Amstrad's firmware, and also demonstrates a couple of ideas of interest to tape-based programmers. The program will format a disc in either drive, to either data or vendor formats.

This format subroutine can be adapted for use in any of your own programs – and in my opinion ALL programs that allow data to be saved to disc should include some kind of formatting option from within the program. Nothing is more frustrating than spending two hours in, say, Screen Designer, then trying to save your picture and discovering:

- None of your used discs have 17k spare for the picture.
- Your blank discs aren't formatted.
- Screen Designer cannot format a disc.
- Leaving Screen Designer to format a disc will lose your masterpiece forever.

It's easy to say that you should always make sure there's an adequate supply of formatted discs before starting work, but programmers are only human (*that's arguable – Ed*) and, like backing up your work every 15 or 20 minutes, the real and the ideal don't always match.

The main difficulty with formatting a disc is that there's no firmware routine to do it – Locomotive Software only provided a system CALL that will format a single track. Hence we need a loop structure that sets up the required parameters and does the format for each of the 40 tracks on the disc. As each track is formatted, a message is displayed with the current track number that lets you know how the program is getting on.

The joy of sectors

You may be wondering why it's necessary to format a floppy disc at all. After all, a cassette tape is made of oxide-coated plastic, just like a disc, but tape users don't have to run their cassettes through a formatting program before they can use them.

The difference is that a tape is a serial access storage device, while a disc allows random access. (Here I'm talking about accessing a particular file among several stored on a single tape or disc. Sequential or random access to data within a particular file is something different).

Let's start by making an analogy between a music cassette and a vinyl

LP disc of the same album. If you want to listen to the fourth track, the cassette has to be wound on past the first three tracks using Fast Forward. The serial nature of the storage device means that there's no other way of getting from the start of the cassette to the required position.

On an LP, however, you just pick up the arm and drop the needle on to the fourth track (*Drop? You're not borrowing any of MY records – Ed*). The fact that the data is stored over the area of the disc means that you can get at any portion of it directly.

In the same way, a floppy disc allows the computer to go straight to the data it needs, but there's an important difference. On an LP the music is still stored serially in a single groove that runs from the record's rim to its centre. The random access is possible because the stylus can be moved instantly to any point in the groove.

But data on a floppy disc is NOT stored in a continuous magnetic track spiralling in from the outer edge to the hub. The electronics and mechanics needed to keep the read/write head positioned accurately over such a track would make a disc drive more complex,

error-prone and expensive (a record player doesn't have the same problem because the stylus must follow the groove). Instead, a floppy disc stores data on many concentric rings, or tracks.

Now typically there are 40 tracks on a disc, and a single track can store a great deal of data – 4.5k on an Amstrad disc system. This is rather a lot in one go: many programs or files are shorter than this and to divide the disc capacity up in this way would be very wasteful. Hence each track is further subdivided into sectors (nine per track on the Amstrad discs).

Obviously a disc drive can very easily find a particular track – it just measures how far in from the rim the read/write head is positioned. Getting the location of a sector within a track is a bit trickier however, even though the start of a track is indicated mechanically by the small index hole punched in the disc near its hub.

Briefly, each track needs a series of carefully-timed data pulses written to it which divide it up into the sectors. You can think of these sector identifiers as being analogous to the lines ruled on the pages of a notepad – and so, finally,

Something to shout about

Peter Green looks at disc formatting, loops and the Amstrad FAR CALL (how much more fun if Locomotive had called this a SHOUT, p'haps not – think about it).

we come to the reason why a disc has to be formatted. It is to prepare the disc for future data storage by laying down the sector IDs.

Program guide

The basic layout of the formatter program is quite straightforward – the firmware handles all of the difficult, accurately-timed stuff involved in talking to the disc drive controller chip. All we have to do is pass it a few simple parameters.

The program first checks that discs are actually fitted, by using the firmware mechanism for accessing external rom commands. If the disc drive is plugged in the computer's initialisation will have logged on several new bar commands to the firmware, such as IDISC, IA, IB and IUSER.

KL-FIND-COMMAND takes a pointer to the command string in HL and checks through its list of external commands and RSXs. If it finds the command, the carry flag is set and HL and C contain the "far address" of the command (HL = address, C = rom select number). No carry means no command and hence no discs. The command string must be in capitals and have the top bit of its last letter set (that's what the "C" + &80 does).

I've used IDISC, but ICPM would also have been suitable: However, some commands like REN and ERA are also provided in commercial utility roms like Arnor's Utopia. These are obviously useless for uniquely identifying the presence of the disc drive.

The main program loop prompts the user for a keypress, and uses a simple range-checking subroutine A-range to filter out keys other than 1 to 5 inclusive. Notice that A-range needs the lower limit in the L register, but the upper limit PLUS 1 in the H register. The five options allow a disc to be formatted to either of the standard formats (data or vendor) in either drive A or B, or else to quit the program.

Incidentally, I strongly recommend always sticking to vendor format – I know data format gives an extra 9k of storage per side, but it makes the discs unusable on a CP/M system because the data format directory is stored on the wrong tracks. So, for example, you couldn't transfer your Amsdos Ascii text files into someone else's PCW 8256 for use with LocoScript – something I often have to do.

Now to a Z80 instruction that I've used virtually in every article this series, but have so far failed to explain

properly: DJNZ, which stands for Decrement B and Jump relative if Non-Zero.

The value in the B register is decremented – if the result is non-zero, a relative jump is made to the label following the DJNZ. If the result is zero, the jump is ignored and the program drops through to the next instruction after the DJNZ. Although the number in B is changed, the test for zero is made without affecting the Z80 F register, all flags being unchanged (often useful).

Being a relative jump, the branch can be forwards or backwards (in fact the range is -126 to +129 bytes). Both types are used in this month's program.

Normally the B register is loaded with the initial value of a loop count, and the jump is backwards, so that a program loop is done B times (because B is decremented, then tested, an initial value of zero actually loops 256 times). This is the machine code equivalent of a Basic FOR...NEXT loop with a step of -1, and an example can be seen in the subroutine set-buff-entry, which uses DJNZ to loop nine times.

The other common use for DJNZ is to use a series of consecutive forward jumps to pick out a particular numbered routine, as shown here following validation of the keyboard input. Each DJNZ jumps forward to the next, until B hits zero – then the code corresponding to the original value in B is executed.

It is a far, far address I do...

Much of the rest of the program is simple enough to follow from the comments in the listing, but the methods used in the format subroutine are of special interest. Normally we're only interested in accessing files from disc in the same way as cassette files, using CAS-IN-OPEN and so on.

In a program like this, though, we need to use the more specialised disc functions to pre-select the format parameters, and actually format a track.

CP/M has an extra jumpblock that provides these firmware calls, but under Amsdos this jumpblock doesn't exist (as I've pointed out in previous articles, its location, &BE80, is a good place to put small Amsdos-only machine code routines). However, a range of these functions IS available to Amsdos via single letter bar commands, Ascii 1 to 9 (CTRL-A to CTRL-I, codes which cannot be typed in as keyboard commands, so Basic

users can't wreak disc havoc with a careless keypress).

We need two of these single-letter functions, Ctrl-C (SELECT FORMAT) and Ctrl-F (FORMAT TRACK). Each is located using KL-FIND-COMMAND, which returns the rom number in C, and the actual address in HL (Amstrad call this three-byte address a "far address"). Since SELECT FORMAT only requires its parameters to be passed in the A and E registers, the "far call" can be made with KL-FAR-PCHL, a routine which calls the far address in C and HL.

However FORMAT TRACK needs a parameter to be passed in HL too, so HL cannot also contain part of the far address. Here we need the more complicated type of far call, the RST 3 instruction which takes the far address as an "inline parameter".

The Z80 has a set of eight RST opcodes. These are special CALLs. Normally a CALL is followed by two bytes specifying the actual address to CALL. Because the address is stored after the CALL op-code it is called an inline parameter (ie the data is part of the sequence of program bytes rather than the contents of a register).

The RSTs are single byte op-codes and need no inline address because each one always CALLs a fixed address. These are set eight bytes as are single byte op-codes and need no inline address because each one always CALLs a fixed address: these are set eight bytes apart at the bottom of memory. That is, RST 0 means CALL &0000, RST 1 means CALL &0008, RST 2 means CALL &0010, RST 3 means CALL &0018 and so on.

The computer designer can put any code in these locations that he likes. Amstrad have put code at RST 3 that fetches the two bytes after the RST, and uses them as an address pointer to three more bytes which make up the far address to be called. Thus the far address can be stored as part of the program, and all the Z80 registers are free to pass parameters.

You can see how assembler labels make this easy to set up. The label after the RST 3 (format-track) sets up the correct inline parameter (this should work OK on Amstrad-specific assemblers) and the three bytes reserved at the actual location of format-track are filled in with the values of C and HL returned by KL-FIND-COMMAND.

● Next month we will see how a program like this can be hidden behind windowing menus.


```

org 80000

.KM_WAIT_CHAR EQU 80006
.KM_READ_CHAR EQU 80009
.TXT_OUTPUT EQU 8005A
.TXT_WIN_ENABLE EQU 80066
.SCR_SET_MODE EQU 80C0E
.KL_FIND_COMMAND EQU 80C04
.KL_FAR_PCHL EQU 8001B

LD LE EQU 80B66
.SCR_SET_MODE EQU 80C0E
.KL_FIND_COMMAND EQU 80C04
.KL_FAR_PCHL EQU 8001B

LD HL,disc
CALL KL_FIND_COMMAND ;Check that disc drives are actually fitted!
JR C,main_program ;Do program if disc(s) fitted
LD HL,no_disc
CALL print ;Else print error message
JP KM_WAIT_CHAR ;Wait for a key-press and exit

.disc
TEXT "DIS",C+880

.no_disc
TEXT "Disc drive not fitted - press a key to abort",0

.main_program
LD A,1
CALL SCR_SET_MODE

.input
LD HL,question1
CALL print
CALL flush
CALL KM_WAIT_CHAR
LD HL,&3631 ;L = lowest char, H = (highest char + 1)
CALL A.range ;Check that A is 831 to 835 inclusive
JR NC,input ;Loop if input out of range

SUB 830 ;Else alter range to 1-5
LD B,A ;Move to B as counter

.setup1
DJNZ setup2 ;Jump forward if B<>1
CALL format_A
CALL format_V
JR do_format

.setup2
DJNZ setup3 ;Jump forward if B<>2
CALL format_B
CALL format_V
JR do_format

.setup3
DJNZ setup4 ;Jump forward if B<>3
CALL format_A
CALL format_D
JR do_format

.setup4
DJNZ setup5 ;Jump forward if B<>4
CALL format_B
CALL format_D
JR do_format

.setup5
RET ;Abort selected - just quit

.do_format
CALL format ;Format the disc
LD HL,question2
CALL print ;Ask whether another disc is to be formatted
CALL flush
CALL KM_WAIT_CHAR ;Fetch answer from keyboard
CP &FC ;Was ESC pressed?
JR NZ,input ;If not, loop back and do it all again
RET ;Else quit

.question1
TEXT "Select required operation:",13,10,10
TEXT "<1> Format A: as vendor",13,10
TEXT "<2> Format B: as vendor",13,10
TEXT "<3> Format A: as data",13,10
TEXT "<4> Format B: as data",13,10
TEXT "<5> Abort the program",13,10,10,0

.question2
TEXT "Press ESC to quit or any other key to",13,10
TEXT "format another disc",13,10,0

.format
;-----
; Format a floppy disc using specified parameters (drive, type)
;-----

LD HL,insert_disc
CALL print ;Ask user to insert disc
CALL flush ;Flush key buffer
CALL KM_WAIT_CHAR ;and wait for a keypress

LD HL,ctrl_F ;Point to external command
CALL KL_FIND_COMMAND ;Find the far address of FORMAT TRACK
JR NC,format_failed ;Couldn't find the command

LD (format_track),HL
LD A,C
LD (format_track+2),A ;Else store the "far address" at address format_track

LD HL,ctrl_C ;Point to external command
CALL KL_FIND_COMMAND ;Find the far address of SELECT FORMAT
JR NC,format_failed ;Couldn't find the command

LD DE,(drive) ;D = first sector number/E = selected drive
LD A,D ;Copy first sector to A
PUSH DE ;Save number/drive
CALL KL_FAR_PCHL ;Perform the SELECT FORMAT
POP DE ;Restore number/drive

LD A,D ;First sector number to A
LD C,1 ;Constant increment for successive sectors
LD HL,header_buffer+2 ;Point to first table entry
CALL set_buff_entry ;Set up sector numbers in header buffer

LD BC,&2800 ;B = 40, C = 0

.f1
LD HL,track
CALL print ;Print the track message
LD A,C ;Fetch current track number
CALL AH.to.ASCII ;Convert high byte to ASCII
CALL TXT_OUTPUT ;Print it
LD A,C ;Fetch number again
CALL AL.to.ASCII ;Convert low byte to ASCII
CALL TXT_OUTPUT ;Print it
LD A,C ;Fetch number again
ADD A,1 ;Add 1
DAA ;using BCD arithmetic
LD C,A ;Replace track number in C

LD A,40
SUB B ;A = track number for current loop (in hex)
LD D,A ;Copy track number to D
LD HL,header_buffer
PUSH BC ;Save loop counter/track number
PUSH HL ;Save address of header buffer
LD C,0
CALL set_buff_entry ;Set up track number in header buffer
POP HL ;Restore registers
POP BC

RST 3,format_track ;FAR CALL to disc routine to format the track
JR NC,format_failed ;Skip if some kind of error
DJNZ f1 ;Else do all 40 tracks

LD HL,format.OK
CALL print ;Print success message
SCF ;Flag success

.format_failed
LD HL,f_fail
CALL NC,print ;If failed, say so

.f2
RET ;and return

.set_buff_entry
;-----
; Set up entry in sector buffer table
; Entry: HL points to first entry
; A holds first value
; C holds offset for successive entries
; Exit: AF, B, HL corrupt, all others preserved
;-----

LD B,9 ;One track has nine sectors

.sbe1
LD (HL),A ;Store entry in header buffer
INC HL
INC HL
INC HL
INC HL ;Point to next entry
ADD A,C ;Add required offset
DJNZ sbe1 ;Loop until filled all ;Point to next entry
ADD A,C ;Add required offset
DJNZ sbe1 ;Loop until filled all ;Point to next entry
ADD A,C ;Add required offset
DJNZ sbe1 ;Loop until filled all 9 entries
RET ;and exit

;-----
; Short parameter-setting routines
;-----

.format_A
XOR A ;Select drive number 0 (= "A")
JR FB1

.format_B
LD A,1 ;Select drive number 1 (= "B")

.FB1
LD (drive),A ;Store it in the drive variable
ADD A,65 ;Convert to ASCII for "A" or "B"
LD (drive.letter),A ;Store it in the message string
RET

.format_Q
XOR A ;Zero flags "abort"
JR FB1

```


CYCA LTD.

287 CALEDONIAN ROAD, LONDON N1E 1EG
TELEPHONE: 01-700 4004

AMSTRAD

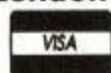
Amstrad PC Compatibles	P.O.A. + VAT
CPC 464 Green	£173 +VAT
CPC 464 Colour	£260 +VAT
CPC 6128 Green	£260 +VAT
CPC 6128 Colour	£300 +VAT
DMP 2000 Printer	£139 +VAT
DMP 3000	£169 +VAT
PCW 8256	£399 +VAT
PCW 8512	£499 +VAT
Amstrad V21/23 Modem	£76 +VAT
CF2 Floppy Disc	£2.50 +VAT
CF2 DD Floppy Disc	£4.50 +VAT
Printer Ribbon DMP 2000	£4.00 +VAT
Printer Ribbon 8256/8512	£4.50 +VAT
JY2 Joystick	£11.00 +VAT
RS 232 Serial Interface	£43.00 +VAT
RS 232 with Software	£49.00 +VAT
CPS 8256 RS 232 (use with PCW 8256)	£59.00 +VAT
Amstrad FD 2	£139 +VAT
Amstrad DDI.1/464	£139 +VAT
MP1 Modulator/464	£17.00 +VAT
Sony 3.5" S/S DD	£1.90 + VAT
Sony 3.5" D/S DD	£2.90 + VAT
Sony 5.25 MD1D	£1.20 + VAT
Sony 5.25 MD2D	£1.70 + VAT
Sony 5.25 MD2DD	£2.75 + VAT
Sony 5.25 MD2HD	£3.00 + VAT
TLX 297761 BT1EQ G Relay to 01 700 4677	

CYCA LTD

287 Caledonian Road, London N1E 1EG

MAIL ORDER HOTLINE

01-700 4004



STOCKMARKET

THINKING OF INVESTING? ALREADY AN INVESTOR?

STOCKMARKET enables you to record details of purchases, sales and dividends of shares, unit trusts etc. Current share prices can be entered very easily at any time for an automatic folio revaluation. Values of share prices, indexes etc can be recorded, listed and plotted along with moving averages. Practise buying and selling shares. See if your intuition is right.

PRICES

- * Store values of share prices, indexes, exchange rates etc.
- * Up to 260 prices per share (eg. weekly prices for 5 years).
- * Tabulate prices.
- * Plot prices and moving averages with log or linear scales.
- * Actual prices supplied as demonstration data (inc FT 30, British Telecom).
- * Use curves to select best buying and selling opportunities.

ACCOUNTS

- * Record full details of your portfolios of stocks, shares, unit trusts etc.
- * Practice buying and selling techniques and accurately record your progress.
- * Up to fifty shares per folio. Store many folios on one disc.
- * Buy and sell shares with automatic calculation of dealing costs.
- * User definable dealing costs.
- * Record dividend yields and price earnings ratios.
- * Update prices and automatically update yields, P/E ratios and recalculate individual share and total folio value.
- * Record dividend payments, total dealing costs and keep cash accounts.
- * Tabulate present folios, past transactions, dividends and cash accounts.
- * Demonstration data supplied. Comprehensive forty page manual.

PC1512
version
£49.95

CPC 464 (disc)/664/6128

PCW 8256/8512

Price: £29.95 (inc. p&p)



MERIDIAN
software

38 Balcaskie Road,
London, SE9 1HQ.
Tel: 01-850 7057

TELETEXT

A world of information
at your fingertips

The Microtext adaptor turns your 464 or 6128 into a sophisticated Teletext Receiver. Giving you a full colour display of any of the free pages from Ceefax or Oracle. As well as news and sports results, there's road, rail and air travel information, what's on TV and weather reports. You can get an update on share prices or bargain holidays. And not only does Teletext cater for special interests, like computing, motoring, or gardening, but you'll also find things to do and places to go in your area, prize competitions and even your daily horoscope, plus much, much more. It's all free, easy to use and it's all at your fingertips.

A page like a recipe or a weather map may be saved to disc or cassette or even printed out, you can load Telesoftware from Ceefax or Channel 4 and the manual has examples and shows how to access and use Teletext from your own programs, the ability to use live information like football results, exchange rates or weather conditions, provides possibilities limited only by your imagination.

The adaptor fits neatly on the expansion port. A lead goes to the 'VIDEO OUT' socket of your video recorder so using your Video as the Tuner for the system.

Just **£74.95 inc P&P** (Overseas add £2.00).

MICROTEXT TUNER NOW AVAILABLE

Our own Tuner has been specially designed to provide the signal that the Adaptor needs, thus eliminating the need for a video recorder. Just plug in an aerial, it tunes itself in (!) and channels are selected from the keyboard. The whole system consists of a Microtext Adaptor, Tuner, Power supply, lead and manual and costs just **£114.80 inc P&P**.

Only from:-

MICROTEXT

Dept AC, 7 Birdlip Close, Horndean, Hants PO8 9PW
Telephone: (0705) 595694

DRIVER

IN THE NEW DIMENSION

ASTROLOGY for beginners

Teach yourself astrology using your Amstrad

A Starter Pack comprising a simple program to calculate a horoscope, an introductory booklet and 2 self-teaching programs (how to interpret the horoscope)

£11.50 cassette £15.50 disc (£13.50 for 1512)

No previous knowledge required

Also many other programs for more experienced astrologers

Please send the Astrology Starter Pack for my Amstrad
464/664/6128/8256/1512. I enclose a cheque/PO, UK, for £11.50/£15.50/£13.50
(Inc p&p). Outside UK add 50p; or, I enclose a large sae for free catalogue.

Name _____

Address _____

ASTROCALC (DeptA) 67 Peascroft Road
Hemel Hemstead, Herts HP3 8ER Tel: 0442 51809

SCREENVISION TURNS YOUR MONITOR INTO A COLOUR TV!

AT THE AMAZING OFFER PRICE OF **£59.95**
Door to Door Insured delivery add £6 INC VAT

USE YOUR AMSTRAD CPC464, CPC664 & CPC6128 MONITOR AS A COLOUR TV SET!

Screenvision is a modern 'State-of-the-Art' TV Tuner which simply connects to your monitor, using the existing lead and converts it to an outstanding colour television.

Screenvision has more features than any other TV Tuner and costs less! Each tuner has seven pre-select push button channel selectors, separate controls for brightness, colour, tone and volume and has built in Speaker, Colour and Automatic gain control.

Unlike other products, Screenvision also connects to a host of other Monitors should you change your system.

DEALER & EXPORT ENQUIRIES WELCOME

SCREENS MICROCOMPUTERS & ELECTRONICS LTD.

MAIN AVENUE · MOOR PARK · NORTHWOOD · MIDDLESEX · ENGLAND
TEL: 09274 20664 TELEX: 929224 SCREEN G



DISCOUNT SOFTWARE

DISC BASED		CASSETTE BASED		HARDWARE	
Colossus Chess 4	11.95	Mini Office II	11.95	DMP 2000 Printer	159.95
Centurion	11.95	HiSoft Turbo Basic	12.95	DD1 Disc Drive	159.95
Death Wish 3	11.95	Italian Tutor	14.95	FD1 Disc Drive	99.95
Elite	10.95	German Master	14.95	2nd Drive Lead	7.95
Exolon	11.95	French Mistress	14.95	Amstrad V21/23 Modern	95.95
F15 Strike Eagle	11.95	Spanish Tutor	14.95	RS 232 Vface (CPC)	55.95
Game Over	11.95	Protect	16.95	Screen Filter colour	14.95
Ginship	Call	Maxam	16.95	Screen Filter (mono)	12.95
Hollywood Hi Jinks	20.95	Tasword 464	15.95	AMX Mouse Package	65.95
Moonmist	20.95	Tasprint 464	8.50	DKT 64K Expansion	35.95
Scrabble	11.95	Tascopy 464	8.50	DKT TV Tuner	59.95
Starfighter	16.95	Character Designer	7.95	Elec Studio Light Pen	26.95
Wizball	11.95			Gunshot Joystick	6.95
World Games	11.95			Quickshot Turbo	12.95
Zynaps	11.95			PCW Ribbons	4.50
Adv Music System	25.95	CP/M		DMP 2000 Ribbons	3.95
Masterfile II	32.95	Protect CPM	49.95	Single 3" Disc	2.75
Mastercalc 128	28.95	Pocket Protect CPM	33.95	Box 10 Amstrad CF2	25.95
Maxam	21.95	FTL Modulus 2	49.95	AMS 20 L Disc Box	11.95
Protect	21.95	Supercalc 2	41.95	Spoke Protector	11.95
Prospell	20.95	Dr Draw	39.95	RS232 Lead F/F	11.95
Promerge	20.95	Dr Graph	39.95	RS232 Lead M/M	11.95
German Master	16.95	Dr Pascal MT	34.95	CPC Printer Lead 2M	10.95
Spanish Tutor	16.95	Dr C Basic	34.95	Printer Lead 1.5M	9.95
Italian Tutor	16.95	At Last Database	24.95	DMP 8K Buffer Kit	5.95
French Mistress	16.95	Right Hand Man	25.95	6128 Monitor Ext Leads	7.95
Tasword 6128	19.50	Cadron Cardbox	49.95	464 Monitor Ext Leads	6.95
Tasprint	12.95	Nevada Cabol	35.95		
Tascopy	10.95	Nevada Fortran	35.95		
Tasprint	10.95	HiSoft C Compiler	35.95	BOOKS & MANUALS	
Tasdiary	10.95	HiSoft Pascal 80	35.95	MCode for Beginners	6.95
Tas Sign	23.95	HiSoft Dwyarc 80 V2	35.95	Mastering Machine Code	8.95
Matrix Spreadsheet	24.95	Cracker 2	41.95	Concise Firmware Spec	17.95
Adv Art Studio	19.95	laneset Crash Course	21.95	DD1 Firmware Guide	9.50
Mini Office II	15.95	laneset Two Fingers	21.95	The Amstrad CP/M Plus	12.95
				Programming the Z80	19.95

EPROMS	EPROMS
Maxam (machine code ass/diss) 32.95	Rombo Rom Board (holds 8 roms) 33.95
Protect (word processor) 32.95	
Utopia (utility rom) 24.95	
Prospell (spelling checker) 29.95	
Promerge+ (mail merge) 29.95	

LABELS: Fanfolded - 1 across x 1,000 OUR PRICE £5.95

ALL PRICES INCLUDE POSTAGE, PACKING & VAT IN THE UK
OVERSEAS ORDERS WELCOME - PLEASE WRITE FOR EXPORT PRICES
PLEASE SEND CHEQUES/POs TO:



M.J.C. SUPPLIES, (ACU)

'Scoja', London Road, Hitchin, Herts SG4 9EN.

Tel: (0462) 32897 for Enquiries/Orders - out of hours Answerphone



THE ULTIMATE CHOICE IN COMPUTER SUPPLIES

DUSTCOVERS

PCW 8256 (Full Set)	£10.35
PC 1512 (Full Set)	£9.50
DMP 2000-3000	£4.89
DMP 4000	£5.75

"THINGI" COPY HOLDER



£6.99 incl.

FITS TO TOP OF PCW WITH
VELCRO STRIP PROVIDED.

PLEASE SPECIFY LEFT/RIGHT REQD.

DISK STORAGE



◀ DIAL A DISK
10 x 3" DISKS
PROTECTED AND
DISPLAYED
£5.95 incl.

3" DISC BOX
HINGED LID ▶
Cap 25 Discs
(uncased) 15 cased
£9.50 incl.



3" CF2 DISKS

**SPECIAL
AUTUMN
PRICE**

~~£25.50~~ **£24.50** for 10
~~£69.50~~ **£69.00** for 30

PERSPEX VDU FILTERS FOR PCW 8512 & PC 1512

- ▶ REDUCES EYESTRAIN
- ▶ REDUCES GLARE
- ▶ REDUCES HEADACHES
- ▶ IMPROVES CONTRAST

ONLY
£14.95 incl.



FITS TO VDU WITH VELCRO PADS PROVIDED
PLEASE SPECIFY IF MONO/COLOUR VDU (PC 1512 ONLY)

SCREEN CLEANING KIT PRINTER CLEANING KIT

RIBBONS	DMP 2000/3000	£10.35
	PCW 8256/8512, black fabric	£13.71
	PCW 8256/8512, black, red, blue fabric	£4.89
	PCW 8256/8512 (Black Carbon)	£3.90
	PCW 8256/8512 (Black Carbon)	£4.83
	PCW 8256/8512 (Black Carbon)	£4.95

LISTING PAPER	11" x 9 1/2" 60 gsm ruled/plain	£15.43/2000
	A4 continuous 70 gsm plain	£14.08/1000
	A4 continuous 90 gsm plain	£14.95/1000
	(Micro-perforated on all 4 edges)	

LABELS 3 1/4" x 1 7/8" 1 across the web ... £31.56/8000
▶ Call for sizes not listed.

**BARGAIN
CORNER**

ALL PRICES INCLUDE VAT — PLUS — FREE NATIONWIDE DELIVERY

SBS Computer Supplies Ltd.

UNIT 3 · CLARKS INDUSTRIAL ESTATE · NEWTOWN ROAD
HOVE · SUSSEX · BN3 7BA · TEL (0273) 726331 TELEX 878226

FOR IMMEDIATE DESPATCH ☎ OUR 24 HOUR



HOT LINE (0273) 726331

COMPANIES
WHY NOT
ASK FOR OUR FREE
64 PAGE CATALOGUE

PLEASE SEND ME	DESCRIPTION	QTY.	VALUE
	TOTAL ORDER VALUE		

LARGE STOCKS
AVAILABLE
ACCESS AND VISA
CARDS ACCEPTED
ACU11

I ENCLOSE A CHEQUE PAYABLE TO
SBS Computer Supplies Ltd.

NAME

ADDRESS

TEL

**COMPUTER
SBS
SUPPLIES**


```
.format_V
LD A,&41          ;Sector number for system
JR f01

.format_D
LD A,&C1          ;Sector number for data

.f01
LD (sector),A    ;Store required sector number
RET

;-----
; Messages, variables
;-----

.insert_disc
TEXT "Insert disc to format in drive"

.drive_letter
TEXT " : ",13,10,"Press any key to continue",13,10,10,0

.track
TEXT 13,"Track number ",0

.format_OK
TEXT 12,"Format successful",13,10,0

.f_fail
TEXT 12,"Format failed - do not use disc",13,10,0

.format_track
RMEM 3           ;Reserve 3 bytes for "far address"

.drive
BYTE 0           ;Required drive no

.sector
BYTE 0           ;Required first sector number

.header_buffer
;9 entries, one per sector
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
BYTE 0,0,0,2
```

```
BYTE 0,0,0,2
BYTE 0,0,0,2

.ctrl_LC
BYTE &03

.ctrl_LF
BYTE &06

.AH_to_ASCII
RLCA
RLCA
RLCA
RLCA           ;Move high nibble to low nibble, then drop through...

.AL_to_ASCII
AND &0F        ;Keep low nibble only
ADD A,&48       ;Add ASCII code for '0'
CP 58          ;If code is '0' to '9', then
RET C          ;quit
ADD A,7        ;Else adjust code to 'A' to 'F'
RET

.print
LD A,(HL)      ;Not sure how I'd do without this routine...
INC HL
OR A
RET Z
CALL TXT_OUTPUT
JR print

.flush
CALL KM_READ_CHAR
JR C,flush     ;Keep reading keys until buffer is empty
RET

.A_range
CP H           ;Compare A with H, setting carry if and only if A < H
RET NC        ;so NC means A higher than required range
CP L           ;Compare A with L, setting carry if and only if A < L
CCF           ;Complement carry, so it's set if and only if L <= A
RET           ;Return with carry set if and only if L <= A < H
```

ACU

Reach the
top with ...

LCL

Educational Software



Amstrad (CPC,PCW, PC) (Disc/tapes) ★ BEST REVIEWS ★
Electron, BBC (tape/disc) AS
Spectrum Commodore 64 SEEN ON TV
(Apple, VIC, ZX81, NEC PC8201A) ★ WORLD LEADERS ★
★ At all Major Shows ★ ★ Hons. Graduate/Teacher Authors ★

COMPLETE SELF-TUITION COURSES

(Each contains 24 programs)
£5 off total for 2, £10 off total for 3,
£17 off total for 4

MICRO MATHS (CPC, PCW, PC)
Course taking beginners (from age 8
yrs) to O-Level/GCSE. 24 programs on
59 topics on 2 tapes/disc + 2 books £24

PRIMARY MATHS COURSE (CPC)
Course taking beginners (from 5 years)
to secondary school entrance in 35
programs divided into 18 lessons/tests.

All animated graphics 2 discs/tapes £24
MICRO ENGLISH (CPC, PCW)

Course taking beginners to English
Language GCSE. Incorporates real
speech, no extras required. 2 tapes/disc
£24

MEGA MATHS (CPC)
A-Level course for mature beginners,
A-Level Students or Micro Maths users.
Covers 105 topics on 2 tapes/disc +
books £24

NEW

IMMEDIATE
DESPATCH

Send coupon or phone orders or requests for free colour catalogue to:
LCL, (Dept. AU), Melody House, 13 Deanfield Road, Henley,
Oxfordshire RG9 1UG

Tel: 0491 579345 (10am-10pm)

Name _____
Address _____
Title _____
Computer _____ Disc/tape _____

3" HITACHI DISK DRIVES

Suitable for use on the Amstrad 6128, 664, Tatung Einstein,
BBC with DFS. 40 track, double density, 3 ms track access
time. Unformatted capacity — single sided 250k. Shugart
interface. Plug compatible with
5¼ inch drives.

Cables available for
connection to:
Amstrad — £7.50 plus
VAT.
BBC — £7.50 plus VAT.
Tatung installation pack
— £12.00 plus VAT.



CARRIAGE £3 + VAT.

PRICE:
£24.95
+ VAT

FOR FURTHER DETAILS SEND S.A.E. TO:

MATMOS Ltd., Unit 11, Lindfield Enterprise Park,
Lewes Road, LINDFIELD, West Sussex, RH16 2LX.
Tel. 0444-73830/0444-414484/0444-454377

Or Computer Appreciation, 111
Northgate, CANTERBURY, Kent
CT1 1BH. Tel. 0227-470512

FREESCAPE™

IS THE NEW DIMENSION

DISCOLOGY NEW

This is the ultimate in disc utilities. Discology consists of 3 programs, a disc editor, a disc explorer and a disc copier.

The Copier

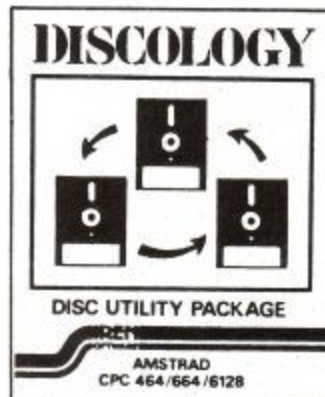
- * At the time of going to press Discology really is the most powerful utility ever written for your Amstrad
- * Makes full use of all 128K on a 6128.
- * Highly intelligent, compresses data allowing whole discs to be copied in one go.
- * Full file copier, copy multiple files in one go. Will cope with files of any length.
- * Copies files from disc to tape.

The Editor

- * Edit any sector, including funny formatted sectors
- * Display in Z80 disassembly, basic listing, hex, ASCII, binary, octal & decimal
- * Search disc for a given string
- * Dump page to printer
- * Built in full floating point calculator, hex to decimal conversion etc
- * Exceptionally easy to use

The Explorer

- * A new concept in disc utilities
- * Graphically maps discs and files
- * Shows how many sectors on each track and displays on which sectors files are stored.
- * Displays full sector information and file information.



Discology makes comprehensive use of pull down menus and is a superb addition to any disc owners software collection. Discology makes extensive use of all 128K on a 6128 and all 64K on a 464. This 100% machine code program offers everything you could dream of plus more.

Discology on disc only £14.99 CPC464/664/6128

Upgrades:- Master Disc owners, return your Masterdisc to us, and we will put Discology onto side B of your Masterdisc. Upgrade price is just £9.99 plus your Master Disc.

DISCOVERY PLUS

The ultimate tape to disc transfer program

"Discovery Plus must be the most advanced and probably most efficient tape to tape disc transfer utility to date" Amstrad Action, December 1986. This program will transfer more games to disc than any other transfer program. The first person who can prove otherwise will receive twice his money back!!

Discovery Plus consists of 4 easy to use programs that together will transfer an extremely high proportion of your software onto disc. Also includes details on how to transfer over 100 games. Silver Screwdriver Award Amix! January 1987.

Discovery Plus now incorporates Splock Trans II

Discovery Plus only £14.99 on disc for the 464/664/6128

PRINT MASTER

PRINTMASTER is probably the most useful program that any printer user can buy. JUST LOOK AT ITS COMPREHENSIVE LIST BELOW

- * Comes complete with 20 fonts (typefaces)
 - * Prints any ASCII file (from Tasword/Protext) in a variety of fonts, sizes & styles
 - * Adds NLQ (Near letter quality) printing to any printer
 - * Semi proportional spacing available
 - * Print large posters
 - * Font designer allows you to create your own fonts
 - * Dump screens to your printer in 16 shades of grey
 - * Very easy to use, full instructions and demo's included.
- No printer should be without this program!

On Disc, only £14.99 CPC464/664/6128

CHERRY PAINT NEW

Another new addition to our range, CHERRY PAINT is a superb mode 2 art package. CHERRY PAINT uses icons, pull down menus and windows to provide an easy to use drawing package for your Amstrad.

- * Uses 640 * 400 pixels in Mode 2
- * Full range of features and options
- * Dump designs to your printer in 5 sizes
- * Compatible with keyboard, joystick or AMX mouse
- * Superb review in Amstrad Action

Incredible value at only £9.99 on disc CPC464/664/6128

TAPE UTILITY

464 OWNERS, LOAD IN YOUR SOFTWARE AT UP TO 4 TIMES THE NORMAL SPEED

Tape Utility will allow you to make back up copies of your tape based software that will load at up to 4 times the normal speed.

- ...So easy to use, simple one key operation.
 - ...Handles up to 42K (approx) in one go
 - ...Will copy normal, headerless, speedlock & flashloaders
 - ...Tests have shown that it will backup about 90% of all Amstrad software
 - ...Choice of ten speeds up to 4000 baud
 - ...Removes protection from basic and speedlock programs
- "Simply the best, the tape to tape back up copier to beat all tape to tape back up copiers". AMSCUB

...Written specifically for the 464, this is not a Spectrum conversion.

TAPE UTILITY ON TAPE ONLY £6.99. AMSTRAD CPC464 ONLY.

SOUNDBLASTER NEW

The SOUNDBLASTER is our first move into hardware. This device allows you to enjoy your games with superb STEREO SOUND. The SOUNDBLASTER is a small stereo amplifier that comes complete with TWO 20 WATT 3 WAY SPEAKERS.

- * Small compact size
- * Powerfull 20 Watt 3 way speakers
- * Speakers contain a 3" woofer, a 2" mid range and a tweeter
- * Volume and balance can easily be adjusted
- * Headphone socket for private listening

FOR A LIMITED PERIOD, COMES COMPLETE WITH STEREO HEADPHONES, ORDER NOW!

Available now at only £29.99 (+£2.00 for postage) CPC464/664/6128

SPLOCK TRANS II NEW

Many programs are now protected by the new version of the Speedlock Protection System. Until now, it was virtually impossible to transfer these games to disc. Now SPLOCK TRANS II performs the impossible.

- * Fully automatic, very easy to use
- * Uses only the absolute minimum disc space
- * Saves program in full including loading screens
- * Programs reload quickly including loading screens with colours set correctly
- * Will transfer easily to disc

Available now on cassette at £7.99 CPC464/664/6128



SIREN SOFTWARE, TEL 061-228 1831
2-4 Oxford Road, Manchester M1 5QE



JOE BLADE

SOMETIMES it seems that Norns of Fate have a real sadistic streak running through their collective psychological profile. Here's a nicely programmed game, at a good price – and by an unfortunate coincidence Players has released it just as the backlash arrives in the wake of the events at Hungerford. The game, needless to say, features a Rambo-like character wandering around an enemy camp and using his rifle on anyone that gets in his way.

Considerations of taste and timing apart, Joe Blade is good budget fare. You take the role of the American loner on a mission into the heavily guarded terrorist camp where a number of hostages have been imprisoned. Joe has quite a maze of cells, offices, corridors and roadways to explore and the hostages are never found in the same place twice. The screen displays a side-on view of Joe walking left and right along the pathway at the bottom: Doors also lead "into" and "out of" the screen into adjacent rooms.

Unemployment is evidently no problem if you're a terrorist – they swarm all over the place. However, the YTS training scheme doesn't seem to be working out too well, as none of them have got the knack of shooting back at you: They simply pace backwards and forwards across the screen. Touching an enemy does reduce Joe's stamina at an alarming rate, leading to a complete state of death and a short dirge, so the best bet is to mow them down as and when they appear.

Once your ammo runs out, you have to rely on leaping nimbly over the guards, unless you've come across an enemy uniform lying on the ground. Wearing this lets Joe walk about with impunity *who's he?* – *Ed*, at least until the uniform inexplicably dissolves. These boys have obviously never heard of fabric conditioner.

Other goodies carelessly strewn around the barracks include food (to replenish lost stamina) extra ammunition and cell keys. These don't actually open the cells,



but let Joe pass through the any locked interconnecting doors. The keys are as fragile as the uniforms, only working once and then disappearing.

Funnily enough the hostages aren't in the cells anyway, but appear to be having a nice kip in the corridors. The real cell inmates aren't worth rescuing, anyway: They all look like Snow White's Dopey having hysterics.

The final items to be found in the barracks are bombs. Touching one starts a timer, giving you 30 seconds to activate the device before you are killed. Setting the fuse involves solving a puzzle which is probably beyond Johnny Rambo's capability – the letters A to E are scrambled and you have to swap them back into alphabetical order, the catch being that only certain pairs can be swapped. Once triggered, the bomb timer allows 20 real-time minutes to find the remaining hostages and reach the exit before the barracks blows up.

Author: Players
Price: £1.99

Nigel

The graphics are tidily drawn in four-colour Mode 1, although the brick wall backdrops get a bit repetitive. Animation of the large sprites is smooth and flicker-free, and the loading screen is also well-drawn: Simple but atmospheric.

Sound effects in the game are sparse, but the main menu has a good three-voice tune.

It's nice to find a high-score table that uses keyboard entry instead of tedious joystick contortions. The gameplay will hardly stretch your brain and eventually gets a bit monotonous, but at this price you can't really go wrong.

16/20

Liz

Players' stuff is consistently good, and consistently underrated – the same goes for the sister companies of Pandora and Interceptor. Perhaps it is this insistence on quality which means that they have few releases, and it is the small

number of releases which contributes to the low profile. Still, I'd rather have it this way. Joe Blade is not the best budget game Players has produced but it is still excellent VFM.

18/20

Colin

A competent enough piece of work by the three people involved but lacking in some of the finer touches that really top off a game. For example, I found it annoying that there is no indication in the score window of the amount of ammunition remaining. Keeping a mental tally isn't really on and you tend to run out when you're in the

thick of things.

I would also have liked a timer to warn when the enemy uniform is going to dissolve: If it happens just as you're passing a guard you can lose a lot of stamina. Nevertheless, an enjoyable but undemanding maze game for the price.

15/20

Z

SPACE, the final frontier, a place that my astronomy lecturer at university assured me was a vacuum, a really empty place with not much knocking around except the odd hydrogen atom every cubic centimetre.

Well, my lecturer seems to have got it all wrong. Every time I load up a computer game I find that space is actually filled to overflowing with all manner of strange lifeforms. It's so crowded out there that it qualifies for a local authority rehousing grant. Most of the aliens seem to have had unhappy love affairs, too, because they're mean and nasty sociopaths who want to kill me. So much for universal brotherhood...

Z, it says here on the packaging, is a place in the unknown where the shroud of death awaits in the land of the alien. Too right, mate. The gameplay area features a plan view on to a landscape which is being criss-crossed by all manner of lethal alien craft, such as droids (several types), meteorites, mother ships, control ships and flying saucers although the instructions call them a "saucims" and claim that they emits "missles".

Well, with a company name like Rino I guess spelling isn't one of their strong points).

Everything except the meteorites fire back at you, and somehow your opponents all seem so much better at dodging around your laser bolts than you are at dodging theirs.

Mostly your task is to improve the neighbourhood by blasting away and reducing everything in sight to a density of one hydrogen atom per cc. Enemies can also be destroyed by ramming them, but this tends to deplete your shields somewhat - run out of energy and kapow!

As an occasional diversion, energy bomb capsules drift across the screen. These can only be opened up by a well-aimed bolt from your laser. Then it's the thrill of the chase as you try to collect the energy bomb before it dissolves.

These bombs come in handy for reaching the next level in the game, as they are the only way of punctur-



ing the force barrier blocking the entrance to the transporter unit. You need several bombs to blast a hole wide enough to pilot your ship through, and to make life harder the barrier (and any holes in it) scroll, making adjacent strikes trickier.

There are four levels, with increasing degrees of nastiness featuring backgrounds of an alien complex, a countryside battle zone, a lunar landscape and night-flight. On this final level you need to collect five of the energy bombs, at which point the alien control ship appears (no sense of strategy, these aliens) ready to receive the five direct hits which are the only way to destroy it.

Pretty the backgrounds may be, but they are essentially cosmetic except for the transporter unit. Hit this and you bounce, but with a considerable energy drain. As your ship's energy only recharges slowly, and running out causes your ship to disintegrate, care in navigation seems to be in order. It's a tough universe out there...

Author: Rino

Price: £4.99

Nigel

This game is certain to be compared with Hewson's Uridium, but doesn't exude the same sense of style as its predecessor. The Mode 0 graphics are colourful but blocky, lacking Uridium's detail and the nice touches it had such as the ship's roll manoeuvre as you changed direction.

The play window is very small, probably to disguise how quickly the scrolling background wraps in both the vertical and horizontal directions.

And variety is conspicuous by its absence. Unlike the spacefighter, I can't see this one taking off.

9/20

Liz

This is a pretty unremarkable shoot-'em-up, but at least Rino aren't charging full whack for it. On the other hand, I'd have thought budget prices were nearer the mark for a game with a tiny screen and only four levels.

The tape doesn't seem to take long to load, so I'm

sure the memory is there to beef up the graphics and the gameplay. The sound effects are rather feeble too, only beeps and bangs.

There's no tune on the title page, no high score table, no real challenge. To sum up - Zzzzzzzz.

8/20

Colin

Initially this is very addictive, but the fascination soon palls. The first disappointment is how small the landscape is. This place is less like a planet and more like a parking space. If they had the whole place carpeted they'd get change from a tenner.

With a small screen and tiny planet there is not much for the processor to do other than scroll. This it does very well. Four direction scrolling is not easy, so there is some programming skill here. I think I'd rather pay £9.99 for a game with more in it.

14/20

Britain's best-selling computer magazines!



The Micro User



Electron User



Apple User



Atari ST User



Atari User



Amstrad Computer User



Amstrad PCW



Amstrad Professional Computing



Computing with the Amstrad CPC



Computing with the Amstrad PCW



PC Amstrad

**On sale NOW at your
newsagents or call**



**Diamond-
Europress**
0424 430422/422928



**Are your
Typesetting costs
weighing
you down!**

Typeshare SimpleSet now lets you produce your own typesetting without back-breaking start-up costs. **£7.50** buys you the **SimpleSet** Manual and Registration allowing you access to high quality photo typesetting and a range of 1,000 typefaces.

- **SimpleSet** is available nationwide.
- **SimpleSet** is ASCII Compatible requiring only a micro-computer, wordprocessing software and a Modem.
- **SimpleSet** requires no specially trained staff. The manual shows you how to format your wordprocessing.
- **SimpleSet** is accessed via 'One-to-One' electronic mail-box.
- **SimpleSet** will give you next day delivery - anywhere (same day courier service available in Central London).
- **SimpleSet** costs only £3.60 per A4 page of bromide.

**ACT NOW! SEND £7.50 (plus VAT) FOR MANUAL AND REGISTRATION OR
CONTACT US FOR FURTHER INFORMATION ON 01-405 7937
ALAN HOUSE-55-59 SAFFRON HILL-LONDON EC1 8QX.**

**Typeshare
SimpleSet**

One of a range of Typeshare Services

CASTLE OF EAGLES

**A new graphical adventure game for
the Amstrad CPC464**

The game is set in Nazi Bavaria in 1944. Your mission is to gain entry into the "Castle of Eagles" which was built on a huge rock in the Bavarian Mountains. You and your partner have been dropped by parachute some 50 miles short of your original drop zone owing to the Aircraft having been shot up on route. You must make your way overland and get into the castle, find and photograph documents about the development of Germany's H Bomb replace the top secret documents and escape to safety with the film. You will be up against the elements, German Patrols and many other hazards.

ARE YOU UP TO IT.

CPC464 Tape send P.O. or
Cheque for £4.95 to:

S & M SOFTWARE

P.O. BOX 332, LONDON SE15 3LE
PRICE INCLUDES P&P

Name
Address
.....
.....
.....

ACU/11/87

FIXED PRICE COMPUTER REPAIRS

All types of home computers:
Amstrad, Sinclair, Commodore, BBC etc
Prices from £7.00

(for minor faults eg. Keyboard type fault)
Inclusive VAT & P+P. 3 months guarantee

Also we buy, sell, rent new or used Home/Microcomputers

Also available: Spares, software, cables, peripherals and
maintenance contracts etc.

Telephone: (0702) 618455/527864/613741
for immediate prices

Packaging materials supplied

SPECIAL OFFER

Spectrum+ Upgrade £31.00 inclusive VAT & P+P

ANALYTIC ENGINEERING LTD,

Analytic House, Unit 18A Grainger Road
Industrial Estate, Southend-on-Sea, Essex

JACKSON COMPUTERS LIMITED

JOIN OUR DISCOUNT CLUB!

Life membership for £8.50

Software/Hardware Discounts of 5-20% off RRP

All AMSTRAD and other leading makes of software available

Complete computer system, Printers, modems, cables

Amstrad CPC464 with colour monitor £279.90

Amstrad CPC6128 with colour monitor £379.90

PCW8256/512 £329.90/£429.90

The New Amstrad PCW 9512 Now available £550.00

New Amstrad PC 1640 ECD Now available Ring for details

Tandon 20 Meg add-on Disk Drive for PC 1512 Special Offer £399.00

All prices include VAT, Postage + Packing

Also free Life Membership when you purchase any AMSTRAD computer

Visitors by arrangement only

TEL: 01-651 6244. Between 9am-5pm 01-655 1610

Send for full Price List & membership form to:

25 Spring Lane, Woodside, South Norwood,
London SE25 4SP

How To Save Money

Don't spend it. But - you've got to live. So you've got to spend
money on food, clothes, fuel and so on.

So how do you save? You use the tools at your disposal:
your computer, your intelligence, your skill.

You use the Home Finance Program - designed to help you save money.

The **HFP**. It runs on Amstrad PCWs and the CPC6128.

It gives you an instant picture of your finance and caters for
up to 15 accounts. The **HFP** is fast, easy-to-use, and comes with
a comprehensive manual. Send cheque/PO for £24.95 and your
personalisation message to:

Datavise (ACU)

20 Drumnaquoile Road, Castlewellan, Co Down BT31 9NT

or sae for further details

STUCK WITH YOUR DMP 1 (or SEIKOSHA GM 500)?

Fed up with the noise and the less-than-brilliant typeface?
At a very low cost, you can convert this obsolete printer into a
modern High-spec. machine with our

INK-JET UPDATE . . .

Draft, NLQ, Underline, Italic, Emphasised - all the modes you
have ever wanted, plus 2k buffer, superior graphics modes,
etc.

No special skills or tools needed.

Contact:

IJU, 4 Church Circle, Farnborough, Hants GU14 6QQ
or 'phone (0252) 510933



PRE-SCHOOL, PRIMARY, JUNIOR

Education

By a Teacher. Tested by Pupils

Approved by Parents and Schools

For All AMSTRAD Computers. CPC/PCW and PC1512

Cassette £7.50 Disc £11.50

SAE For Lists (Please indicate CPC /PCW or PC1512)

ARC (ACU5) 53 Bentley Street, CLEETHORPES,
South HUMBERSIDE DN35 8DL. (0472) 699632

RAMASOFT Budget Utility Software

For the AMSTRAD CPC range of home computers

FONT MASTER

FONT MASTER is a font designer utility that enables you to create new character sets to
include in your Basic and machine code programs. Features included:
Design up to four characters at once * Test characters in all three text modes * Save
character sets as binary files or SYMBOLS for easy inclusion in Basic programs * Character
scroll, rotate, etc. * Sample character sets included * Print character set * Etc.
FONT MASTER is £8.50 on cassette £11.50 on disc (*special introductory offer*). Please
state your machine type.

JUNIOR-WORDPRO

JUNIOR-WORDPRO is a word processor for children. Some of the features boasted by
JUNIOR-WORDPRO:
Full cursor movement * Character and line insert * Text overwrite mode * Fully automatic
printout * Word wrap * Mode 1 text and double line spacing for clarity.
JUNIOR-WORDPRO is £9.95 on cassette and £12.95 on disc.

RAMASOFT

6 Stile Plantation, ROYSTON, Herts SG8 9HP
Tel: (0763) 43715

NEED HELP? . . . Well, read on

If you are an owner of the Amstrad CPC and don't ever get
a chance to help other users, write reviews or air your
opinions - NOW YOU CAN.

Amstrad CPC Newsletters provide these opportunities and include
Programming series, hints and tips to keep you going!

But the best part is, its **NON PROFIT MAKING** and costs just £5 for 6
FANTASTIC issues. And of course, you get access to the Public Domain
Library **ABSOLUTELY FREE!!**

What more could you ask for? Give it a go and you'll be back
for more and more.

Sample issue 85p or send a SAE for information sheet.

CHRIS BRYANT, 11 HAVENVUE ROAD, SEATON, DEVON EX12 2PF.
'Gimme a call on 0297-20456 after 7 (Mon-Sat) and anytime Sundays'
LIVING ABROAD . . . WHY NOT JOIN FOR ONLY £11 FOR SIX ISSUES.

ARE YOU IN A RUT??

Then climb out by learning to use your AMSTRAD
for pleasure, personal or business use with our
unique range of. . .

OPEN LEARNING COURSES

Phone (0206) 560783 24 hours

or send for FREE details to:

MICROWISE UK, FREEPOST, Colchester C03 4BR

Name Micro

Address

MASK

EVER had one of those days? You know the sort, when an evil organisation bent on world domination drops a vortex bomb on to your HQ and scatters all your friends throughout space and time. Some mornings it just doesn't pay to set the alarm clock.

As Matt Trakker, master strategist of the forces of Mask, it's your job to pass through the vortex in your super vehicle Thunder Hawk and pick up all your lost buddies for a final assault on the Venom base. Sounds simple enough, but soon you discover the snags.

First, Venom have sent a pair of agents to each of four time zones (on the start level, one of these agents is yourself). Each agent has been separated from his "mask" (some sort of combat gear), and a sneak attack on Thunder Hawk at the start of the game has scattered the vehicle's equipment everywhere. That makes for a whole load of happy hunting.

Each of the Mask agents has been hidden in a doorway somewhere on the playing area. To locate an agent, you will need to find and switch on a personal scanner tuned to the agent: the direction finder on the Thunder Hawk dashboard then leads you to him.

But naturally it isn't quite that easy – to activate each scanner you must find and assemble (in the correct order) four parts of the corresponding security key (also lying around at random). When you manage to match four keys, they spell out a letter, which can be typed in on the keyboard to trigger the scanner. Now you can find your partner, and then go and pick up his mask (or your own on level 1).

The other items you can collect are Thunder Hawk's bombs, which are required to destroy obstacles blocking access to parts of the map, and repair kits, useful for patching up damage. Damage? Oh yes, I forgot to mention the tanks, jeeps, helicopters, falling boulders, acid pools, dinosaurs, laser turrets and a dozen other nasties that Venom unleashes upon you in the various



time zones. A stroll through the countryside this ain't.

Each level is completed when you've found the scanner for the missing agent(s), chosen and assembled the correct set(s) of four security keys, located the agent(s) and reunited them with their mask. Then it's back to the vortex, where you are warped through to the next level.

On the fourth and final level you must complete the mission by totally destroying the Venom base. For this you have to hit it in certain selected areas with three of the Thunder Hawk bombs. Care is required when using your bombs: You automatically start the timer when you place them by the required target, and if you fail to get clear in time, Thunder Hawk goes up too!

Just in case this is all a little too easy for you, you're up against a time limit, too. Maybe today it should be someone else's turn to save the world...

Author: Gremlin Graphics

Price: £8.99

Nigel

This is the thinking woman's shoot-em-up, if that isn't a contradiction in terms. Not just mindless mayhem and slaughter, though there's plenty of that, but map exploration, strategic thinking, memory puzzles and a steady hand required on the joystick.

The graphics are great, very colourful and with

large, well-animated sprites. Unlike many Mode 0 games, you can really see what everything is supposed to be.

There's a nice loading screen too, but my one quibble is that neither the instruction leaflet or screen tell you Mask is a multi-load game, requiring a keypress at certain points to continue.

18/20

Liz

I don't believe it. A licensed game that is NOT awful! Let's hope Gremlin has started a trend. The graphics are excellent and varied, with lots of smooth animation. I found it very difficult at first (keyboard control is nearly impossible – use a joystick) but after a while I started to get the hang of

things and this is definitely one I'm holding on to.

Two gripes though. First, the game crashes if you have external roms except the disc fitted (even if they're disabled). I object to dismantling my hardware every time I play. Second, collision detection is a little too tight. Nevertheless – buy it.

19/20

Colin

MASK is a TV tie-in, which usually means the software house has spent a fortune on the licence and so does not have any money left to pay for the programming. Well perhaps Gremlin is a bit more far-sighted, or perhaps the Telly company

was not as greedy as usual, but either way it works out that Mask is a good, exciting and well programmed game. Coming soon to a monitor near you Mask II. Shame the program is such rubbish.

19/20

AMSTRAD
COMPUTER USER

Exclusive READER OFFERS

The OCP Art Studio was voted Best Utility of the Year. Now comes the Advanced OCP Art Studio with all the power and flexibility of its predecessor, and much more!

**Save
up to
£8**

Its innovative features include:

- A colour priority facility so you can draw behind or mask particular areas of the screen.
- Eight random spray cans with three spray speeds for that professional finish.
- Three levels of magnification with sophisticated editing facilities.
- Cycle colours to produce simple animation effects.



Normal Price: £24.95
Offer Price: £18.95

You can also:

Design in Mode 0 (as well as Modes 1 and 2), paint with multicoloured patterns, display cursor x-y coordinates at all times, save windows to disc (or squash, stretch, flip, or rotate them), use keyboard, joystick, or mouse, and produce triangles, rays, rectangles, circles, filled circles, ellipses, and filled ellipses with ease. You can also add text in any of nine point sizes, in two directions, in normal, bold or italic, and with variable spacing.

Suitable for	Product	Format	RRP	Special reader offer	YOU SAVE	Offer including subscription	YOU SAVE
CPC Range ★	Advanced Art Studio	Disc	£24.95	£18.95	£6	£28.95	£8

★ CPC 464 and 664 requires DK'Tronics 64k ram cartridge

To order please use the form on Page 71

AMSTRAD
COMPUTER USER

Exclusive READER OFFERS

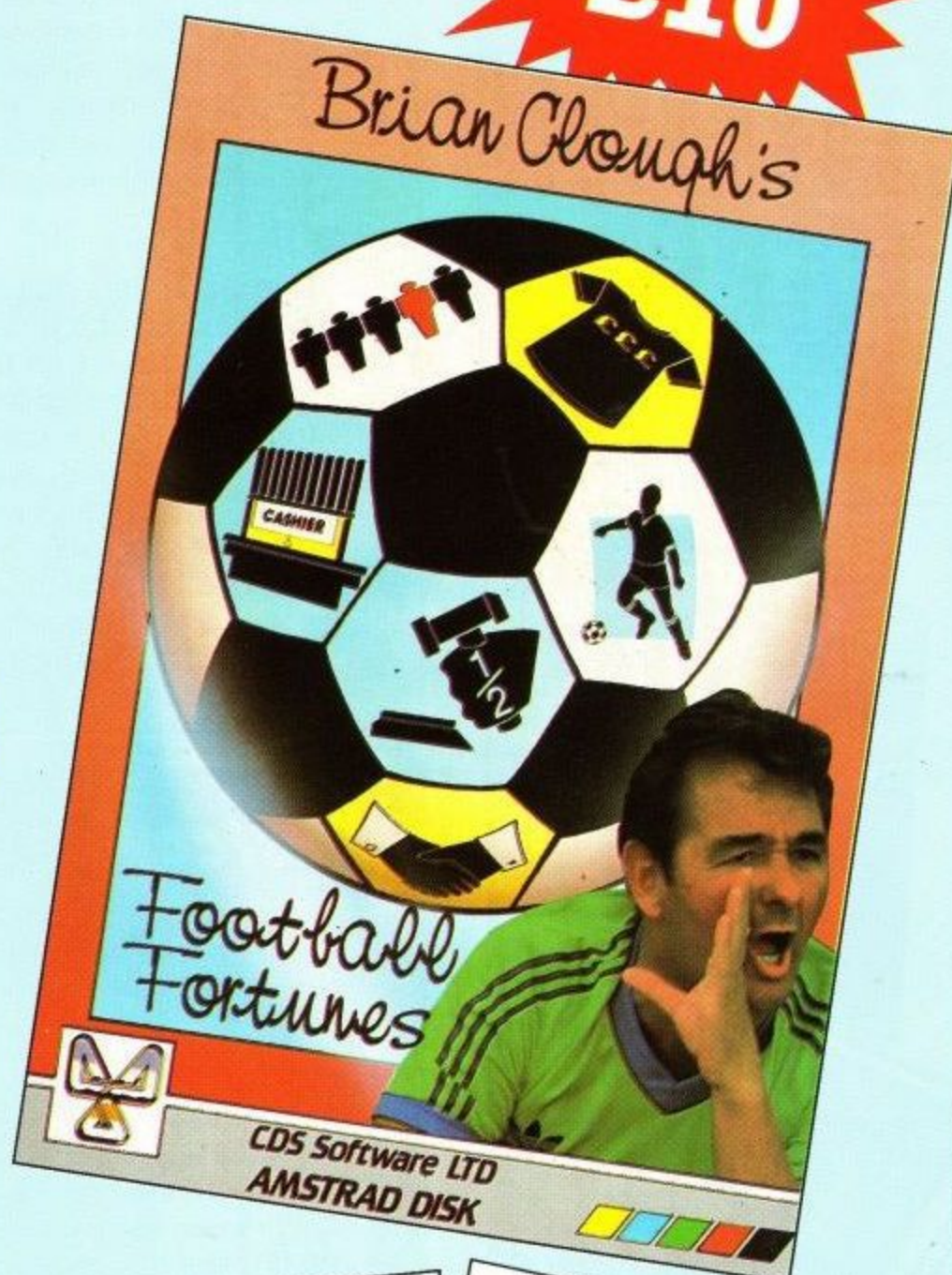
Up for the Cup!

Here's your chance to play football's first interactive computer and board game.

Brian Clough's Football Fortunes is an exciting football management game with a difference – it combines an excellent range of computer-based features with a fascinating board game.

The result for the players is a package which is as much fun and as skillful to play as other best-selling board games, combined with the flexibility and speed of play which only a computer can supply.

SAVE
UP TO
£10



CONTENTS INCLUDE

- CPC software
- Playing board
- Five coloured counters
- 112 Player cards
- 10 spare Player cards
- Six immunity cards
- Pack of money

FEATURES

- Two to five players
- Four skill levels
- Variable game length
- Computer die
- Teleprinter
- Constantly updated league tables
- Assessments of each manager's performance

Suitable for	Product	Format	RRP	Special reader offer	YOU SAVE	Offer including subscription	YOU SAVE
CPC Range	Brian Clough's Football Fortunes	Tape	£14.95	£11.95	£3	£19.95	£7
		Disc	£17.95	£14.95	£3	£22.95	£7

TO ORDER PLEASE USE THE FORM ON PAGE 71

AMSTRAD
COMPUTER USER

Exclusive READER OFFERS



£4.95

Binders

Your *Amstrad Computer User* is the ideal source of reference for every user of Amstrad computers. Keep your magazines tidy and in tip-top condition by using our top quality binder.

The *Amstrad Computer User* binder holds 12 issues. Each binder is black with the logo embossed in silver. Only £4.95.

Bundle 1: January 1986 to June 1986.

This contains a map of The Devil's Crown, pokes for Sorcery Plus, how to use the CPC's fourth mode and a shaded dump for DMP 2000 printers. Software reviews include: Brainstorm, the ideas processor; GAC, the adventure system; Laser Basic, the games writing aid and Rainbird's Music System. Among the hardware reviewed in this bundle is dk'Tronic's ram add-on, various serial interfaces, joysticks and a Teletext adapter. Gamesters will value the maps of Herbert's Dummy Run, Batman and Get Dexter. Programmers will learn from a collection of articles, including advice on music and the 6845 VDP.

Bundle 2: July 1986 to December 1986.

Articles include an exhaustive review of assemblers and art packages, the first full review of the PC1512, plus reviews of joysticks, printers and the Electro-Music Research Midi interface. Those readers who often find themselves clutching a sweaty joystick will appreciate the articles on flight and fight games, the Equinox map and the hints on Spindizzy. Programmers can type in programs like ZX Loader, Battle of the Cars, Interceptor and Double Trouble. And if you want to know who does what then there are interviews with Palace, Activision, Mastertronic and the sadly demised Mikro Gen. A bundle of fun.

Dustcovers

Keep your equipment free from dust and grime with an *Amstrad Professional Computing* dustcover, made from clear pliable vinyl and bound by strong red cotton and sporting the logo.

**DMP2000/3000
Printer £3.95**

**CPC range
Keyboard £3.95
Monitor £5.95**

DMP 2000/3000 Printer Cover	£3.95
CPC 464/664 keyboard cover	£3.95
CPC 6128 keyboard cover	£3.95
Green screen monitor cover	£5.95
Colour screen monitor cover	£5.95
PC 1512 keyboard and monitor set	£9.90
PCW 8256 keyboard, monitor and printer set	£11.95

Back issues

1987 - January: Jailbreak, Starglider, Model Universe reviewed, PC games, Arnor interview, Frost Byte mapped, Crawler listing, Multi coloured CPC.

February: PC Programming, PCW Protext, CPC Listings. Top Gun and Gauntlet reviewed. The Secret of the Red Boxes plus all the regulars.

March: Nemesis preview, Music Machine - the ultimate Sound peripheral. Making the most of Protext, Machine Code manipulation, Elite Disc hack, background print spooler and US Gold interview.

April: Computer Journey - what makes your Arnold tick, the Men from Microprose, Amstrad RS232 reviewed, Sentinel from Firebird, back-up reminder program.

May: Ambug - Build it yourself robot, Empire review, Art Studio from Rainbird. Plumberdroid Lizting, Plan It, the house finance organiser.

June: Ranarama from Hewson, smooth screen scrolling, Head over heels mega map, Maxam II, Motor racing games, Citizen MSP printer, Machine code triangles.

July: Mission Genocide - exclusive preview. Computer Journey II, what makes your discs drive. Amstrad Vs Star wide printers. DK'Tronics battery backed up clock. Hewson interview. Parrot art package.

August: Starfox preview, CPC through the crystal ball, how to program, Ultramon and Devpac machine code reviews, machine code breakout and Cheetah midi keyboard.

September: Living Daylights (the game of the film), a look at Amster's Cage, the HFP home finance for CP/M+. Looking at roms, how to de-bug programs, plus a look at CPC areas on bulletin boards.

October: Solomon's Key - guide to the ghouls, Protext and Tas-Sign advice. Firebird - who's who and why. Arnor C review. Precision's super fast printer and the Cage Page view from Micronet.

Bargain bundles

£4.95

Each bundle costs £4.95 each, a substantial saving over the usual price of back numbers.

The complete works of 1986 for only £8.35!

£4.95

PCW8256/8512
Keyboard, monitor
and printer set
only **£11.95** set



Back issues
£1.25 each



AMSTRAD
COMPUTER USER

Offers subject to
availability
All prices include
postage, packing &
VAT.

All Overseas items
despatched by
air mail

ORDER FORM

Valid to 30.11.87

Subscriptions

£12 UK	8000	<input type="checkbox"/>
£25 Europe incl Eire	8001	<input type="checkbox"/>
£40 Overseas	8002	<input type="checkbox"/>
Commence with	issue	

Renewals

£12 UK	8811	<input type="checkbox"/>
£25 Europe incl Eire	8812	<input type="checkbox"/>
£40 Overseas	8813	<input type="checkbox"/>

ACU Specials (See pages 18 & 50)

NEW

	With sub*	Without sub		
Amstrad Anthology Vol 1 Tape	£2.95	£7.95	8156/8161	<input type="checkbox"/>
Amstrad Anthology Vol 1 Disc	£3.95	£9.95	8157/8162	<input type="checkbox"/>
Amstrad Anthology Vol 2 Tape	£2.95	£7.95	8158/8163	<input type="checkbox"/>
Amstrad Anthology Vol 2 Disc	£3.95	£9.95	8159/8164	<input type="checkbox"/>
Utilities Unlimited Tape	£2.95	£7.95	8138/8165	<input type="checkbox"/>
Utilities Unlimited Disc	£3.95	£9.95	8139/8166	<input type="checkbox"/>

*Only available if accompanied by subscription order or renewal

Pack of 8 Magazines† £6.60 8167 ☐

†Add £3 for Europe & Eire/£11 for Overseas

Rainbird Advanced Art Studio

	With sub*	Without sub	
CPC 6128 Disc	£16.95	£18.95	8140/8141 <input type="checkbox"/>

*Only available if accompanied by subscription order or renewal
Add £2 for Europe & Eire/£4 for Overseas

Brian Clough's Football Fortunes

NEW

	With sub*	Without sub	
CPC Disc	£10.95	£14.95	8149/8150 <input type="checkbox"/>
CPC Tape	£7.95	£11.95	8151/8152 <input type="checkbox"/>

*Only available if accompanied by subscription order or renewal
Add £2 for Europe & Eire/£4 for Overseas

Bargain bundles

Bundle 1 - * January 86-June 86	£4.95	8153	<input type="checkbox"/>
Bundle 2 - * July 86-December 86	£4.95	8154	<input type="checkbox"/>
Bundle 3 - ** January 86-December 86	£8.35	8155	<input type="checkbox"/>

* Bundles 1 or 2 UK £4.95, Europe & Eire £6.95, Overseas £13.95
** Bundle 3 UK £8.35, Europe & Eire £12.35, Overseas £26.35

Back numbers

UK £1.25, £1.75 Europe & Eire, £3.25 Overseas

1987		April	8029	<input type="checkbox"/>	August	8033	<input type="checkbox"/>
January	8026	May	8030	<input type="checkbox"/>	September	8034	<input type="checkbox"/>
February	8027	June	8031	<input type="checkbox"/>	October	8035	<input type="checkbox"/>
March	8028	July	8032	<input type="checkbox"/>			

Dust covers

CPC 464/664 keyboard	£3.95	8100	<input type="checkbox"/>
CPC 6128 keyboard	£3.95	8101	<input type="checkbox"/>
CPC range green screen	£5.95	8102	<input type="checkbox"/>
CPC range colour monitor	£5.95	8103	<input type="checkbox"/>
DMP 2000/3000 Printer	£3.95	8105	<input type="checkbox"/>
PCW 8256 keyboard, monitor and printer set	£11.95	8104	<input type="checkbox"/>
PC 1512 Keyboard + colour monitor set	£9.90	8134	<input type="checkbox"/>
PC 1512 Keyboard + mono monitor set	£9.90	8135	<input type="checkbox"/>

Binder

£4.95 8106 ☐

Add £3 for Europe & Eire/£7 for Overseas

Readers in Europe (inc. Eire) & Overseas please
add £2 per item unless otherwise indicated

TOTAL

Send to
Amstrad Computer User,
FREEPOST,
36 St Petersgate,
Stockport SK1 1HL

Telephone orders 061-429 7931 24 hours
Enquiries 061-480 0171 9am-5pm

PLEASE PRINT IN BLOCK CAPITAL LETTERS
Please allow up to 28 days for delivery

Please indicate method of payment (✓)

☐ Access/Mastercharge/Eurocard/Barclaycard/Visa

☐ Signature

☐ Cheque made payable to Amstrad Computer User

Name

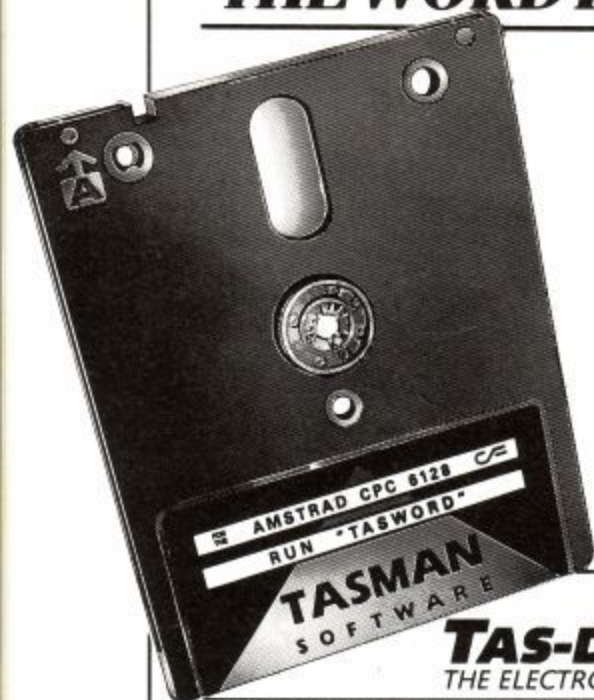
Address

Expiry date
/

ACU11

TASWORD 6128

THE WORD PROCESSOR FOR THE AMSTRAD CPC 6128



TASWORD 6128
The Word Processor
© Tasman Software Ltd 1985

Print text file	P
Print with Data merge	D
Save text file	S
Load text file	L
Merge text file	M
Return to text file	R
Customise program	C
save Tasword	I
Erase file from disc	E
into Basic	B
check spelling	K
Install Tasprint	I

9 words 9 characters 65276 characters free Drive A

move text left delete word start of text fast scroll up
centre line delete line end of text fast scroll dn
move text right delete line start of line word right
rejustify para (adj) clear text end of line word left
rejust line (m-d) insert line/char scroll up scroll down

Mr J H Shears
17 High Street
Lockton Bay
Lancashire LA7 6LX

3rd February 1986

Dear John,

Thank you for your letter of the 31st January. I have corrected the first draft of the article and incorporated your suggested changes. It is a good thing TASWORD has a find and replace facility! You will see from the enclosed print out of the corrected draft that I have also made some other changes and I hope that you agree that they are an improvement.

Line 18 Col 68 [M] on [M] on [Insert off] [Paging off] [ESC for help] [NORMAL CHARS]

TAS-DIARY THE ELECTRONIC DIARY

TAS-DIARY for the Amstrad CPC 6128, 664 and 464 with disc drive disc **£12.90**

Keep an electronic day-to-day diary on disc! TAS-DIARY features a clock, calendar and a separate screen display for every day of the year. Each year stored on disc includes a memo pad and several note pages. TAS-DIARY is an invaluable aid to keeping records, reminders, and any other data which is related to that most valuable commodity of ours - time!

TASWORD 6128 THE WORD PROCESSOR

TASWORD 6128 for the Amstrad CPC 6128 disc **£24.95**

Brilliant value for money.

AMSTRAD ACTION December 1985.
A powerful and easy to use word processor and a superb data merge program.

AMTIX December 1985.

TASWORD 6128 is the word processor especially developed to utilise the extra memory in the CPC 6128.

The program uses ALL the additional 64K of memory in the CPC 6128 as text space. This means that text files can be around ten thousand words long. TASWORD 6128 includes a built-in data merge program. Mail merge, in which a letter is printed any number of times, each individually addressed to a different person, is just one of the applications of this powerful facility.

The notepads are a unique feature of TASWORD 6128. Four separate notepads are available. Typing reminders and storing letter headings are just two possible applications for the notepads.

Up to one thousand characters can be stored in ten user definable keys allowing commonly used words, sentences, or even paragraphs to be typed with a single keypress.

TASWORD 6128 has comprehensive customisation features. These allow many of the program facilities to be changed to personal requirements. A customised program can be saved and includes the notepads and user definable keys.

TASWORD 6128 is fully compatible with TAS-SPELL and TASPINT. It will also read in data from Masterfile 6128. It can even be used to enter and edit your own Basic programs.

With all standard and many extra word processing facilities TASWORD 6128 is the most powerful of the TASWORDS, for the Amstrad CPC computers.

TASWORD 464-D

THE WORD PROCESSOR - WITH MAIL MERGE!

TASWORD 464-D disc **£24.95**

This is the new TASWORD especially developed to utilise the capabilities of the CPC 464 and 664 disc drives. The additional facilities include a larger text file size and automatic on-screen disc directories during save and load operations. A major new feature is the mail merge facility. This gives multiple prints of your standard letters, forms, etc., with each copy containing, for example, a name and address automatically taken from a disc file containing the data. This data can be entered using TASWORD 464-D, or created using the Masterfile Program Extension package. A powerful and useful conditional printing facility is included - parts of a document can be printed according to user-specified criteria. TASWORD 464-D will only run on, and is only supplied on, disc.

TAS-SPELL THE SPELLING CHECKER

TAS-SPELL disc **£16.50**
for the Amstrad CPC 464 and 664 running
TASWORD 464-D and for the CPC 6128 running
TASWORD 6128

Spelling mistakes and typing errors spoil any document whether it is a private letter or your latest novel. With TAS-SPELL you are free to be creative in the confident knowledge that your spelling won't let you down.

TAS-SPELL checks the spelling of TASWORD 464-D and TASWORD 6128 text files. TAS-SPELL has a dictionary of well over twenty thousand words which it compares with the words in your text. If a word is not recognised then the relevant part of your text is displayed with the suspect word highlighted. You can correct the word, ignore it (it might be a name), or even add it to the TAS-SPELL dictionary. Please note that TAS-SPELL will only work with TASWORD 464-D and TASWORD 6128.

TASWORD UPGRADES

TASWORD 464 and Amstrad owners: send your original cassette or disc (not the packaging) as proof of purchase and £13.90. Your original will be returned together with TASWORD 464-D or TASWORD 6128 on disc.

TASPRINT 464

THE STYLE WRITER

TASPRINT 464 cassette **£9.90** disc **£12.90**

A must for dot-matrix print owners! Print your program output and listings in a choice of five impressive print styles. TASPRINT 464 utilises the graphics capabilities of dot-matrix printers to form, with a double pass of the printhead, output in a range of five fonts varying from the futuristic DATA-RUN to the hand-writing style of PALACE SCRIPT. TASPRINT 464 drives the dot-matrix printers listed below and can be used to print AMSWORD/TASWORD 464 text files. TASPRINT 464 gives your output originality and style. Completely compatible with the 664 and 6128.

TASWORD 464 THE WORD PROCESSOR

TASWORD 464 cassette **£19.95**

"There is no better justification for buying a 464 than this program"
POPULAR COMPUTING WEEKLY,
NOVEMBER 1984

Your 464 becomes a professional standard word processor with TASWORD 464. Supplied complete with a comprehensive manual and a cassette which contains both the program and TASWORD 464 TUTOR. This teaches you word processing using TASWORD 464. Whether you have serious applications or simply want to learn about word processing, TASWORD 464 and the TUTOR make it easy and enjoyable.

TASCOPY 464 THE SCREEN COPIER

TASCOPY 464 cassette **£9.90** disc **£12.90**

A suite of fast machine code screen copy software for the CPC 464, 664 and 6128. Print high-resolution screen copies in black and white and also large 'shaded' copies with different dot densities for the various screen colours. TASCOPY 464 also produces 'poster size' screen copies printed onto two or four sheets which can be cut and joined to make the poster.

TASPRINT 464 and TASCOPY 464 drive the following dot-matrix printers:

AMSTRAD DMP1 MANNESSMANN STARDMP501/5/515 SHINWACP-80
EPSON FX-80 TALLY MT-80 BROTHER HR5 COSMOS-80
EPSON RX-80 BROTHER M1009 DATAC PANTHER AMSTRAD DMP2000
EPSON MX-80 TYPE III NEC PC-8023B-N DATAC PANTHER II

TAS-SIGN

THE SIGN MAKER FOR THE CPC 6128 AND PCW 8256/8512

Produce and print your own signs, posters, banners and large notices to get your message across with maximum impact.

- Four distinctive lettering styles
- Characters at any height from one inch to the full width of the paper
- Italic printing
- Underlining
- Constant or proportional letter spacing
- Automatic kerning
- Line centering
- Eight shading patterns
- Print either across the paper in the usual direction, or along the length of the paper to produce large eye-catching banners and notices
- Print a border around the sign, in one of the optional shading patterns if required
- A range of options to select print quality

Tas-sign drives nearly all dot-matrix printers including those made by:

Admate	Canon	Mannesmann Tally	Shirwa
Amstrad	Citizen	NEC	Smith Corona
Astech	Datech	Newbury	Sord
Brother	Epson	Panasonic	Star
C. Itoh	Kaga-Taxan	Seikosha	

FOR SALE
A BARGAIN
ACQUIRE WITHIN

ANNOUNCEMENT!
Tasman Software
have released
TAS-SIGN
the sign-maker!

Your Invitation To
A PARTY
at T and A's
Sat 9pm

PRIVATE

BEWARE
OF THE
DOG

The illustrations on this page are reduced from full-size TAS-SIGN output.

VOTE FOR ME

TAS-SIGN £29.95

FOR THE CPC 6128 AND PCW 8256/8512

PC TASWORD PC The Word Processor £29.95
TASWORD PC Demonstration Disc £2.00
TASPRINT PC with twenty five fonts and a font designer £29.95

PCW TASWORD 8000 The Word Processor £24.95
TAS-SPELL 8000 The Spelling Checker £16.50
TASPRINT 8000 The Style Writer (with 8 fonts) £14.90

All prices include VAT and post and packaging

Tasman

SOFTWARE

Available from good stockists and direct from:

TASMAN SOFTWARE LTD., SPRINGFIELD HOUSE, HYDE TERRACE, LEEDS LS2 9LN. TEL: LEEDS (0532) 438301

If you do not want to cut out this magazine, simply write out your order and post to: TASMAN SOFTWARE, DEPT ACU, SPRINGFIELD HOUSE, HYDE TERRACE, LEEDS LS2 9LN.

I enclose a cheque/PO made payable to TASMAN SOFTWARE Ltd OR charge my ACCESS/VISA number:

NAME _____
ADDRESS _____

ITEM

PRICE

_____	£ _____
_____	£ _____
_____	£ _____
_____	£ _____
_____	£ _____

Outside Europe add £2.00 per item airmail.

TOTAL £ _____

Telephone Access/Visa orders: Leeds (0532) 438301



Please send me a FREE Tasman brochure describing your products for: IBM/Amstrad PC ☐ Amstrad PCW ☐ Amstrad CPC ☐ Spectrum ☐ QL ☐ MSX ☐ Commodore 64 ☐ Tatung Einstein ☐ ACU

Overseas: The following distributors of Tasman products may be contacted for the address of local suppliers. Many products are supplied in translated form. FRANCE & SWITZERLAND: Semaphore Logiciels, CH 1283 La Plaine, Geneva. SCANDINAVIA: Proctris 192, 1371 Asker, Norway. NETHERLANDS: Fokst, PO Box 1351 9701 B1 Groningen. GERMANY: Proctris, Schloßstrasse 50 50152, D-4500 Osnabrück. BELGIUM: Easy Computing, Avenue Guillaume Lefevre 30, 1160 Brussels. PORTUGAL: Informatica, Campo Grande, 284A, 1700 Lisbon. AUSTRALIA: Dolphin Computers, Unit 2, 7 Watkyn Street, Artarmon, New South Wales 2064. NEW ZEALAND: Software Supplies, PO Box 865 Christchurch. USA: Ramen International, 17620 26 Mile Road, Washington MI 48094. ITALY: Omega Soft, Via G. Pascoli 3, 24100 Bergamo. SPAIN: Orlas Informatica, Avda. Isabel II, 16-8, 2011 San Sebastian.

The Least Significant Bit

THINGS move apace in the trendy world of games software, so you need to be "in" to keep up with the personalities. Herbie Wright, numero uno at Firebird was spotted giving away his age by twisting to the sounds of Camden Palace Sixties night, obviously a night club regular. Unconfirmed rumours claim that his father owns the incredibly swish Xenon club in Piccadilly.

Time off is not quite as relaxing for members of the Amstrad staff - Thomas Power spent a couple of weeks on the fire-torn island of Rhodes. Still, even watching the local fauna go up in smoke is dull by comparison with Joss, a new recruit to Amstrad's technical staff. He is famed for going sailing with his family. So what, you may say. Lots of people go sailing. Yes, but they don't all end up shipwrecked and have to be rescued by the Canberra.

Still on the theme of exeant antics, the staff of Amstrad usually deride "punters" - that's you and me folks. But they spent the day punting on the Cam - the river with the bridge at Cambridge. After a day being a punter one member of the crew was very wet, but his wife, the irrepressible Suz, exacted revenge sweet enough to cause the evil doer to see stars. Talking of

stars keep your eye on the box for the most famous 464 of all, the one that lives in Albert Square.

You may think that Colin only uses it to play Starglider while Barry is on the stall. No, Colin uses it as a graphic designer and is soon to be seen producing a logo with screen designer. And you thought that you only found out what was going to happen in East Enders by reading a newspaper with massive mammaries on page 3. ACU - the place where the Sun doesn't shine!

Farewell

GOODBYE, Jane Nolan. For two years you have served *Amstrad Computer User* well as advertising manager. Now you are defecting to NewStar, home of NewWord, William Poel and Jeremy Spencer.

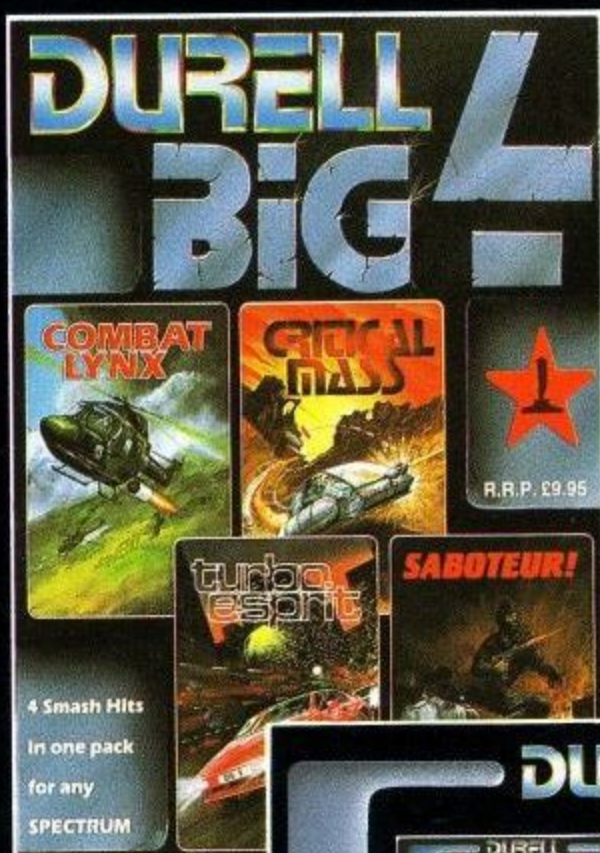
The magazine has been richer for your presence, spiritually as well as financially. Where would we have been without knowing that Waga-Wubba, a word with its etymological roots in the phrase "burning rubber" means that a page has no, or little yellow in it. Where else would we be without Jane's gift for explaining to advertisers that printing the wrong advert, upside down in the wrong issue of the magazine doesn't really matter because at least we got the phone number right this time? And where would we be without the excitement of a fight for the parking space?

NewStar will be richer by employing not only a great saleswoman but also having instant access to her mental database of who's who in Brentwood, where they went to school and who their brother is going out with. We'll miss you Jane.

ADVERTISERS' INDEX

Advanced Memory Systems	6	Domark	76	Mirrorsoft	23
Advantage	22	Durrell	75	MJC Supplies	60
Amsoft	35	Garwood	31	Nemesis	46
Amstrad Computer Show ..	9	Goldmark Systems	54	O.J. Software	44
Amstrad Computing Newsletter	66	G-Ten	46	Rainbird Software	2
Amstrad Plc	17,32	HSV Computer Services ..	26	Ramasoft	66
Analytical Engineering ..	66	I.J.V.	66	Romantic Robot	24
Arc Education	66	Incentive Software ...	59,61	RSD Connections	50
Arnor	9	Jackson Computers	66	S&M Software	65
Astrocalc	59	LCL Educational Software	61	SBS Computer Services ..	60
Campbell Systems	10	Leek Computer Centre ..	46	School Software	44
Compumart	53	Matmos	61	Screens Microcomputers ..	60
Connect Systems	54	Meridian Software	59	Seltec	44
Cyca	59	Microlink	14	Siren Software	62
Database Software ...	36,37	Microsnips	40	Star Micronics	13
Datavise	66	Microtext	59	Tasman	72,73
		Microwise	66	Typeshare	65
				Virgin Games	4

DURELL



BIG 4 – VOLUME II – RRP 9.95
Spectrum Commodore 64 Amstrad CPC

Available September 21st

SAME PRICE! – Commodore and Amstrad DISKS 9.95

From leading stores, or send cheques and postal orders to Durell Sales Dept, Castle Lodge, Castle Green, Taunton, TA1 4AB. Give your name, address, game required, computer type, and whether for disk or cassette.

Order by credit card – phone 0823-252193 for our 24 hour ordering service by credit card (BARCLAYCARD visa and ACCESS mastercard).

JEFFREY ARCHER

**NOT A PENNY MORE,
NOT A PENNY LESS**
THE COMPUTER GAME



Atari ST
CBM 64
Amstrad CPC
Spectrum 48
Spectrum 128
BBC B & Master

"We have had our money stolen by a very clever man. Gentlemen I therefore suggest we steal it back. Each of you must return with a plan of how we are to extract \$1,000,000 from him without his ever becoming aware of it.
NOT A PENNY MORE, NOT A PENNY LESS"

Published by



DOMARK