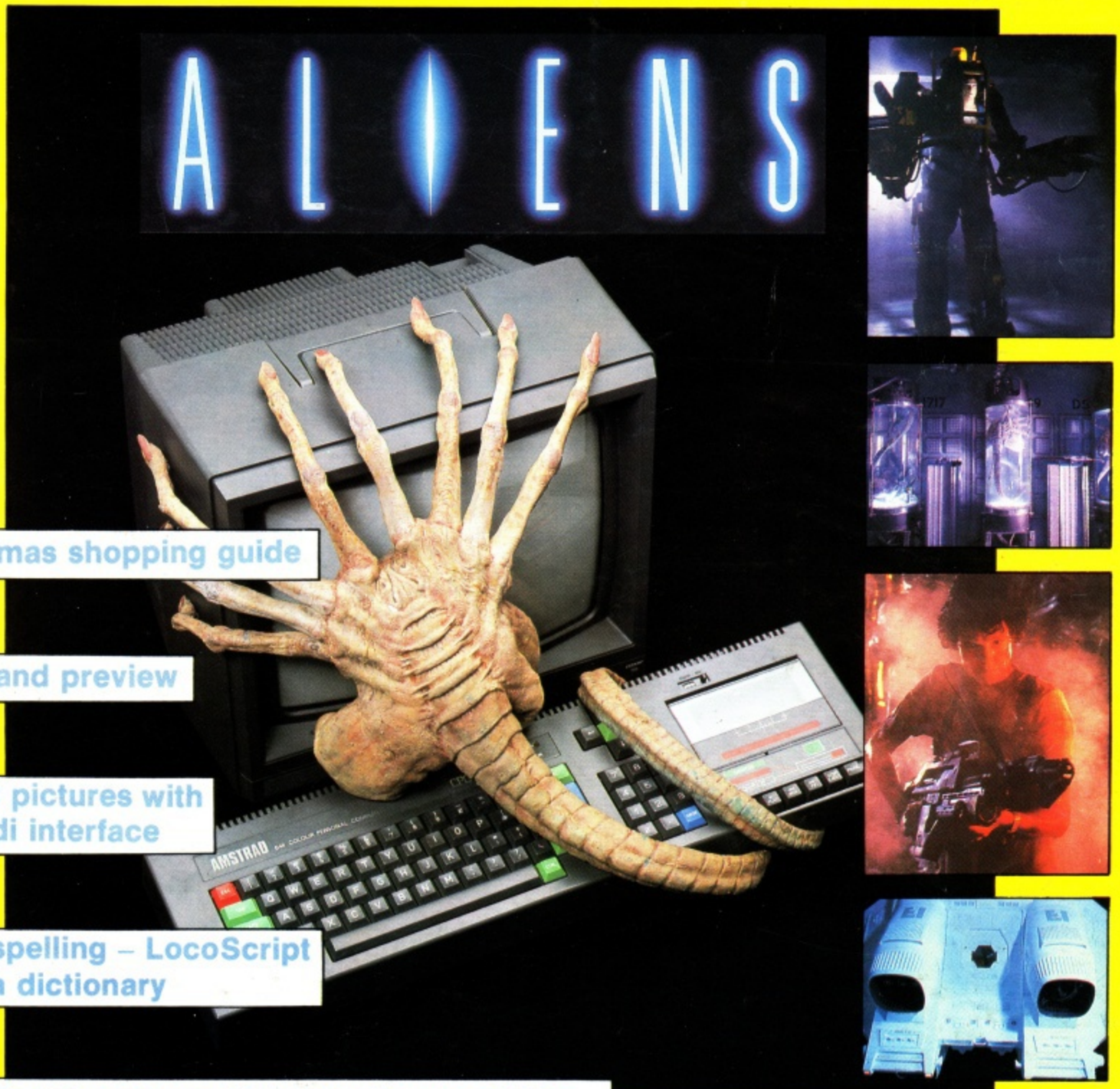
The Official Amstrad Magazine

December 1986 £1.00

AMSTRAD COMPUTER USER



Christmas shopping guide

Heartland preview

Digital pictures with the Vidi interface

Joycespelling – LocoScript finds a dictionary

Plus: Dan Dare map, Pokes and competition. Win goodies from Ariolasoft, a calendar from Level 9 and a robot arm from Spectravideo

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

activator





After years of neglect many strange and dangerous life-forms have infested Antari. The fuel-rods so essential to her reactivation have been taken from the Power Chamber and lost in her web of decks, chambers and rooms. You must locate these and return them to their correct location. Many dangers lurk around every corner. Radiation will penetrate your **ACTIVATOR'S** outer skin. Time is limited.

cascade

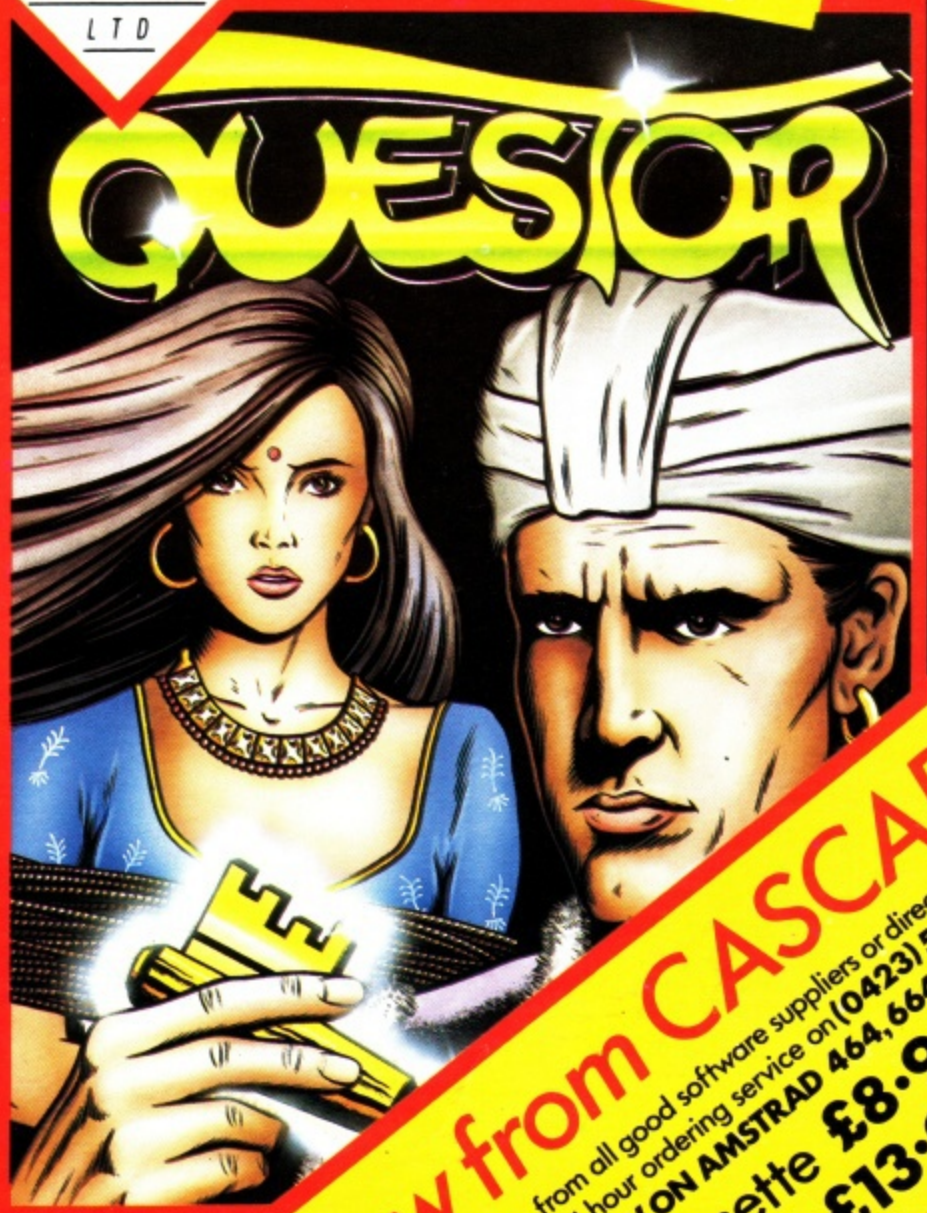
CASCADE GAMES LTD





You are **QUESTOR** – and only you have The Power. The power and the will to deliver your Kingdom from the evil Garr. For Garr would destroy all that stands between himself and domination. But you are strong with The Power. You can use The Power and enter where fear defeats the weak of spirit.

QUESTOR



New from CASCADE

Available from all good software suppliers or direct from Cascade - 24 hour ordering service on **(0423) 504663**

OUT NOW ON AMSTRAD 464, 664, 6128

Cassette **£8.95**

Disk **£13.95**

Cascade Games Ltd,
Harrogate, HG1 5BG, England.

CONTENTS

REGULARS

5 **News**

11 **Letters**

61 **Gallup Chart**

122 **Least Significant Bit**

REVIEWS

54 **Odin's Heartland**
John Baker explores the world of the mystic book

66 **LocoSpelling test**
Your Joyce can now spell - but how good is it?

49 **Rombo digitiser**
Turn stars into digits with this box o' tricks

95 **Games reviews**
Colin, Liz and Nigel fight the Joystick wars.

COMPETITIONS

29 **A helping hand**
Win a robot arm

21 **Virgin Competition**
Win a Dan Dare book, poster and super-yuppie T-shirt

25 **Win a year with Level 9**
Fifty calenders to be won

93 **Ariolasoft Stole a Million**
An Ariolasoft goody bag up for grabs

PROGRAMMING

79 **Understanding MS-DOS**
Defining function keys can make your life much easier

74 **Pinball**
Since I was a young boy I played the pixel ball...

70 **Goin' Loco**
Playing TAG with graphics

31 **Assembly Point**
Pete Green sorts his bubbles

FEATURES

62 **A.L.I.E.N.S**
Can a computer game be spooky? It can when Aliens come to play

45 **Why I want a 968**
When we asked who wanted a firmware guide we had no idea you could be so inventive

38 **Christmas list**
What to buy and where to buy it. All ACU recommended

22 **Dan Dare**
A map and Poke to help in defeating the evil Mekon

83 **Adventures**
Bill Brock unmasks spies and examines Leather Goddesses

16 **The Hairy Hacker**
Pokes by the plenty, hints by the heap

OFFERS

118 **The ACU shop**
Backnumbers and binders, subs and savings

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 Avralite 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
Assistant Editor: Alexander Martin
Advertisement Manager: Jane Nolan
Advertisement Assistant: Lorraine Day

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, owners, members and contributors. We regret that Amstrad Computer User cannot enter into personal correspondence.
© Avralite Ltd 1986.

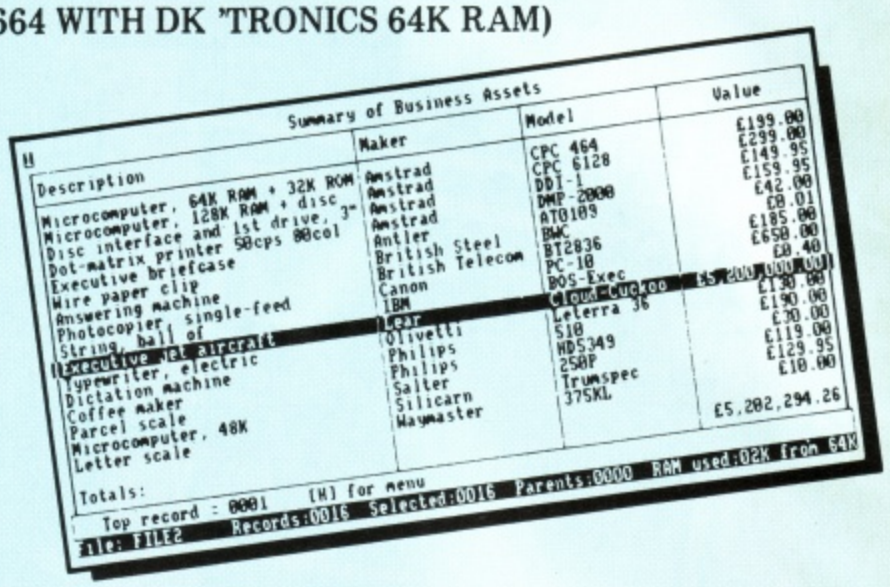
Advertisement

MASTERFILE III

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

RATHER ENHANCED ...

We are pleased to announce the third major issue of MASTERFILE. This is no mere update, but a thoroughly enhanced and streamlined re-design of MASTERFILE 128, packed with new features, and a delight to use. We included some of the best ideas which our earlier MASTERFILE customers contributed. We sent prototypes out to our eager "test" users, and they kicked it as hard as they could, and came up with even more ideas. We spent several weeks further honing MASTERFILE III. Then we sat down and totally rewrote the manual.



SOMEWHAT POWERFUL ...

For the benefit of newcomers to the CPC machines, MASTERFILE III is a very powerful and flexible data filing and retrieval system. All "database" systems require that your data is organised into fields and records. But 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.

EVER SO FAST ...

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. You can build new files from other sources — e.g. transfer data from Spectrum MASTERFILE. The speed of **Search** of MASTERFILE is second to none. We even get calls from customers who say that "The search did nothing"; they simply blinked and missed the revised status saying how many records had been found! Records can be sorted ascending/descending, character or signed numeric, even embedded keys such as surnames. 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.

PLEASINGLY PRICED ...

How much does it cost? Just £39.95. Our test customers all say this is far too low — but then we didn't charge them this! However, we appreciate that many of you are "home" users who do not want to pay a "business" price. So we kept to a realistic figure. But don't be fooled by the low price. This is no toy written in Basic, nor is it a lumbering CP/M dinosaur. This is real machine-coded computing power. We have had IBM and Apricot users beg us for a MASTERFILE for their machines — when they had seen the earlier CPC MASTERFILE. They are going to be more frustrated now. So are the PCW plodders. Alas, many of you pay a lot more, because you buy one database after another before you throw them all out for MASTERFILE. The trick is to ask around, read the reviews and choose MASTERFILE III first time. Try telephoning our competitors and ask to speak to the programmer for technical information. Then try us. We think you will spot the difference!

For those of you who already have an earlier MASTERFILE, we tempt you with some of the extras that "III" has:

Three Times faster disc load/save than MASTERFILE 128/II. **Twice** the screen speed. Total +/— values. Merge all/selected. Save all/selected. Disc file erase options. Implicit record numbering, both physical and selected. GOTO selected record number. Simpler but more powerful search. Full data name prompting. Print report width up to 160 columns. Page numbering. Insert records anywhere. **Record Cursor** for direct update within a display page. Smart new text editor. Format printing. Extended **User Basic** options. Compatible with all earlier CPC MASTERFILE files. **Field-to-Field Calculations.**

MASTERFILE III complete costs £39.95. We can provide an UPDATE onto your original MASTERFILE 464/128/II disc for £19.95 — inclusive of the new revised manual. If your original MASTERFILE 464 is on tape, we ask £22.95 for the exchange.

We also have one of the fastest and friendliest spread-sheet programs around, **MASTERCALC 128**. For this we ask £33.00. But as a SPECIAL OFFER to customers who buy MASTERFILE III complete and MASTERCALC 128 together, we offer the spread-sheet at £10 OFF, just £23. (£62.95 in total for both programs.)

All prices include VAT and P&P to anywhere in Europe. Outside Europe please add 20% for air-mail service. ACCESS/VISA/MASTERCARD welcome, written or telephoned. Please quote your card expiry date if ordering via credit card. If paying by cheque, make out to **"Campbell Systems"**.

Our normal response is return of post, 1st class.

Dept AU 12/86

CAMPBELL SYSTEMS, 7 Station Road,
Epping, Essex CM16 4HA, ENGLAND.
Tel: Epping (0378) 77762

AMSTRAD NEWS

Amstrad raps PC rumours

The Sunday Times carried an article on October 19 which claimed that Amstrad PCs overheated and gave the impression that Amstrad had lost a £4million contract with ICI.

Both Amstrad and ICI have refuted this story. Malcom Miller of Amstrad has been quoted as saying: "It was inaccurate and damaging. We are seriously considering what further action to take." ICI also denies that it has rejected the Amstrad PC.

The Director of Information Technology, Derek Seddon, says: "It is far too early for us to make a decision on the PC 1512. Our tests last three months and we have only just started. We have taken samples of the PC1512 for test because this machine could offer very good value for money".

One of the most widespread rumours was that the Amstrad PC did not work, or overheated with network cards fitted. This is untrue. Amstrad tested a large number of cards before the machine was launched.

One facet of the Sunday Times story which did bear an element of truth referred to an unpredicted high demand for hard disc models.

No hard discs are fitted with machines when they are manufactured. All PCs have the hard discs added in Amstrad's Shoebury factory after the basic computer has been tested.

More discs – and they're cheaper, too

The shortage of Amstrad discs seems to have eased and production is meeting the demand from disc hungry Arnold and Joyce users.

In fact things are going so well that Amstrad has decided to cut the recommended retail price to £2.99 per disc. They will be available from the Amstrad user club and approved Amstrad stockists



PC1512 . . . overheating rumours are coolly refuted

A businesslike show

The last Amstrad show was in October and you'll be reading this in November. However the lore of magazine publishing means that this is the December issue, which brings us on to the next show in January. The shows don't seem to stop, but they do get better and better.

Amstrad and Database (the show's organisers) had insisted that no tape copiers were allowed. The one exception to this rule allowed companies to sell hardware which could save memory to disc if that same unit was required to re-load the software. This meant that Romatic Robot was free to sell its specially modified Multiface two.

A new name on the Amstrad scene is DataPhone, which has an unapproved modem for the PCW based on the Demon modem. It can operate at 300/300 baud and 1200/75 baud. The KiwiChat software (written by the one and only Hairy Hacker) will work with both scrolling and Viewdata systems.

Joyce (PCW) peripherals were very much in evidence. ASD was showing its 10 and 20Mb hard discs, and the ideal thing to put your Joyce on was on view on a nearby stand – IQ desks look very smart but are a little awkward to move from place to place. Arnor seems to have taken a liking to a big stand at the bottom of the stairs. It had three new products: The long awaited CP/M Protext, on show but still not available, a new 3D graphics package called Model Universe and a rom version of the BCPL language.

Kempton Data was selling its mouse and joystick interface for the PCW and the Nabitchi Gem-like front end.

That stalwart of the word processor scene Tasman was moving with the times by selling Tasword PC, a version of the popular Spectrum program for the IBM PC. A demo version costs £2 and the full thing £24

The Electric Studio had its video digitiser on display. This works with both the Joyce and the 6128. The fast frame rate was illustrated by running a copy of 2001 through a 6128.

Glentop has had PC books available since the launch of the machine with the help of Digital Research. At first glance these looked very good – not the usual global replace job which usually accompany a new computer.

PCW owners will appreciate the book

on Mallard Basic by Ian Sinclair aimed at the naive user. It must be good – Locomotive Software is selling it.

The best product at the show was the Rombo Vidi digitiser – there is a full review in this issue. Other exhibitors were very impressed, many of them buying one of the boxes. AMX is thinking of taking on the Vidi for use with its Pagemaker package. Talking of Pagemaker, it did it's usual non-appearance act at the show. When they do get it out we'll have nothing to moan about.

Creative Sparks Distribution span the whole range of software, from Sparklers budget software to Trustwriter, a WordStar clone for the new PC. But first impressions of Trustwriter were not very good.

DK'Tronics showed a television tuner which turns your monitor into a TV for £69.95. A later model with teletext will cost £99.99.

New from Pace is the Linnet V21/V23 modem which is suitable for use with the new PC. The stand was doing a roaring trade, displaying the Series 4 modem and pre-production version of Commstar software for the PCW.

CP Software was showing Bridge and a sprite package for the PCW, which goes to prove that Joyce owners do more than word process.

The show came at the right time for Amsoft, which has an exclusive distribution deal for LocoMail and stocks of the new firmware guide SOFT 968.

The next show is on January 9 – see you there.

Oh dear!

There was a mistake in our Poke for Thrust line 160 should have read:

160 DATA 3e,c3,21,39,9e,32,30,00

Sorry. It won't happen again - well it probably will but we'll try to avoid it.

Serial interface available

The Pace/Amstrad alliance continues with the badge-engineered RS232 interface mentioned in these pages a couple of months ago. The interface uses the excellent Comstar software written by ex-Amstrad engineers Chris Honey and Chris Laing. A new deal will allow Amstrad to sell the Linnet modem for the PC.



The Sega games computer

New games from Ariolasoft

The flood of games from Ariolasoft continues unabated. This month there is Sepulcri, a 3D isometric where you control Robbie the Robot through loads of mazes. The graphics are by the famous Jill Lawson, a regular contributor to ACU.

Werner is a popular German cartoon character who loves beer and motorbikes. After a night out with some friends he is challenged to a motorcycle race to end all motorcycle races.

Have you ever wanted to be a frog? Now is your chance. In Camelot Warriors you turn into all manner of things. A neat little spritey game with some nifty animation.

Ariola's fourth game doesn't run on anything – it's a game in itself. The Sega machine is a dedicated games computer, and it shows the games are fantastic – just the thing to keep rival siblings from your CPC, pretty cheap too at £99.95.

Look how we can cut the cost of visiting London for the

AMSTRAD COMPUTER SHOW

Our all-in-one package includes return rail fare from anywhere in Britain, hotel room (including private bathroom and full English breakfast) AND a ticket for one of the most popular theatre shows in London!

The cost of the complete package is:

Zone	*Adult*	*Under-16**
A	£44	£12
B	£50	£15
C	£54	£18
D	£58	£20
E	£65	£22
G	£76	£28
H	£78	£29
J	£86	£33

**Up to 2 children sharing*

Zone A: *Beds, Berks, Bucks, Essex, Herts, Kent, London, Surrey.*
Zone B: *Cambs, E. Sussex, Hants, Leics, Northants, Oxon, Suffolk, W. Midlands, W. Sussex, Warwicks, Wilts.*
Zone C: *Avon, Cheshire, Clywd, Derbyshire, Dorset, Glos, Gtr Manchester, Hereford & Worcs, Lancs, Merseyside, Norfolk, Notts, Salop, Staffs.*
Zone D: *Devon, Dyfed, Gwent, Gwynedd, Lincs, Mid Glamorgan, Powys, S. Glamorgan, S. Yorks, Somerset, W. Glamorgan.*
Zone E: *Cornwall, Cumbria, Humberside, N. Yorks, W. Yorks.*
Zone G: *Central, Cleveland, Dumfries & Galloway, Durham, Northumberland, Strathclyde, Tyne & Wear.*
Zone H: *Borders, Fife, Lothian, Tayside.*
Zone J: *Grampian, Highland.*

The basic price includes the pantomime Alice in Wonderland at the Lyric Theatre, Hammersmith.

For an additional £6 you can have a ticket for a thriller – Richard Todd in The Business of Murder at the Mayfair or Wildfire with Diana Rigg at The Phoenix.

Or for an extra £12 you can have a seat at a big West End musical, like 42nd Street at the Theatre Royal or Me & My Girl at the Adelphi.

If you would like a booking form for our hotel/theatre package please tick the box on the Advance Ticket order form. (Only available if you also order one or more advance tickets for the Amstrad Computer Show.)



Step into the sparkling world of Amstrad computing at the Novotel, Hammersmith, on Friday, Saturday and Sunday, January 9 to 11.

Doors open 10am
Close 6pm on Friday & Saturday; 4pm Sunday

Your chance to quiz top experts at presentations in the Amstrad Theatre

Advance tickets make welcome Christmas presents

(They also save you a third off the normal price – and let you walk straight past the queues!)

Advance ticket order

Please supply:

☐ Adult tickets at £2 (save £1) £ ____

☐ Under-16s tickets at £1 (save £1) £ ____

TOTAL £ ____

☐ Cheque enclosed made payable to Database Publications Ltd.

☐ Please debit my credit card account:

Access / Visa ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Admission at door: £3 (adults), £2 (under 16s)

☐ Tick this box if you want a booking form for our hotel/theatre offer (see panel alongside).

POST TO: Amstrad Show Tickets, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY.

AMSTRAD COMPUTER SHOW

Champagne Suite & Exhibition Centre, Novotel, Hammersmith, W6

January 9-11, 1987

Name .....

Address .....

.....

..... Signed .....

PHONE ORDERS: Show Hotline: 061-480 0171
PRESTEL ORDERS: KEY *89, THEN 614568383
MICROLINK ORDERS: MAILBOX 72:MAG001

Please quote credit card number and full address + Ref. **ACU 12**

AMSTRAD PROFESSIONALS FROM DIGITAL RESEARCH

* And presentation quality graphics, so ask about DR GRAPH and DR DRAW packages **£49.95 each**

Your Amstrad can handle interactive presentation quality graphics. So here they are.

The Amstrad 8256 and 6128 don't simply have massive memory capacities that take them across the dividing line between home and business machines. They also have GSX graphics extension systems that make them potential producers of high quality (and highly exciting) graphics for business, educational, scientific, industrial or pure pleasure purposes.

Now Digital Research, creators of the CP/M operating systems that make this graphics capability possible, offer you two professional graphics software packages which exploit it to the full: DR GRAPH and DR DRAW.

Data comes alive with DR GRAPH £49.95.

DR GRAPH lets you use data entered manually or created with popular spreadsheet programs such as SuperCalc to design vividly effective and professional line, bar, scatter and stick graphs, and pie and text-only charts, quickly and effortlessly.

Simply choose options from menus and by filling in a form.

When you've completed your selections, you've completed the graph.

Choose from three different type styles (plus your machine type) for titles, legend and annotation copy. Deploy different line styles, line and bar widths and eight filled patterns to add clarity and emphasis. Add borders, colours and labels. Bar charts can be stacked, clustered, or arranged in steps or "sticks." Pie charts can include exploded "slices."

Annotation can be incorporated, modified, and moved anywhere you want. Different graph types can be combined within one chart, and as many as four different charts or graphs can be combined on a single page.

Ideas become art with DR DRAW £49.95.

DR DRAW lets you create organization charts. Flowcharts. Business logos. Technical diagrams. Maps. Or just about any shape or line drawing imaginable.

And each element can be enhanced or highlighted with a variety of colours and patterns.

Easy-to-follow menus let you select pre-programmed shapes – circles, bars, arcs, rectangles, polygons, and lines – or create your own pictures by modifying these shapes via mouse or keyboard. Add text anywhere you wish, selecting between a wide variety of type font styles.

Revise with the stroke of a key. Fill a shape with colour or patterns.

Enlarge or reduce it. Move it to a new location, or copy it.

Change type fonts, size, colour, and location with just a few simple keystrokes.

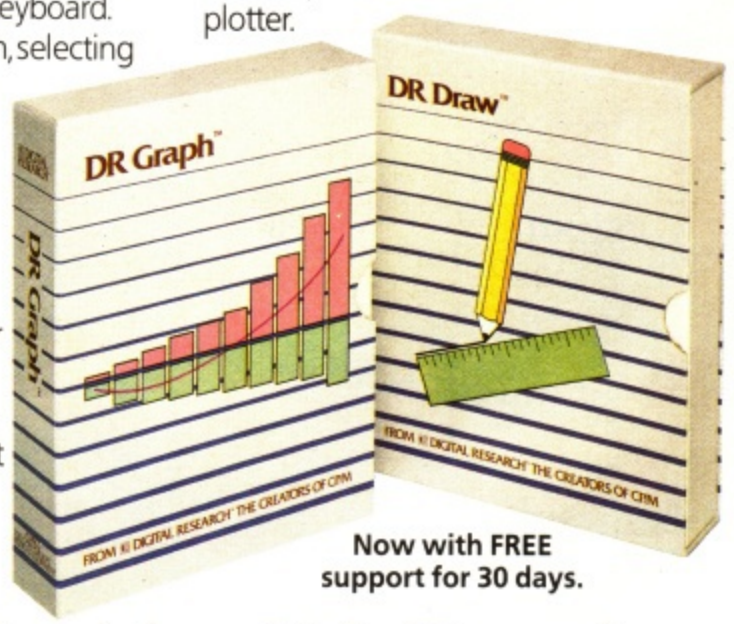
Zoom in for detailed work, then zoom back out to view the entire picture. Or zoom out to fit your picture neatly in a 8½"x 11" or 11"x 8½" page layout. On extra- large drawings, you can pan the screen back and forth over each section.

See, store, print, present!

DR GRAPH and DR DRAW let you see exactly what you've designed on screen. Then store it on disk for recall or update later. Or print or plot on paper or overhead transparency film.

Either way, you've got a totally professional presentation.

Both packages run on Amstrad CPC 6128 or PCW 8256 computers with one or two disk drives. Hard copy can be produced on any GSX-driveable printer or plotter, such as Amstrad, Epson or Shinwa printers and the HP 7470A plotter.



Now with FREE support for 30 days.

Amstrad Professionals from Digital Research. Now Professionalism begins at home.

To place an order, send cheque to: Amstrad Sales, Digital Reasearch (UK) Limited, Oxford House, Oxford Street, Newbury, Berkshire RG13 1JB. Or telephone Newbury (0635) 38787 or 38783, with your credit card details. Or contact your local Amstrad dealer.

*FREE telephone support for 30 days following receipt of registration card. Thereafter a full year's on-line telephone support is available for just £15.00 + VAT. Full details will come with your software.

*Prices include Packaging, Postage and VAT.

DIGITAL RESEARCH
The creators of CP/M™

FINGERTIP COMMUNICATION

DIALUP is a communications package which puts the world of information literally at your fingertips. It's vast range of 'up-to-the-minute' features must surely make it the most comprehensive 'value for money' communications package available to date.
It has been specifically developed with the home user and educationalist very much in mind. It is simple to use. So simple, in fact, that two single finger keystrokes are all that is required to connect you directly to a service. WHAT COULD BE SIMPLER?



DIALUP can be used on a number of machines such as the new Amstrad PC 1512; the BBC Models B, B Plus and Master; the RML 380Z, 480Z and Nimbus; the Apricot PC/Xi and IBM PC/XT. It works with any manual dial modem and a wide range of autodial modems, including the WS3000/WS4000 range of modems, the Schools Modem and CommunITel modem.

It is also very economical. Using a Multistream account (available from BT), you can connect to the majority of services in the UK and only local dialling rates will apply. A definite saving on your telephone bill!!.
You can not only access Prestel type services (Viewdata) but also electronic mail services such as Easylink or Telecom Gold to send a letter, telex or other documents to a friend, colleague or company.
A whole variety of transactions and purchases will be possible from your armchair. WHAT COULD BE EASIER?.

DIALUP
COMMUNICATIONS SOFTWARE

This is the first in the DIALUP range of communications software – on stream for 1987 is DIALUP Commercial for the business user and DIALUP Professional for the sophisticated comms user. We shall be pleased to send details as they become available.

DIALUP is menu driven to make it easier to use. It has a number of useful facilities. You can
- print interesting pages/frames or save frames to disc and review them later
- save logon sequences for auto logon, password protection and logon to pre-selected pages
- see at a glance how long you have been connected from a 'status-line'
- use special keys to perform a variety of useful tasks at the press of a button eg. temporarily halt the flow of information to the screen (so you can read it at your own pace).
- use 'file commands' without having to break connection with a service (list, file, rename, copy)
- save details of up to 50 services.

For the technically minded communicator here are some of the technical specifications –
- full duplex
- XON/XOFF flow control
- RTS/CTS handshaking
- 300, 1200, 1200/75, 75/1200, 2400, 4800, and 9600 baud rate
- XMODEM, KERMIT or DIALUP file transfer error checking protocols
- telesoftware download (CET standards)
- direct exchange of files between two DIALUP users (back to back connection)
- multistream EPAD protocol for additional error correction
- colour and graphics (in Viewdata mode).

DIALUP Educational is NOW available complete with DIALUP disc, a tutorial disc, a 160 page user Manual, a function overlay keystrip and cable at ONLY £79.95 + p&p and VAT. A total communications package, DIALUP plus the Miracle Technology WS4000 modem (Hayes compatible and fully intelligent), is offered at a special price of JUST £199.95 + p&p and VAT.



HOW TO ORDER. Either fill in and post the coupon below or telephone PMS Communications Ltd on 021-643 7688 quoting Access or Barclaycard details.

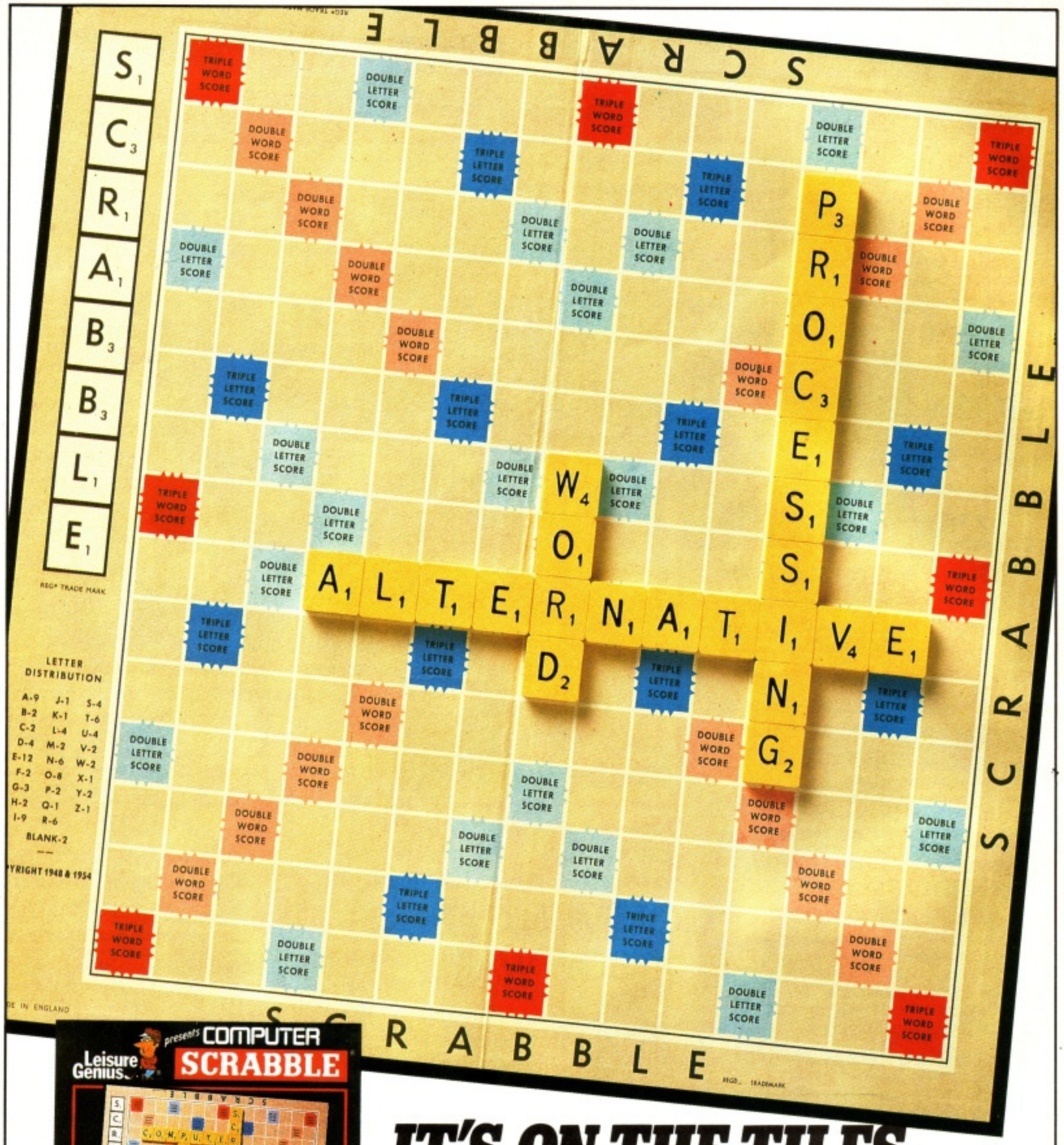
Send to: PMS COMMUNICATIONS LTD, Norfolk House, Smallbrook Queensway, BIRMINGHAM B5 4LJ. Phone: 021-643 7688

NAME _____ ADDRESS _____ PHONE Day _____ Evening _____

Please send me the following:
☐ DIALUP Educational communications software packages (includes cable) @ £79.95 + £2.95 p&p + VAT per copy (TOTAL £95.34)
☐ DIALUP Educational communications software packages (includes cable) with the Miracle Technology WS4000 modem @ £199.95 + £5.50 p&p + VAT (TOTAL £236.27)

I enclose a cheque for £_____ made payable to PMS Communications Ltd.

Give details of machine on which it will be used.
Micro: _____ Model: _____
(If BBC, do you require a ☐ 40 track disc or ☐ 80 track disc);
Please also send me details of (tick): ☐ DIALUP Commercial ☐ DIALUP Professional





IT'S ON THE TILES.

Leisure Genius presents this classic word game elegantly translated to computer. SCRABBLE® is available for AMSTRAD CPC machines and now for the PCW 8256/8512.

Computer SCRABBLE® faithfully follows the board game rules, and features a large vocabulary and intelligent "opponents" so you can play by yourself, as well as with friends.

Please send me a copy of Computer SCRABBLE®: AMSTRAD PCW 8256/8512 DISC £19.95 ☐
AMSTRAD CPC 464/664/6128 DISC £14.95 ☐ AMSTRAD CPC 464/664/6128 DISC £14.95 ☐ CASSETTE £9.95 ☐

Name _____
Address _____
_____

Please make cheque payable to Virgin Games Ltd,
2/4 Vernon Yard, Portobello Road, London W11 2DX. (Please do not post cash).

SCRABBLE® Trade Mark and Copyright licensed by JW Spear and Sons PLC. Leisure Genius® is a registered trademark of Winchester Holdings Ltd, a wholly owned subsidiary of Virgin Games Ltd

Leisure Genius®

Please bear in mind that the views expressed herein are not necessarily those of Amstrad. Be assured that all your views are given thorough consideration. This letters section is the Amstrad Computer User's own forum.

Accents axed

Looking through the June issue of Letters I was disappointed to see that you did not correctly advise Susanne Lees of Caithness on how to get the foreign letters and accents on screen on to her printer.

She might find the solution by looking through her printer's manual to see if it supports the symbols in question and how to obtain them through the use of DIP switches.

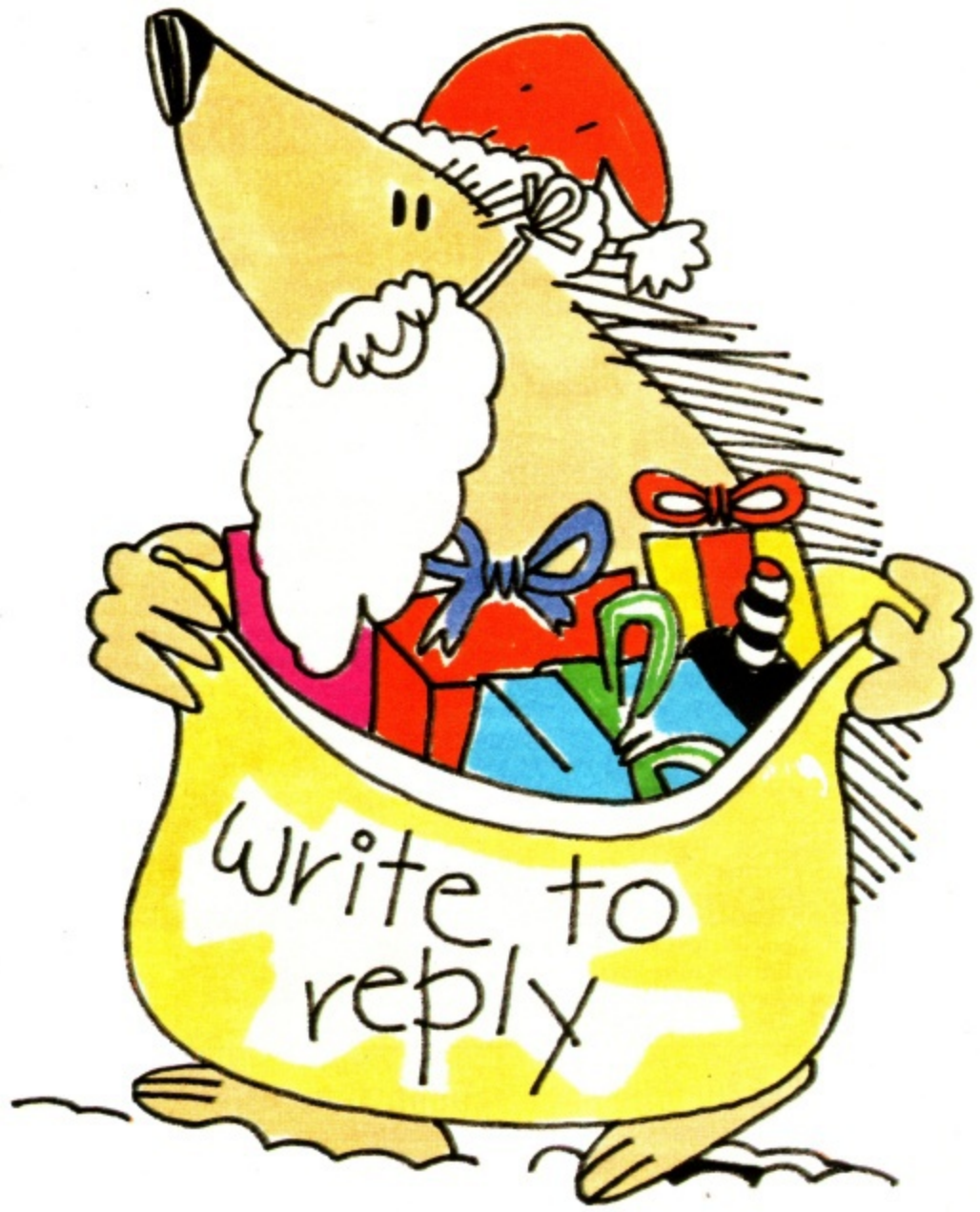
I am multilingual and have to use foreign letters and symbols all the time. The combination of Protext and a Citizen 120D lets me achieve my objectives without any problems.

I would certainly like to get in touch with other multilinguals and polyglots using Amstrad CPCs out there to exchange information concerning this kind of problem.

Richard Wong,
76 Rue Gay-Lussac,
75005 Paris,
France.

ACU: *Suzanne Lees' main problem was that she uses a DMP–1. There are many solutions to this, the cheapest being to buy Tasprint, the most elegant being to buy a PCW.*

A CPC with Protext and a flexible printer sounds like a good compromise.



Bye bye PCW, Hi PC

I have been using an Amstrad PCW as a word processor for the last year and have been very satisfied in all respects, but am now considering upgrading to an Amstrad PC to run more comprehensive spreadsheet and accounting packages.

I am, however, a little concerned about the various press comments concerning the quality of the screen display.

As my main use for the PC will still be word processing I would like to know whether the PC's screen definition is in fact good enough for word processing and how it compares with the PCW's screen definition.

If I do go for the PC, which monitor do you think would be better for word processing colour or monochrome?

Finally which of the professional word processing packages would you recommend to succeed LocoScript?

H.R.Rayner,
Edgware,
Middlesex.

ACU: *For word processing you would be much better off with a mono monitor. The system I am buying for home use is a PC with mono screen and 20Mb hard disc.*

This is an excellent word processing system. If you don't want to stretch to the price of the 20Mb hard disc then you should certainly try for a 10Mb.

I don't feel that the advantages of a colour monitor are worth £150 if you are using serious software. The packages to look at are SuperWriter and NewWord 2, both at around £70.

Amstrad is offering WordStar 1512 which falls between the two stools of not being WordStar and not being LocoScript. – SR.

Handling strings

As a newcomer to computing I have been experimenting with some simple programs in Basic involving questions and answers and find that it is apparently not possible to use the command GOTO X (a variable) to facilitate the handling of strings.

Is there a facility for manipulating line numbers in Mallard Basic which I have missed? If not which of the other languages available for the PCW would you recommend for the manipulation of text involving questions and answers?

Peter Russell,
Helens Bay,
Co. Down,
N. Ireland.

ACU: *Using Locomotive Basic it isn't possible to goto a calculated line number as you describe. However, there is a facility to do this in a different way.*

ON...GOTO can be used to goto a specific line number according to the value of a variable. With a little thought you should be able to substitute this.

High altitude Arnold

Can I speed up my CPC 6128 by replacing the Z80A with a Z80B processor which has a faster clock rate, or will the other chips be unable to keep up?

(Upgrading in this way is more complicated than just changing one chip, you would need to get a faster clock signal, this would then cause unpredictable problems within the rest of the computer. – Ed)

Is anyone planning to publish a firmware spec or a memory guide for the

HiSoft Software What's New?

A lot! We've been very busy over the summer months, carefully crafting more programming tools for the Amstrad computers. Our move into new offices (see the address below) with extra space and quiet country surroundings sparked off many new programs, like HiSoft FORTH & Knife86, and improvements to existing ones such as Pascal80 & Write Hand Man. Of course, all the old favourites like C, TurboBASIC and Devpac80 are still with us and our free catalogue is fatter than ever (just phone or write for a copy) ..... but we'd like to use this space to tell you something new!

HiSoft Pascal80

Pascal80, our popular Pascal compiler for the Amstrad disc computers, has changed dramatically. It now includes a fully-interactive editor so that you can edit, compile, correct, re-compile and run all from a simple menu, error messages rather than numbers, variant RECORDs, FILEs of *any* type, register variables, upper or lower case reserved words, CHAINing and more. Pascal80 is now a complete Pascal development system, is still much faster and smaller than Turbo Pascal and yet costs only ... **£39.95**

Existing owners can upgrade to Version 2 for £10 inc.
Runs on any CP/M 2 or 3 system with TPA > 36K.

HiSoft FORTH

At last! A new & truly useful FORTH compiler for your Amstrad PCW and CPC6128 computer. HiSoft FORTH is a fast, compact language with full GSX graphic library, interactive screen editor, structured assembler for mixing FORTH and assembly language, low level CP/M BDOS interface, extensive utility libraries and much more. HiSoft FORTH programs run incredibly quickly and yet are easy to write and debug. The package comes on disc, complete with an extensive 70 page manual with a full tutorial section on the FORTH language and costs only **£19.95**

KNIFE-86

Heavy duty disc salvage with Knife-86

You've just accidentally deleted the document you spent the last 4 hours typing in ... what do you do? Whip out The Knife and the disaster's over, with one swift cut and thrust of the UNDEL feature you can recover all that lost work.

But it doesn't stop there, Knife-86 is the most comprehensive disc hacking tool available for the IBM PC and its compatibles (including, of course, all the **Amstrad PC1512** models).

You can track files across discs, recover sectors and clusters to new files, alter directory entries & even execute DOS commands from within the package. Knife-86 comes with a host of oher useful utilities to generate batch files, print pages of text, word count files etc. Plus an informative 64 page manual packed with information on MSDOS **£29.95**

Sea Chest

Incredible value for money, this package offers you the games of Chess and Connect-4 written in HiSoft C for your Amstrad CPC6128 and PCW8256/8512 computers. Featuring GSX graphics, this package is not only fun to play but also wonderfully educational. With both the source and the object code you can either play straight away or attempt to produce a championship winning chess program ! A chestful of goodies.

£19.95

Write Hand Man

This fabulous program sits in the background of your computer ready to spring into action at the touch of a key to give you a notepad, diary, calculator, macro key editor and much more. We have a special version for owners of the Amstrad PCW and CPC6128 computers that includes a file editor, a calendar, function key editing and full use of graphics. A gem of a program at only

£29.95

Runs on any CP/M 2 or 3 system

Other Products and Ordering Information

TurboBASIC Compiler for CPC range	Tape/Disc	£14.95/£19.95
HiSoft C Compiler with extra libraries	Tape/Disc	£19.95/£39.95
HiSoft Devpac80 assembler/debugger	Disc	£39.95
The Knife disc hacker with UnERAse	Disc	£12.95

You can order by telephone using Access and Visa or send in a cheque or postal orders to the address below. We always despatch by first class post and delivery is usually within 5 days. Please write or phone Sue or Julie for a full catalogue, trade details, export information etc.

HiSoft The Old School, Greenfield, Bedford, MK45 5DE. (0525) 718181

Software Toolshop from HISoft

The Software Toolshop
One-Stop Programmer's Shop
Christmas Offers

CIS COBOL

A full, professional COBOL compiler from MicroFocus, CIS COBOL conforms to the ANSI 74 standard and comes complete with indexed sequential filing. Incredible value for money, this package originally cost over £450! Amstrad CP/M Plus.

£49.95

ZBASIC

Super fast, easy-to-use and standard, ZBASIC is a BASIC compiler that works on all the Amstrad CP/M and MSDOS (PC1512) computers. Now you can write in one language on all machines. Please specify machine when ordering.

£49.95

PROSPERO

FORTRAN & Pascal

ProPascal and ProFORTRAN are widely regarded as the most modern and professional CP/M compilers available. They both produce fast, efficient code & adhere closely to standard definitions. Great value! **£49.95**



Shop early and avoid disappointment! We have limited stocks of these super-value products so be sure to place your order quickly, all programs on offer will be despatched to you within 24 hours of order. We have many other language and utility products available for the Amstrad computers, please phone or write for a catalogue. Orders may be placed by phone using Access & Visa or by post with a cheque or postal orders.

The Software Toolshop Ltd The Old School, Greenfield, Bedford MK45 5DE Tel (0525) 718271

6128? Can one get by using the 464 publications?

(There is now a new firmware guide called SOFT 968 which should be available from the User Club – Ed)

Is there a really good flight simulator for the Amstrad – something with decent graphics and comprehensive instrumentation like Flight Simulator for IBM. I have tried Fighter Pilot on the Spectrum and while it is okay there is definitely scope for something better.

(The best flight simulator around at the moment is Tomahawk from Digital Intergration, but MicroProse is having a range of flight simulators, including the excellent Acrojet, converted by Andromeda software.)

Finally may I comment on how well the 6128 tolerates the dreadful voltage fluctuations we experience here in Nepal.

Several of my colleagues run their American hardware from expensive car battery inverter systems and advised me to do likewise.

However, although my monitor wobbles from time to time I have experienced no corruption of data and have only lost the memory when the supply has failed completely.

Mike Roake,
United Mission to Nepal,
Kathmandu,
Nepal.

CB aggro answer

I am afraid your advice about the Home Office is way out of date. The writer was quite correct in stating that the Radio Investigation Service of the Department of Trade and Industry is the place to go – but wrong when he says they will do nothing.

The procedure is to complete a form, but make it clear that the interference is from CB – give the address and any other information that points to this.

Most enquiries are to investigate interference to TV and it may be the officer he contacted did not understand what he was being told.

David E. Daniel,
Handle 'Red One',
Hon Secretary,
The Bravo Alpha Sierra Group,
Liverpool.

On-line banking

I have an Amstrad 6128 and I have been interested in the possibility of operating a Nottinghamshire Building Society Homelink account.

The building society literature says that one needs to buy or hire a Homedeck alphanumeric keyboard but if one is an existing Prestel subscriber no additional equipment is necessary.

The building society says it can supply a Homedeck at a specially reduced price of £150 including VAT and that there are two versions, ordinary Homedeck or a microcomputer version.

Do you know anything about this latter version? And can I purchase one of the many modems and software for my Amstrad 6128 which are advertised in the Amstrad magazines and operate a Homelink building society account without purchasing a Homedeck? This would appear to be cheaper than purchasing a Homelink in some cases.

A.R. Wilkins,
Long Hanborough,
Oxford.

ACU: *Your best bet would be to buy a modem, serial interface and software. This will provide you with more facilities than a simple Homedeck.*

Make sure you subscribe to Prestel Microcomputing. We would recommend the Pace setup using the CommStar software.

Brumm club

I would like to inform fellow readers that I am in the process of forming a users' club in Birmingham. Could those interested write to me?

Hopefully we won't have to charge anything to join. We also hope to have access to a university which uses 6128's.

If you live locally please drop me a line.

John B. Woods,
54 Lockwood Road,
Northfield,
Birmingham, B31 1QD.



A word of caution

Truly has it been said: Those whom the gods would destroy, they first make mad.

"If there was a market in mass produced portable nuclear weapons, we'd market them too". – Alan Sugar, September issue of International Management.

Consider the renewal of my subscription cancelled.

D.A.Russel,
London E8.

Software starved

I am writing to ask if you can help me at all. As a PCW user I find there is very little in the way of software available to me, compared to the long list of business software suitable for use on other Amstrad computers.

The list on the centre pages of the Amstrad software catalogue proves my point. Only six of the 36 titles listed are suitable for the PCW.

I have the book Mastering the Amstrad PCW 8256/8512 by John M Hughes with me. On page 101 he says ". . . or load a computer language, like Basic which is a popular 'programming language' often taught in schools and widely used all over the world".

Is it possible for me to find a Basic program or is it not available? I can find lots of useful applications programmed in Basic – my local library is full of them – but as Joyce doesn't speak the language they are useless to me.

I do realise that I could learn to

program using Mallard Basic but it would be a long, hard, uphill task for someone who left school years ago!

Mrs K.Walker,
Harwich,
Essex.

ACU: There is plenty of PCW software about, but not much from Amstrad. Try NewStar on (0277) 220573.

Digital pictures

Owners of a CPC464 or 6128 may be amused by the following striking pattern-drawing program, adapted from an idea in Scientific American:

```
10 PRINT:INPUT "Enter three numbers a,b,c: ",a,b,c
20 x=0:y=0:k=1
30 MODE 1: BORDER 0:INK 1,24: INK 2,6
40 PLOT x+y+320-a,x-y+200,k
50 z=y-SGN(x)*SQR(ABS(b*x-c))
60 y+a-x
70 x=z
80 k=3-k
90 GOTO 40
```

The remarkable feature is the variety and complexity of the patterns generated from such a simple program. The delicate tracery of each pattern builds up in a fascinating manner.

First a simple outline is generated, then nothing much seems to happen for maybe ten minutes, then a whole level of complexity is added and this may happen repeatedly, often for several hours.

There exist many interesting combinations of input numbers a, b, c. To get started, try the combinations 100, 10, –50 and –70, –1,200. Any values may be used, though the scale of the pattern will be found to depend on a, which is best kept below 250.

Andrew Bebbington,
Canterbury,
Kent.

ACU: Thanks for the program, we will have a similar article in a future issue.



Locked out

Please can you help me? I saw in your September issue a map for CRL's The Rocky Horror Show. On this map is the Torture Room. Please can you explain how I get to the torture room in the game.

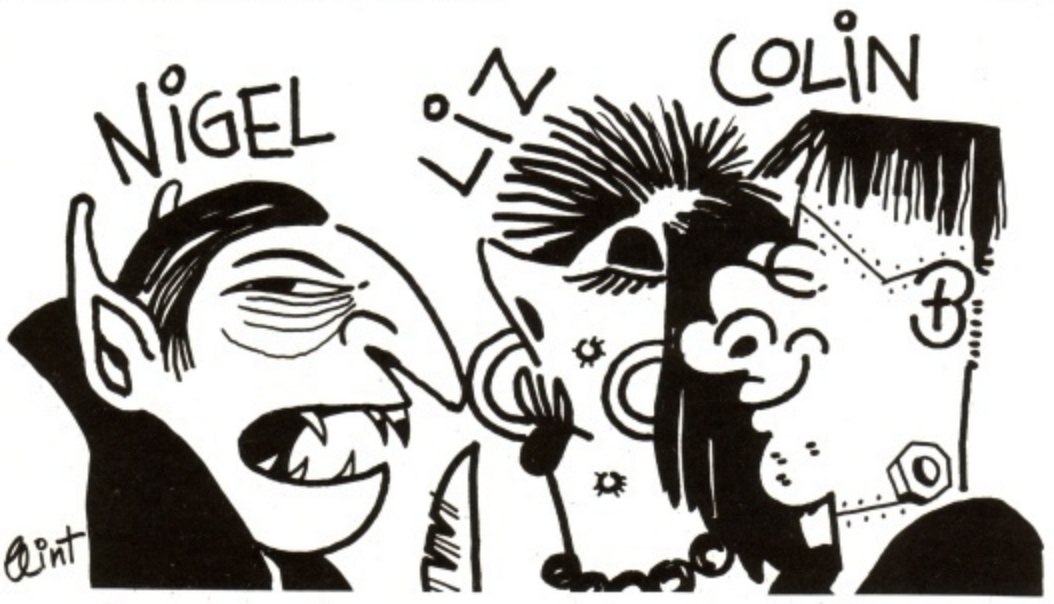
Gary Jones,
Whitstable,
Kent.

Mental picture

I was wondering what Nigel, Liz and Colin look like. You know, the ones who review the games, I'm totally infatuated with Nigel's style of writing and wondered what they all looked like.

Next time I write it might even be from a printer. I was also wondering if there was anything I could buy to connect my Casio MT52 keyboard to my 464.

Stephanie Hornby,
Fleetwood,
Lancs.



Disc case life cycle

In your recent correspondence an unfortunate disc user complained of missing disc cases. I have experienced this same phenomenon of disc cases disappearing.

Surely you answered the question yourself in saying that many spare cases appeared in your office. Obviously these cases have a homing instinct and I suspect my cases, like your other correspondent's, have found their way back to the Amstrad birthplace, perhaps trying to find reincarnation.

If you can accept this explanation would you be kind enough to return my five missing cases.

P.J.Clarke,
Ashtead,
Surrey.

Life cycle II

I read with interest the letter in the September issue about the empty cases for discs.

I have a suggestion. Sell off your heap of plastic containers to your readers, maybe with a limit per order. Then everybody gets happy. You get rid of your surplus containers and your readers get what they need. I will be the first to order four containers.

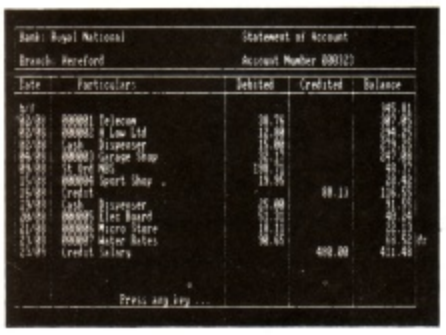
Gorm Helt-Hansen,
Domusvej,
Denmark

ACU: We can only surmise that the ACU office is merely a stop-off point in the migration of a disc case – they all seem to have deserted us. You can always buy a special box.

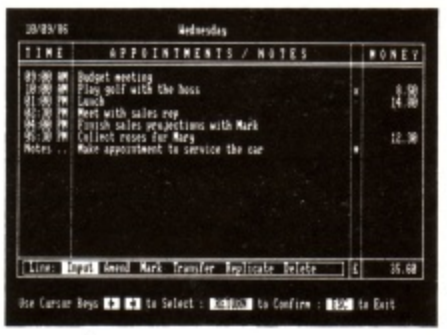
ACU

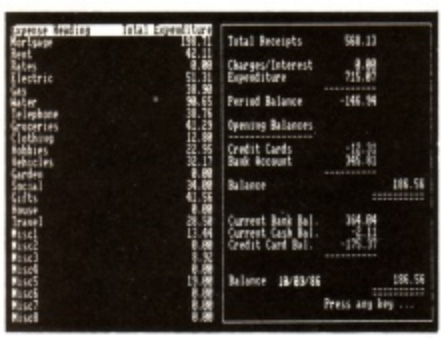
Clear your desk's clutter!













PlanIt The complete personal organiser

Now you can use the power of your computer to organise your activities in a way never possible before. With PlanIt, a few keystrokes are all you need to keep track of your money, plan your budgets – and manage your time far more effectively. And you'll find it's so very simple to use! It contains:

Personal Accounts Gives you up-to-the-minute facts about your financial position at any time. Keeps separate accounts of your banking, cash transactions, credit card payments. Allows 24 individual accounts, up to nine different credit cards (and warns you when you reach your cash limit) and as many as 400 different transactions a month. Sets up your standing orders. Automatically updates all relevant accounts with each transaction.

Financial Diary All the features of the best desktop diary – plus much more. Enter up to 15 items per day and have them automatically sorted in time order. Add your expenses and have them totalled in separate categories. Speed search for entries, then mark them for future manipulation or replication.

Card Index Create your own address book, phone directory, tape library title list. Use the flexible editor to enter or amend data. Sort and search. Call up detailed reports on contents in any form. Produce mailing labels on your printer.

Extra utilities include a loan calculator and calendar.

PlanIt PCW range
Disc £24.95

PlanIt CPC range
Tape £14.95
Disc £19.95

DATABASE SOFTWARE

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

Please send me: PlanIt CPC on tape £14.95 *( ) disc £19.95 *( )
PlanIt PCW on disc £24.95 *( )
*Europe add £2. Overseas Airmail add £5.

☐ I enclose cheque payable to Database Software or
☐ Please debit my Access/Visa card number

Name

Address

Signature

ACU12

Better blasting

Happy day! And now the bad news: My computer's not been at all well recently. Its discs have slipped, the disc drive's crashed, the dreaded GOSUBs have returned, the print-head has dandruff, the printer itself was sacked by Murdoch, the cursor's worn and the light pen has put on weight. Even the manuals have had appendixitis.

It hasn't all been bad news though, someone has just released a word processing book for secretaries. It's called: The Joyce of Secs.

To make my day, Mr. R. Moore has written in to say that on the 464, putting in lines like:

20 REM CIRCLE

translates itself to:

20 REM *CIRCLE

and doesn't run properly. The word on this little number is that it is one of those undocumented features that us programmers make fortunes out of patching round. To avoid this, don't put bars, pound signs and so on in rem statements. That's known technically as a cop-out.

I'm sure that this yur poke has appeared somewhere before, but I can't find it and it's something some people will enthuse over anyway. This is a pokeyette from Stephen Hulley in Hemel Hempstead, who has poked at Bounty Bob Strikes Back. This is one of the games I haven't seen, so this'd better work Steve!

```
10 REM BOUNTY BOB STRIKES BACK !
20 REM AMSTRAD CPC 464 ETC
30 REM INFINITE LIVES
40 REM STEPHEN HULLEY 1986
50 MEMORY &3900:CLS
60 LOAD"":LOAD"!",&4040
70 A=&8900
80 FOR N=0 TO 51
90 READ D$:POKE A+N,VAL("&"+D$)
100 NEXT N
110 CLS:PRINT "Please wait."
120 CALL &8916
130 DATA 21,6E,06,36,18,2C,36,05,C3,40,0
    0,21,34,BD,36,00,2C,36,89,C3,04,BD
140 DATA F3,11,40,00,21,00,BB,01,37,02,D
    5,E5,C5,78,21,4B,40,36,72,2E,4E,36
150 DATA 92,6C,ED,B0,37,C3,2C,B8
```

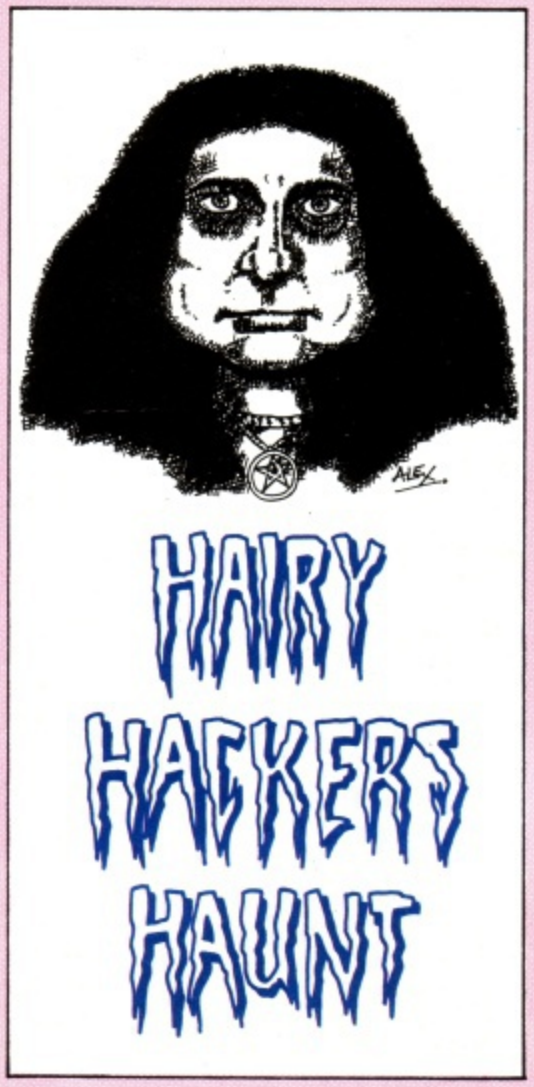
Figure 1

Rewind your Bounty Bob tape to the beginning and RUN that lot. On screen distructions will appear.

In future, would anybody sending in a poke of over half a dozen bytes please put it on about eight bytes per line and with a flippin' checksum on the end of it. This makes it much easier for me and the punters to type in. Threat over, back to the column.

Slick screen shifting

James of Yoxall has asked me for advice on writing sprite routines. Well Jim lad, yer got the wrong fella. But since you wrote in you'll get some advice.



Vyk is Vax – and here's his hacks

The first way to make it appear as if you're doing a lot of work when you're not is to shift the screen around the shape instead of the shape around the screen. This is demoed (is that an English word?) by the following program.

This shifts the screen around the easy way – it lets the screen controller do all the hard work. The program adjusts the vertical and horizontal offsets of the screen. The chequered background does not actually stay still, but it looks like it and illustrates the principle.

```
100 REM ***
110 REM *** Bouncing screen demo by
120 REM *** The Hairy Hacker and a
130 REM *** small furry creature from
140 REM *** the Crab Nebula.
150 REM ***
160 REM
170 MODE 1
180 INK 3,6,18:'Only for non-epileptics.
190 FOR i=0 TO 640 STEP 16
200 MOVE i,0:DRAWR 0,400
210 NEXT i
220 FOR i=0 TO 400 STEP 16
230 MOVE 0,i:DRAWR 639,0
240 NEXT i
250 LOCATE 1,26:PRINT
260 MOVE 0,0:DRAWR 640,0
270 FOR i=0 TO 640 STEP 16
280 MOVE i,0:DRAWR 0,16:NEXT
290 WINDOW #1,15,25,12,14
300 PAPER #1,3:CLS#1
310 LOCATE 16,13:PRINT "Booinng !"
320 x=0:y=0:yi=1:xi=1
330 LOCATE 1,26
340 CALL &BD19
350 n=45665+x+y*40:OUT &BC00,12:OUT &BD0
    0,INT(n/256)
360 OUT &BC00,13:OUT &BD00,n-INT(n/256)*
    256
370 x=x+xi:y=y+yi
380 IF x=0 THEN xi=1:GOTO 400
390 IF x=29 THEN xi=-1
400 IF y=0 THEN yi=1:GOTO 340
410 IF y=22 THEN yi=-1
420 GOTO 340
```

Figure 2

Lines 100-240 set up the screen and an optional flashing ink.

Lines 250-290 scroll in some screen memory that isn't on the screen to start with and fills it with the same pattern as the rest of the screen.

Lines 300-330 create a little shape to bounce about.

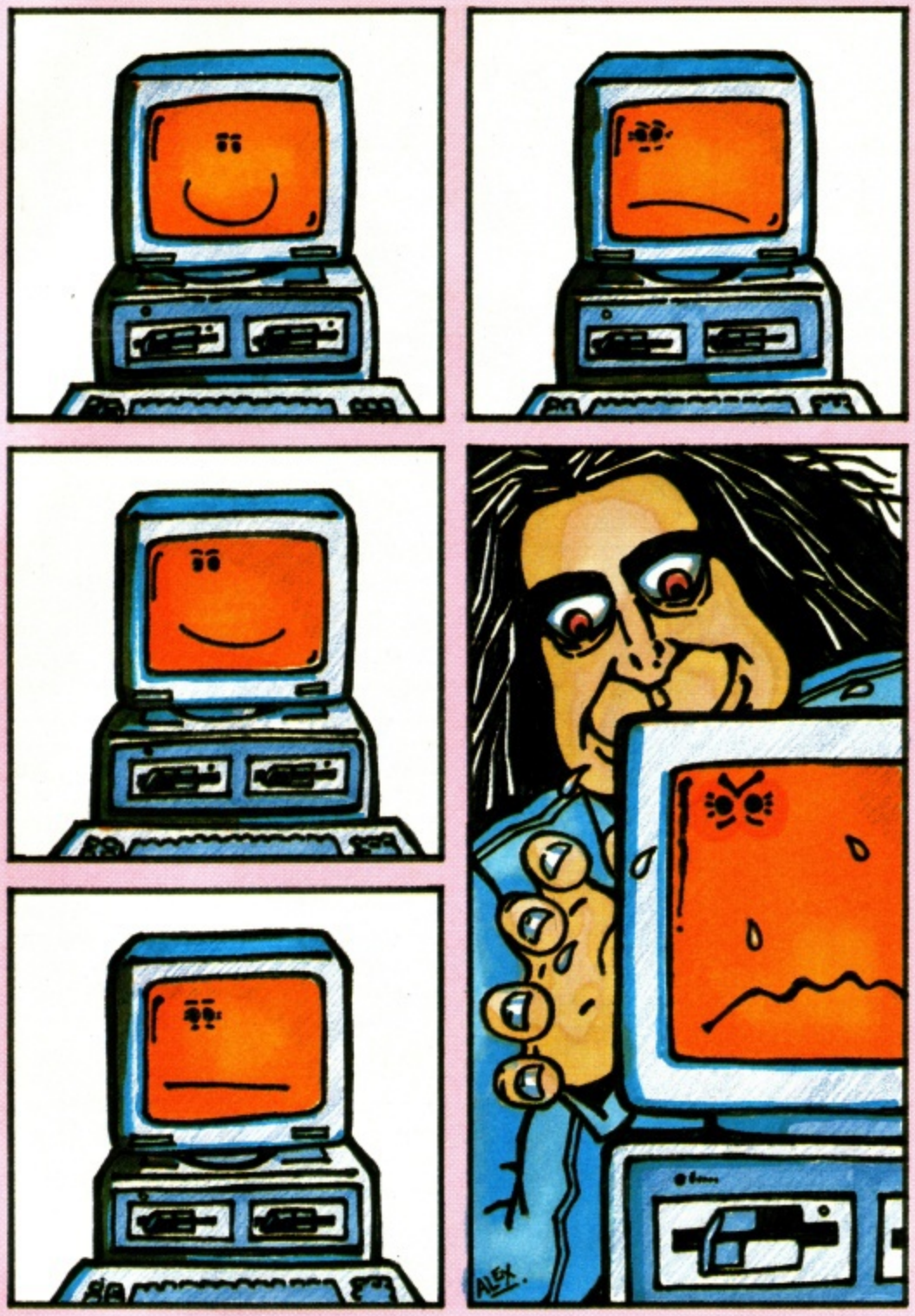
Lines 340 onwards move the two pointers (12 & 13, but you can use the firmware call) that the graphics chip uses to tell what part of memory to look at.

The second way to prevent your large sprite from flickering like an expiring subway light is to have two screens on the go at the same time. As well as the normal screen we all know and love, there is a second one that can happily live at &4000 in the memory map.

If you have both screens alternately displayed and only update the one that isn't showing, the effect will be a flicker-free display.

This is especially effective if you swap screens on every other frame flyback (the period between individual TV pictures), effectively giving you much more time for your cranky old sprite routine to update things.

This is not as difficult as it looks (especially to 6128 owners who have read



up on BANKMAN) and here's how:

```
10 REM ***
20 REM *** How to screen switch by a
30 REM *** small furry creature from
40 REM *** the Crab Nebula and the
50 REM *** Hairy Hacker.
60 REM ***
70 REM
80 FOR i=1 TO 5:READ a:POKE HIMEM+i,a:NE
   XT
90 DATA &3E,&40,&c3,8,&bc
100 MODE 1
110 FOR i=1 TO 24:PRINT STRING$(40,"1");
    :NEXT
120 PEN 2
130 CALL HIMEM+1
140 MODE 1
150 FOR i=1 TO 24:PRINT STRING$(40,"2");
    :NEXT
160 PEN 1
170 x=&40
180 WHILE INKEY$="":WEND
190 POKE HIMEM+2,x:CALL HIMEM+1
200 IF x=&40 THEN x=&C0 ELSE x=&40
210 GOTO 180
```

Figure 3

There, that will show a screen full of ones and a screen full of twos. When you tap on the spacebar with your little paws, it will switch between screens so fast it'll make your eyes water.

That is the way it is done on most games with big moving scenes, if they can afford the 16k of memory that the second screen takes up.

The important call to look up in the manual is SCR_SET_BASE. All the poked code does is send 40 or C0 hex to that routine, telling it which screen you want.

You will notice that yours truly has used a few evil-looking OUTs in his first program. This is only because it gets very confusing when you start trying to stuff lots of registers to fly firmware routines directly from Basic.

You may also wonder what the CALL &BD19 is doing. This is the only firmware call that is mentioned in the beginners manual. All it does is twiddle its thumbs until the monitor is starting a new picture. Try leaving it out, and spot the difference.

In the event of real programming, I would recommend using SCR_SET_OFFSET and friend routines out of the firmware manual. This is partly because of compatibility, but mostly 'cos I'm a lazy so-and-so and they do all the complicated calculations for you. If you haven't got the firmware manual yet, and you're programming in machine code – get it!

Colourful characters

Among other interesting letters in the mailbag were TSB prospectus, begging letters from gas and electricity board, a phone bill with the number only just smaller than the figure in red, and the following quiz from Richard of Nottingham, curiously covered in garlicy French salad dressing.

He asks: How do poor people whanging away in Basic manage to print glorious technicolour characters with the SYMBOL command?

Well, the magic isn't in the symbol command. Instead you put PRINT CHR$(22)+CHR$(1); at the start of your program and then you can print things on top of one another. Then it's just a case of changing pen colours for the desired effects. Told you it was simple.

Just as easy is returning things to normal: PRINT CHR$(22)+CHR$(0);

More joystick japes

Now details on how to cheat with a Cheetah. The one in question is the Cheetah Mach I joystick (a sound device!), with added microswitches.

This doesn't mean that they've made the fire buttons smaller but that they use some very durable switches in it that have the unfortunate side effect of clicking all the time. This makes a decent blasting session sound like an old Telecom/Meccano telephone exchange freaking out.

The strange thing is that the only non-microswitch switches are the handle fire buttons. These are usually the first ones to succumb to the tender ministrations of vibrating, sticky digits. Humm ...

Any road up, I can't tell you how to kill the clicks but I can give the usual second fire button hack for it. As usual, any problems you have are your own and we advise you to read through the instructions first.

Unlike the previous hacks, the fire buttons we're going to convert are on the base, so there's no need to take the handle apart.

First off you'll need a length of

stranded (no, not on a desert island), insulated wire about a foot longer than the cable. Wrap this round the cable now, before you start swinging dismantled chunks of joystick about.

Remove the four screws from the base with a trusty (or rusty) cross-head screwdriver. Ensure you count all four (some roadies can't count that far) and place them in your equally trusty Rolls-Royce hubcap (quieter than a Porsche), Guiness ashtray, wok or handy belly-dancer's navel.

When you prise the two halves apart a little black bit will fall off the auto-fire switch. Catch it, even if the auto-fire doesn't work on Amstrads.

At the front end (where the cable goes in) are two microswitches (the big green things) linked up by clips and lengths of orange and black wire. Prise the front two out of their little plastic holders and disconnect one or both of them from the orange wires by pulling the clips off.

Take the end of the wire close to the base and strip about an inch with teeth, wire strippers or one of those things you usually slice your thumb on.

Thread the bare end through the hole in the tab of the microswitch(es) you have disconnected. Make sure you connect up the tabs marked NO, or you'll get more second fire than you bargained for.

Once the microswitch(es) are/is well and truly trussed up, put the thing(s) back again and turn your attentions to the small lump on the other end of the cable.

Bare the end of the wire as before, but only a quarter inch this time and without slicing the thumb.

The hole that you want to poke this wire in is shown in Figure 1, reproduced from the first Hairy Hackers with the kind permission of nobody in particular.

Nearly there. Tape the wire to the plug with insulating tape, gaffer tape, cellotape or anything that stops it flapping around in the wind and insert plug in the relevant orifice on your 'straddy.

Turn on the power and push switches. Base microswitches should produce capital Zs only, handle buttons Xs only and other switches ↑↓ ← → in predictable sequence.

If this works, screw it all back together again. If not, think hard about whether this was a good idea in the first place, or whether pushing the buttons on top when you've taken the switches away from underneath should do anything.

Notice that throughout this wee hack there have been no wires cut. This pleases the ed immensely, 'cos he'll probably want his stick back later. Unfortunately this won't cut any ice with Mr.Cheetah. After this your guarantee will be declared well and truly void.

I just seem to have suffered from a stack overflow. The stack of discs I put on top of my Joyce flowed over the back and on to the floor. Again!

A potion for Druid

Justin Garvanovic seems to produce pokes the minute a game arrives in the shops. Here is a program which provides infinite energy, spells, keys, invisibility, golems and chaos for Druid. This deletes the rating bar but it isn't needed. Either rewind to the start of the tape or fast forward past the first file then run the routine.

```
10 MODE 1:MEMORY 12345
20 PRINT "LOADING..."
30 LOAD "!druid1",&6400
40 WINDOW#1,15,27,10,10
50 WINDOW]#2,15,27,13,13
60 tot=0
70 FOR n=&800 TO &85F
80 READ a$:a=val("&"+a$)
90 POKE n,a:tot=tot+a
100 NEXT
110 IF tot<>7717  THEN PRINT "Whoops, so
    mething wrong with the data.":END
120 CALL &800
130 DATA 2a,38,bd,22,60,08,2a,01
140 DATA bb,22,38,bd,3e,f7,32,0e
150 DATA bc,3e,c3,21,1f,08,32,30
160 DATA 00,22,31,00,c3,00,64,2a
170 DATA 60,08,22,38,bd,cd,37,bd
180 DATA 3e,f7,32,ba,0f,3e,c3,21
190 DATA 3e,08,32,30,00,22,31,00
200 DATA cd,00,23,c3,00,0f,af,32
210 DATA 01,2c,32,ee,30,32,8a,28
220 DATA 32,49,26,32,e1,28,3c,32
230 DATA c8,27,32,ca,27,32,cb,27
240 DATA 3e,c9,32,51,45,c3,3e,1e
```

Figure 4

Guzzle some more

This poke, also from Justin, provides infinite lives for Players Guzzler.

```
10 MODE 1:MEMORY 12345
20 LOAD ""
30 tot=0
40 FOR n=&BE72 TO &BE92
50 READ a$:a=VAL("&"+a$)
60 POKE n,a:tot=tot+a
70 NEXT n
80 IF tot<>3500 THEN PRINT "I detect an
   error, better check.":END
90 CALL &BE72
100 DATA 21,80,be,3e,c3,32,bc,bc
110 DATA 22,bd,bc,c3,05,40,cd,37
120 DATA bd,21,00,00,22,6e,56,22
130 DATA 70,56,7d,32,5b,61,c3,ba
140 DATA 67
```

Figure 5

More force to your Lightforce

The final poke from Justin furnishes you with infinite lives in Lightforce. Rewind the tape to the start and run the routine.

```
10 MODE 1:OPENOUT "d":MEMORY 1234
20 LOAD""
30 FOR n=112 TO 118
40 READ a$:POKE n,VAL("&"+a$)
50 NEXT n
60 POKE 1602,195
70 POKE 1603,112
80 POKE 1604,0
90 CALL 1500
100 DATA af,32,da,79,c3,31,73
```

Figure 6

Fixed Galaxians

In the Rookie/Neophyte Hackers letters selection this month we have some alterations to make to the games that get published in the magazine. Before hacking at them, please make sure that the thing works in the first place, all right?

The first re-write comes from a Mr. (scriblescrawl) Flint of Calside. He suggests the following mod for making Galaxian Revenge listen to joystick control by changing the following bytes:

Line 1420 - 47 becomes 4A

Line 1450 - 3F becomes 4B

Line 1740 - 15 becomes 4C

There, all the bytes mentioned are after the 3E and before CD,1E,BB. Seasoned 'straddy hackers will already have noticed that this is the "test a key" call. You'll probably have to ignore the checksum on this, as the changes will muck it up somewhat. The error can safely be ignored, 'cos you tested it in the first place, didn't you ?

Mr. Flint also sent in a Nightshade-to-disc program, which has been declared unfair on Ultimate by the ed., and so disappears into the Big Black File to come out after the glorious revolution. *(No writing in and pleading for it either – Cruel Ed.)*

Colin Findlay sent in a Rambo poke – too late, see last month's issue. But also a poke for The Last V8, which did make it in time:

```
10 MODE 0
20 OPENOUT "DUM":MEMORY 1799:CLOSEOUT
30 LOAD "!A"
40 LOAD "!B",49152
50 LOAD "!C",12800
60 LOAD "!D",1800
70 FOR N=0 TO 15:INK N,":NEXT N
80 LOAD "!E",49152
90 POKE 1908,0:POKE 1909,0:POKE 1910,0:P
   OKE 1911,0:POKE 1912,0
100 CALL 1809
```

Figure 7

Rewind your V8 tape, RUN the above pokeyette and push the play key.

Do you realise that the Hairy Hackers column depends on people like you sending in little pokes and twiddles that you as a real, creative person find useful in some perverse/obscure way?

If you are in possession of such items, we suggest that you send your contribution (however large) to: The Hairy Hacker, c/o ACU. (Address printed in the front of the flippin' magazine – you look it up.)

Oh, before I go, did anyone spot the deliberate mistake in last month's issue? The whole magazine was printed upside-down!

DANUM

THE NORTH'S LEADING AMSTRAD BUSINESS ADVICE CENTRE



CALL IN AND CHAT
No appointment necessary



MODEMS

AMSTRAD MODEM FOR PCW 8256/8512
MODEMS FOR PC, 464, 6128 etc.

CALL FOR PRICE

AMSTRAD

PC 1512 IN STOCK NOW!!!

HARDWARE

PC 1512 SD Single Drive
Mono – **£399** Colour – **£549**

PC 1512 DD Twin Drive
Mono – **£499** Colour – **£649**

PC 1512 HD10 10Mb Winchester
Mono – **£699** Colour – **£849**

PC 1512 HD20 20Mb Winchester
Mono – **£799** Colour – **£949**

SOFTWARE

Wordstar 1512 WP Package	**£60.83**
Supercalc II Spreadsheet	**£43.88**
Supercalc III Spreadsheet	**£60.83**
Sidekick for PC 1512	**£26.04**
Reflex for PC 1512	**£60.83**
Sage Accountant Package	**£149.00**
Sage Accountant Plus	**£199.00**
Sage Payroll	**£99.00**
Sage Bookkeeper	**£99.00**
Sage PC Write WP	**£99.00**
Sage Desk Set	**£69.00**

DIGITAL RESEARCH BOOKS

Introducing the Amstrad PC	**£ 7.95**
Using GEM on the Amstrad PC	**£12.95**
Using DOS Plus on the Amstrad PC	**£ 9.95**
DOS Plus Manual for the Amstrad PC	**£17.50**
Using presentation graphics on the Amstrad PC	**£12.95**
Word Processing using GEM Write	**£ 9.95**

PCW 8256/8512

PCW 8256 Complete – **£399**
PCW 8512 Complete – **£499**

SOFTWARE

Loco Mailmerge	**£34.75**
Loco Spellcheck	**£34.75**
Delta D/Base	**£86.95**
Multiplan S/Sheet	**£60.86**
Newword II WP	**£60.86**
Sage Accounts	**£86.95**
Sage Accounts Plus	**£130.43**
Sage Combo Pack	**£173.90**
Sage Retrieve D/Base	**£60.86**
Sage Payroll Pack	**£60.86**
Pocket Wordstar and Mailmerge	**£86.95**

10 Mb HARD DISK & MONITOR STAND

- *Specifically designed for PCW 8256/8512*
- *10 Mb formatted capacity*
- *Fully supported by Amstrad Hardware and Software*
- *Fast 85 MS access time*
- *Supplied with enhanced CP/M plus*
- *Complete with controller and drive*
- *Introductory offer*

£399.00

PRINTERS FOR YOUR AMSTRADS

All prices include cables and a serial/parallel interface for PCWs.

DOT MATRIX

	For PC 1512	For PCW 8256/8512
Citizen 120 100 CPS draft, 25 CPS NLQ, 80 col	£195.00	£229.00
Citizen LSP10 100 CPS draft, 25 CPS NLQ, 80 col	£199.00	£233.00
Citizen MSP10E 160 CPS draft, 40 CPS NLQ, 80 col	£275.00	£309.00
Citizen MSP15E 160 CPS draft, 40 CPS NLQ, 132 col	£349.00	£383.00
Epson LX86 120 CPS draft, 16 CPS NLQ, 80 col	£235.00	£269.00
Amstrad DMP3000 105 CPS draft, 80 col	£155.65	N/A

DAISY WHEEL

Daisy Step Junior 14 CPS, 132 col	£169.00	£199.00
Daisy Step 2000, 21 CPS, 132 col	£245.00	£279.00
Juki 6100, 20 CPS, 132 col	£285.00	£319.00
Citizen Premier 35, 35 CPS, 132 col	£495.00	£529.00

Serial and Parallel Interface for PCW 8256/8512 **£49.00**

'Phone or call for your comprehensive software listing for all Amstrad PCs and PCW computers.

Carriage charges for hardware	**£ 7.50**
Small items	**£ 2.50**
Books and software	**£ 1.50**

MAIL ORDER DIVISION

We accept orders with cheques, VISA or ACCESS. All products can be reserved by 'phone.

BARCLAYCARD VISA ACCESS

ALL PRICES EXCLUDE VAT *(no VAT is charged on books)*

DANUM

COMPUTER SYSTEMS
17 East Laith Gate, Doncaster,
South Yorkshire DN1 1JG

TELEPHONE (0302)
20355

Freedom of the press.

FOR THE AMSTRAD
CPC 6128
CPC 664,
(+64K Min Add On Ram)
CPC 464
(+64K Min Add On Ram
+ Disc Drive)

WORKS WITH KEYBOARD JOYSTICK OR AMX MOUSE

AMX Pagemaker puts you right at the heart of the desktop publishing revolution.

At long last you can produce newspapers, posters, leaflets, notices and handouts in your own home, office or school.

We're not talking about amateurish results, but extraordinarily professional work with crisp text and exciting graphics.

It's the sort of 21st Century technology that's turned Fleet Street upside down and is part of the most exciting advance in publishing since Guttenberg and Caxton.

You can type directly onto your screen with a choice of 16 typefaces or, if you really want to be creative, you can design your own typefaces, and, just like the most advanced computer setting, you can centre, range right, left or choose literal justification. You can even have full pixel control over character size and spacing.

Alternatively, you can load in either word processing or standard ASCII text files with fully automatic on-screen text formatting.

EXTRA! EXTRA!

Using the patterns supplied, you have outstanding graphics facilities for drawing, spraying and painting, or you can achieve some incredible results, using your own pattern designs.

The cut and paste options include copying, moving, rotating, stretching plus a fantastic zoom facility.



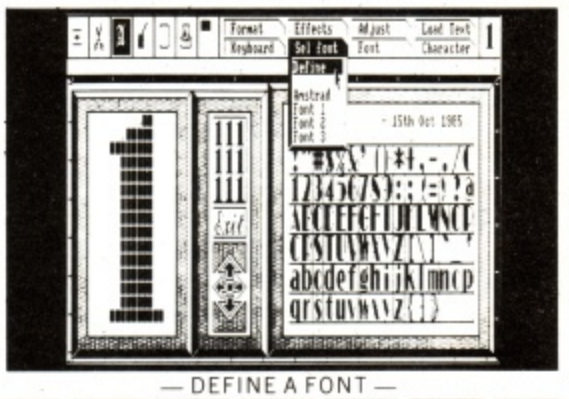
WIN £200! REPLACE THIS PAGE. WRITE TO AMS FOR COMPETITION DETAILS



— ZOOM ON AMX PAGEMAKER —



— PREVIEW YOUR PAGE —



— DEFINE A FONT —

A mode conversion routine allows you to load in screens and digitised pictures from all Amstrad graphic modes.

HOLD THE FRONT PAGE!

The 'Preview' facility gives you total control over your work by allowing you to view a page in miniature at any time, while also permitting the viewing of disk based pages prior to loading or saving. A wide range of printers including the Amstrad DMP-2000, Epson FX/RX/LX/LQ, Mannesman Tally MT80+, Shinwa CP80II and Star SG10/15 are supported.

AMX Pagemaker is supplied on 3" disc and includes a comprehensive illustrated manual, while costing a mere £49.95. Your gateway to Desk Top Publishing is present at all good computer dealers or by mail order using the FREEPOST order form.

AMX Pagemaker – your opportunity to publish and be damned!

PLEASE RUSH ME **POST FREE** _____(Quantity) AMX PAGEMAKER PACKAGE/S AT £49.95 each INCLUDING VAT AND P & P **ACU 12/86**

I ENCLOSE CHEQUE/POSTAL ORDER FOR £_____

OR DEBIT MY ACCESS ☐ OR VISA ☐ (tick as appropriate)

CARD No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

EXPIRY DATE_____

SIGNATURE_____

NAME (Block Capitals Please)_____

ADDRESS_____

_____POSTCODE_____

AMX PAGEMAKER

IMAGINATION AT YOUR FINGERTIPS

SEND TO: ADVANCED MEMORY SYSTEMS LTD., FREEPOST, WARRINGTON WA4 1BR.

☎ FOR INSTANT ACCESS/VISA ORDERS TELEPHONE 0925-413501/2/3

ADVANCED MEMORY SYSTEMS LTD · 166/170 WILDERSPOOL CAUSEWAY · WARRINGTON WA4 6QA · TELEX: 628672 AMS G

DAN DARE

Two ways to win!

The method to master Mekon's missile

Dan Dare, the most exciting game to hit earth – Virgin should go public on the strength of it alone – got a rave review last month. Yet some of you may be finding it a bit complicated to guide Dan through his perilous mission to stop Mekon's asteroid destroying the world.

So we've come up with a map and a poke to help you and Dan overcome the evil forces of the universe. See the route he'll have to take and the obstacles the team will have to overcome in order to stand any chance of preventing the globe going green.

```
10 MODE 1:REM DAN DARE POKE
20 MEMORY &2000
30 LOAD "!",&2040
40 tot=0
50 FOR n=&BE00 TO &BE33
60 READ a$:a=VAL("&"+a$)
70 tot=tot+a:POKE n,a:NEXT n
80 IF tot<>5718 THEN PRINT"Oh dear, bett
   er check the data.":END
90 CALL &BE00
100 DATA f3,21,80,20,11,a0,be,01
110 DATA 30,01,7e,ee,a0,12,23,13
120 DATA 0b,78,b1,20,f5,3e,f7,32
130 DATA f4,be,3e,c3,21,28,be,32
140 DATA 30,00,22,31,00,c3,a0,be
150 DATA af,32,c3,77,c6,c9,32,58
160 DATA 7c,c3,8c,6e
```

The poke to provide infinite lives may cause some corruption, but then the Mekon always was pretty corrupt. Due thanks go to Justin Garvanovic for this routine.

Dare you win Dan's delights?

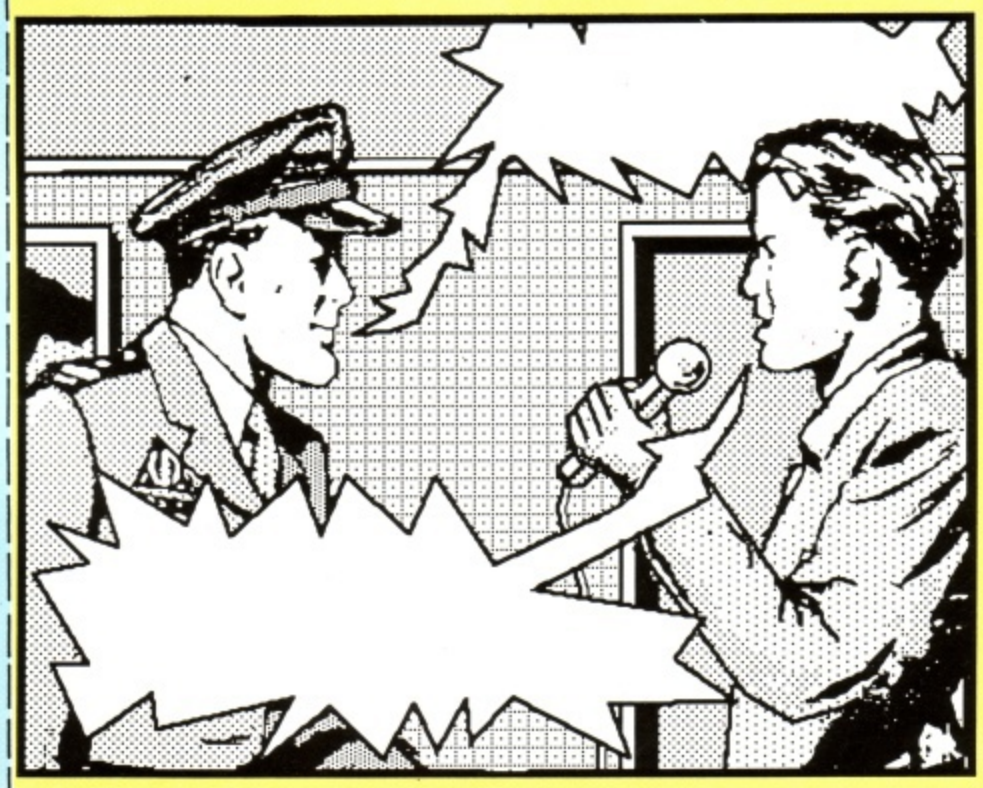
If you were as impressed by Virgin Game's Dan Dare as we were you'll be eager to win one of the five Dan Dare T-shirts,(like the Ed wears). They are very special since Virgin were only allowed to have 150 made. And there are posters, and biographies of Dan's creator, Frank Hampson.

This jolly bundle could be yours if you supply one of the five wittiest, sharpest, replies from our death defying saver of the earth's people, in the space on the picture below.

Rules:

1. Senders of the five wittiest entries chosen on December 22 will each receive a T-shirt, poster and book.
2. You may photocopy the form but only one entry is allowed per reader.
3. The judge's decision is final. No employees of *ACU (Huh! - Ed.)* may enter.

Dan Dare entry form



Name _____

Address _____

_____

_____

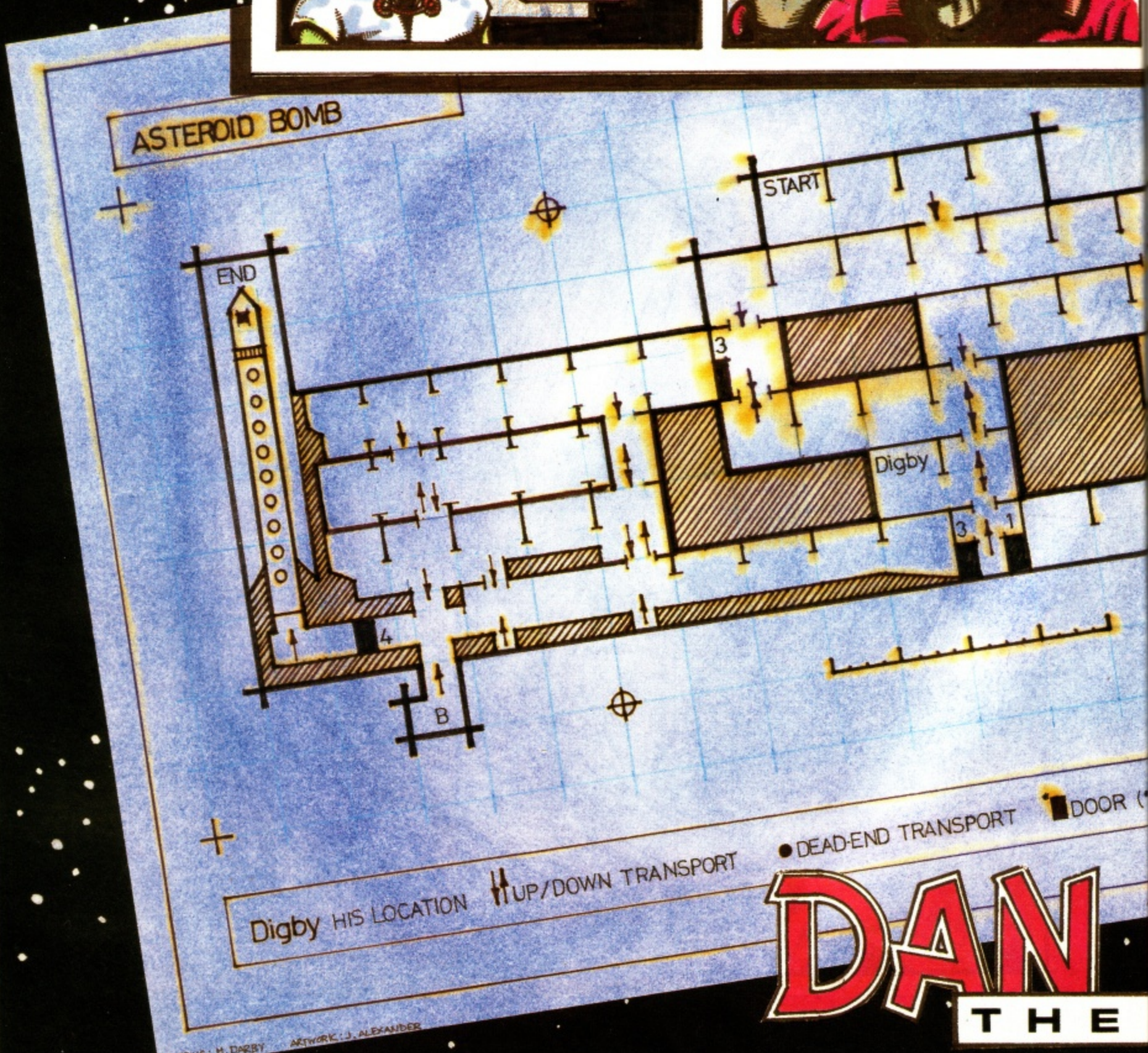
_____

_____

_____

Send your entry to:
Dan Dare Competition,
Amstrad Computer User,
169 Kings Road, Brentwood,
Essex CM14 4EF.


ON A FAR DISTANT PLANET OF THE EVIL MEKONTAN EMPIRE A MEETING IS IN PROGRESS..
YOU HAVE SEEN MY PLANS FOR THE ASTEROID BOMB....
WILL YOU BUILD IT?
OF COURSE OH MIGHTY ONE IT WOULD BE A GREAT HONOUR FOR ME!


ASTEROID BOMB
START
END
3
Digby
3
1
4
B
Digby HIS LOCATION
UP/DOWN TRANSPORT
DEAD-END TRANSPORT
DOOR
MAPPING: M. DARBY
ARTWORK: J. ALEXANDER

DAN
THE

GOOD! NOW I CAN DESTROY THE EARTH AND RID MYSELF OF THE CURSED DAN DARE FOR ONCE AND FOR ALL!!

Prison

CERTAIN DEATH!!

R (* denotes when opened by bridge section No.) B BRIDGE SECTION

ALEX

....ON EARTH

PREPARE TO LAUNCH THE ANASTASIA!!

DAN DARE

MAP

QuickShot®

We've TURBOCHARGED the World's Best Selling JOYSTICK ....

QuickShot® 2 Turbo



* EXTRA PRECISION
* TURBO 'RED' BASE
* SIDE GRIPS
* 12 MONTH WARRANTY
* SIX MICRO-SWITCHES
* AUTO-FIRE
* STABILISING CUPS

COMPATIBLE WITH:

- SINCLAIR ZX SPECTRUM (INTERFACE REQUIRED)
- AMSTRAD CPC 464/664/6128
- AMSTRAD PCW (INTERFACE REQUIRED)
- COMMODORE 64
- VIC 20
- COMMODORE C16 (ADAPTOR REQUIRED)
- COMMODORE PLUS 4 (ADAPTOR REQUIRED)
- MSX
- ATARI HOME COMPUTERS
- ATARI 2600/5200 VIDEO GAMES SYSTEMS
- SPECTRAVIDEO SV1 738 X PRESS
- ACORN ELECTRON (INTERFACE REQUIRED)
- BBC (INTERFACE REQUIRED)

S.R.P. **£13.95** INC VAT

Available from:

W. H. SMITHS ● BOOTS ● JOHN MENZIES ● LITTLEWOODS MAIL ORDER ● TOYS R'US ● ALLDERS DEPARTMENT STORES ● SPECTRUM ● LEISURESOFT ● RAM ELECTRONICS ● SILICA SHOP

..and other computer stockists.

SPECTRAVIDEO LTD.

(A WHOLLY OWNED SUBSIDIARY OF ASH & NEWMAN LIMITED)

SPECTRAVIDEO™

165 Garth Road, Morden, Surrey SM4 4LH, England. Telephone: 01-330 0101 (10 lines) Telex: 28704 MMH VANG Facsimile: 01-337 5532

WIN A LEVEL 9 CALENDAR!







What could be a better Christmas present to prepare you for the New Year than an attractive calendar. As well as hiding the marks on your wall it's useful for remembering all those useful dates like the next Amstrad show, your summer holiday, the cat's birthday!

Level 9, creators of thrilling adventure games, listed below, have 50 calendars to give away. Just match the names of their games with the inlay card and you could win one in time for 1987.

a) The Worm in Paradise
b) The Price Of Magik
c) Red Moon
d) Emerald Isle
e) Lords of Time
f) Return to Eden
g) Snowball
h) Dungeon Adventure
i) Adventure Quest
j) Colossal Adventure.

Rules:

1. All entries must be in by December 22.
2. The judge's decision is final.
3. Only one entry is allowed per reader, but you may photocopy the form.

CALENDAR CONTEST ENTRY FORM

Answers

1. ..... 6. .....
2. ..... 7. .....
3. ..... 8. .....
4. ..... 9. .....
5. ..... 10. .....

Send to: ***Calendar Competition, Amstrad User, 169 Kings Road, Brentwood, Essex CM14 4EF.***

Name .....
Address .....
.....
.....
.....
.....
.....

Leek Computer Centre

7 Ball Haye St, Leek, Staffs ST13 6JN

NEW! AMSTRAD PC1512's
(IBM Compatible)
from £399 (Ex. V.A.T.0
phone NOW!

Telephone (0538) 387859

Access

VISA

HARDWARE

PCW 8256	£435.00
PCW 8512	£550.00
CPC 6128 (Col)	£385.00
CPC 6128 (Gm)	£285.00
CPC464 (Col)	£285.00
CPC 464 (Gm)	£185.00
Amstrad Spectrum 128+2	£145.00
As above with gift pack	£155.00
DMP2000 Printer	£155.00
DMP3000 Printer	£189.00
Inter Gem	£89.00
Light Pen (PCW)	£75.00
Light Pen (CPC)	£19.00
Mouse (CPC)	£65.00
Modulator (CPC) from	£14.00
Disc Drive/IF (CPC)	£150.00
Disc Drive (PCW)	£170.00
Modem (CPC)	£30.00
Joysticks (from)	£6.50
Dust Cover (CPC) 2pcs	£8.50
Dust Cover (PCW)	£11.00
Printer Ext Lead (PCW)	£10.50

SOFTWARE

PCW	
Pocket Wordstar	£45.00
SuperCalc II	£45.00
Caxton Cardbox	£85.00
Sagesoft Retrieve	£60.00
Safesoft Accounts	£85.00
Dr. Draw	£45.00
Dr. Graph	£45.00
Datagem	£35.00
The Cracker	£45.00
Sagesoft Payroll	£45.00
Newword (Wordpro)	£60.00
LEISURE	
Tomahawk	£15.00
Fairlight	£12.50
Batman	£12.50
Deadline	£18.50
Hitchhikers Guide	£24.00

SOFTWARE

AMSTRAD CPC:	
Elite (Tape)	£12.75
Mag Max	£6.75
Yie ar Kung fu II	£6.75
Terra Cresta	£6.75
Knight Rider	£6.75
W.A.R.	£6.95
Ghosts and Goblins	£6.75
Spindizzy	£7.95
Stainless Steel	£6.75
Nexor	£6.75
Starstrike II	£7.95
Tomahawk	£7.95
2112 Ad (Disc)	£12.75
Sorcery Plus (Disc)	£12.50
Elite (Disc)	£17.50
Laser Basic	£12.75
Nexus	£7.95

HOW TO ORDER
1 Visa (Phone)
2 Access (Phone)
3 Cheque (Post)
4 Instant Finance/ Business Leasing (Written details on request)
5 Out of hours Answerphone
6 Personal callers welcome. (To obtain ad prices please bring this copy).
7 NO MONIES CASHED UNTIL GOODS DESPATCHED

Please Note:
All prices include V.A.T. and delivery

EDUCATIONAL ORDERS WELCOME

AMSTRAD PC SOFTWARE

GEM Write	£89.00	Reflex	£63.00
GEM Draw	£89.00	Sidekick	£27.00
GEM Wordchart	£89.00	Wordstar	£65.00
GEM Graph	£89.00	Supercalc 3	£65.00
GEM Diary	£35.00	Sage PC Write	£105.00
GEM Font Editor	£89.00	Sage Retrieve	£105.00
GEM Toolkit	£165.00	Sage Accountant	£155.00
		Sage PC Planner	£105.00

This is only a sample of the items available please ring for details of items not shown. All items offered subject to availability

AMSTRAD



	Mancomp Price £
AMSTRAD . . .	
8256 WORD PROCESSOR SYSTEM	430.00
8512 WORD PROCESSOR SYSTEM	540.00
6128 128K + GT65 GREEN MONITOR	299.00
6128 128K + CTM644 COL. MONITOR	399.00
464 64K + GT65 GREEN MONITOR	199.00
464 64K + CTM644 COL. MONITOR	299.00
DISC DRIVE + INTERFACE (464)	159.95
SECOND DISC DRIVE (LESS CABLE)	99.95
SECOND DRIVE CABLE	6.95
464/6128 MODULATOR	29.95
RS232 INTERFACE (464)	49.95
RS232 INTERFACE (8256)	67.85
SPEECH SYNTH + SPEAKERS	29.95
AMX . . .	
AMX MOUSE (464/6128)	69.95
AMX UTILITIES	19.95
AMX PAGEMAKER	49.95
AMX 3D ZICON	24.95
MEMORY EXPANSION	
64K MEMORY EXPANSION (464/664)	49.95
256K MEMORY EXPANSION (464/664)	99.95
256K MEMORY EXPANSION (6128)	99.95
256K SILICON DISC (464/664)	99.95
256K SILICON DISC (6128)	99.95
DK TRONIKS LIGHTPEN + I/F (464/664)	24.95
JOYSTICKS	
AMSTRAD SINGLE JOYSTICK	9.99
CHEETAH 125 JOYSTICK	8.95
COMMUNICATIONS	
PACE:	
COMMSTAR SOFTWARE	31.62
SERIAL INTERFACE	79.06
COMMSTAR + INTERFACE	102.35
COMMSTAR + NIGHTINGALE	150.94
COMMSTAR + NIGHTINGALE + I/F	172.50
I/F TO NIGHTINGALE CABLE	8.62
WORD PROCESSING	
TASMAN:	
TASWORD 464	19.95
TASWORD 464 – DISC	24.95
TASWORD 6128	24.95
TAS-SPELL	16.50
TASPRINT	9.90
TASCOPY	9.90

THE NEW
PC1512
Including:
HARDWARE, SOFTWARE, DISC DRIVES, MONITORS, Etc.
PHONE FOR DETAILS

BEEBUG UTILITIES

ULTRABASE (464/664/6128) DISC	17.95
ULTRABASE (464/664/6128) CASS	14.95
LOCKSMITH (464/664/6128) DISC	16.95
LOCKSMITH (464/664/6128) CASS	13.95
LOCKSMITH (464/664/6128) ROM	29.95
REMBRANT (464/664/6128) DISC	16.95
REMBRANT (464/664/6128) CASS	13.95
DISC DEMON (464/664/6128) DISC	17.95
DISC DEMON (464/664/6128) ROM	29.95
TOOLKIT (464/664/6128) DISC	17.95
TOOLKIT (464/664/6128) CASS	14.95
TOOLKIT (464/664/6128) ROM	29.95

COMPLETE OFFICE SUITE

DATABASE:	
MINI OFFICE II (464/664/6128) CASS	14.95
MINI OFFICE II (464/664/6128) DISC	19.95

PRINTERS

SEIKO SP1000CPC PRINTER FOR AMSTRAD	240.00

All prices include VAT, Carr. Extra.
Software orders add £1.80 P&P.
Hardware orders add £7.00 per item P&P.
Joysticks add £1.00 P&P.

OPEN MON-SAT 9AM–8PM

EXPRESS REPAIRS!

Faulty Amstrad? . . . Send just the keyboard. DO NOT send the monitor, unless the monitor is also DEAD! (To make sure monitor is DEAD, switch on monitor in darkened room, turn up brightness to maximum and after 5 minutes switch off. If you get a bright spot receeding, then monitor is O.K. (not DEAD)). Please send all items, well packed by 'Compensation Fee Paid' – Post, details from your P.O.

AMSTRAD REPAIRS BETWEEN £14 and £55

SPECTRUM REPAIRS BETWEEN £9 and £20

COMMODORE REPAIRS BETWEEN £14 and £35

BBC REPAIRS BETWEEN £14 and £45

ESTIMATES GIVEN ON PRINTERS/DISK DRIVES ETC.

MANCOMP GUARANTEE
If the same fault occurs within 90 days of our repair, we will repair it FREE of charge AND refund the postage
*Terms and Conditions available on request

FIRST –
To provide 'While-U-Wait' Service.

FIRST –
With International repairs and discounts for Schools, Hospitals and H.M. Forces.

FIRST –
To provide Insured/Recorded Delivery on return journey.

FIRST –
With ***LOW CHARGES*** (e.g. £9 for keyboard faults).

FIRST –
For ***PROFESSIONALISM*** . . . "Of all the repair companies 'Sinclair User' spoke to, ***MANCOMP*** seemed the most professional when it came to advice and a helpful attitude". AUGUST 1985.

FIRST –
For ***SPEED*** . . . "One firm, at least, can usually effect any necessary repair 'over-the-counter' in 45 mins. Based in Manchester, ***MANCOMP*** can offer what is arguably the fastest turnaround in the business, to personal callers". 'CRASH' Magazine, JUNE 1985.

FIRST –
For ***ADVICE & HELP*** . . . "I have come across a firm that will be more than willing to advise you as to how to remedy your problem. They are called ***MANCOMP*** and as well as repairing faulty computers, are also quite willing to discuss your problems with you, and offer reasonably cheap and (more importantly) CORRECT cures". Phil Rogers, 'POPULAR COMPUTING WEEKLY', JANUARY 1985.

FIRST –
For ***LOW PRICES*** . . . "My computer blew recently. I took it to ***MANCOMP***, who fixed it in 8 mins. and for less than £10. they are local, 'clued-up', and blindingly efficient!" COMPUTER COLUMN, '4 HEATONS DIGEST', (Vol. 1, No. 11.).

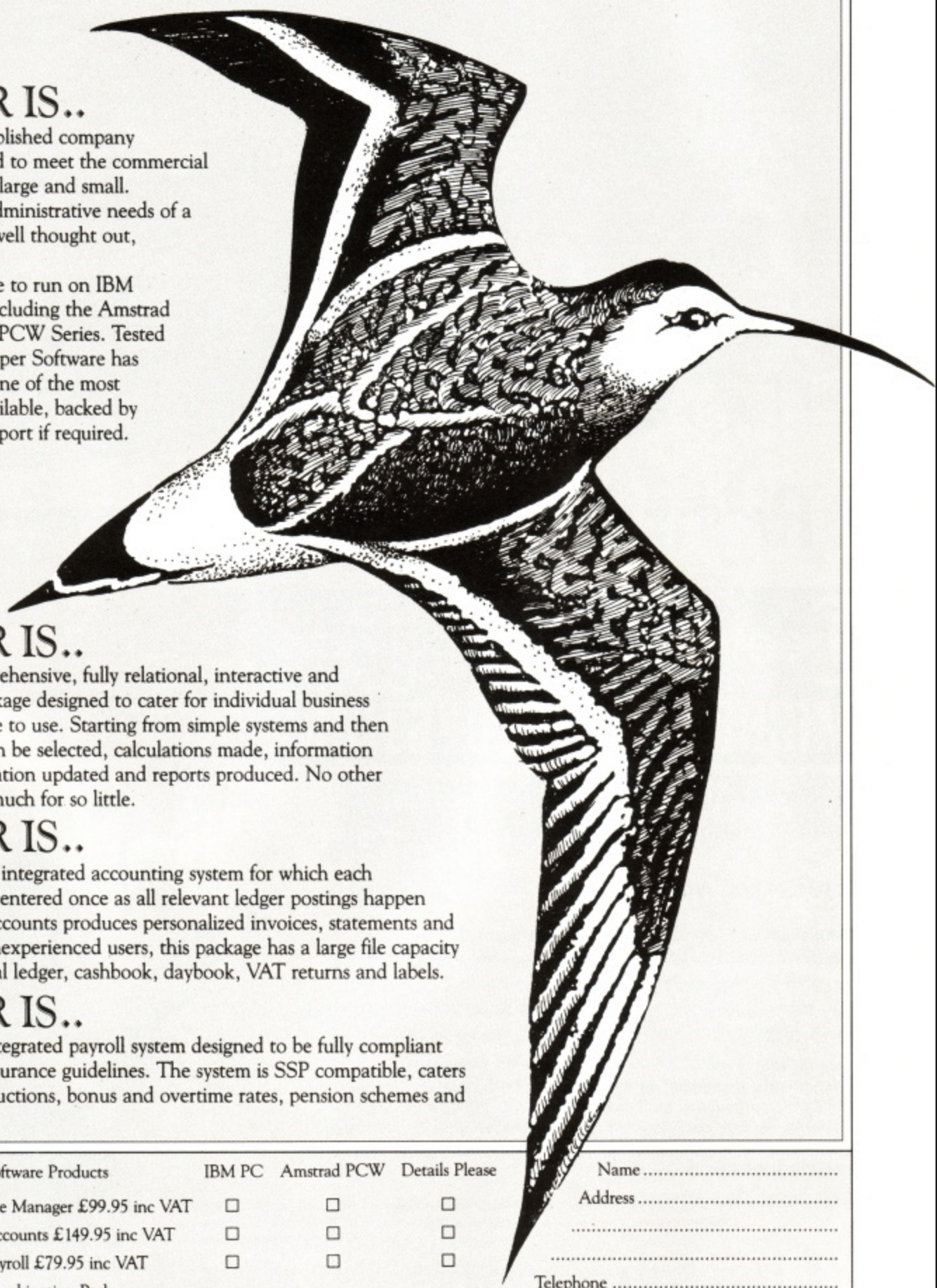
FIRST –
For ***HONESTY*** . . . Call in and watch your computer being tested and repaired 'While-U-Wait'. Our engineers don't disappear into a back room. If there is nothing wrong, we will tell you!

FIRST –
For ***REPUTATION*** . . . We have a reputation built on 2½ years of successful Spectrum, BBC, Commodore, Apple and IBM repairs.

MANCOMP LTD

(Dept AA11) PRINTWORKS LANE, LEVENSHULME, MANCHESTER M19 3JP.
Tel 061-224 1888 or 061-224 9888

WHAT IS SANDPIPER?



SANDPIPER IS..

A professional, well-established company producing software designed to meet the commercial requirements of businesses, large and small. Produced to cater for the administrative needs of a busy office, the software is well thought out, practical and simple to use.

All products are available to run on IBM PC/compatible machines including the Amstrad PC 1512, and the Amstrad PCW Series. Tested in the market place, Sandpiper Software has proved, by demand, to be one of the most popular software ranges available, backed by full customer telephone support if required.

SANDPIPER IS..

File Manager — a comprehensive, fully relational, interactive and programmable multifile package designed to cater for individual business needs, and yet it is so simple to use. Starting from simple systems and then expanding upwards, files can be selected, calculations made, information returned to any file, information updated and reports produced. No other database package offers so much for so little.

SANDPIPER IS..

Accounts — a simplified integrated accounting system for which each transaction need only to be entered once as all relevant ledger postings happen automatically. Sandpiper Accounts produces personalized invoices, statements and remittances. Designed for inexperienced users, this package has a large file capacity for Sales, Purchase, Nominal ledger, cashbook, daybook, VAT returns and labels.

SANDPIPER IS..

Payroll — a simplified integrated payroll system designed to be fully compliant with all Tax/National Insurance guidelines. The system is SSP compatible, caters for additions and deductions, bonus and overtime rates, pension schemes and holiday pay.

Sandpiper Software Products	IBM PC	Amstrad PCW	Details Please
Sandpiper File Manager £99.95 inc VAT	☐	☐	☐
Sandpiper Accounts £149.95 inc VAT	☐	☐	☐
Sandpiper Payroll £79.95 inc VAT	☐	☐	☐
Sandpiper Combination Pack Accounts & Payroll £199.95 inc VAT	☐	☐	☐

I enclose a cheque made payable to Sandpiper Software Ltd

ACU 12/86

Name .....

Address .....

.....

.....

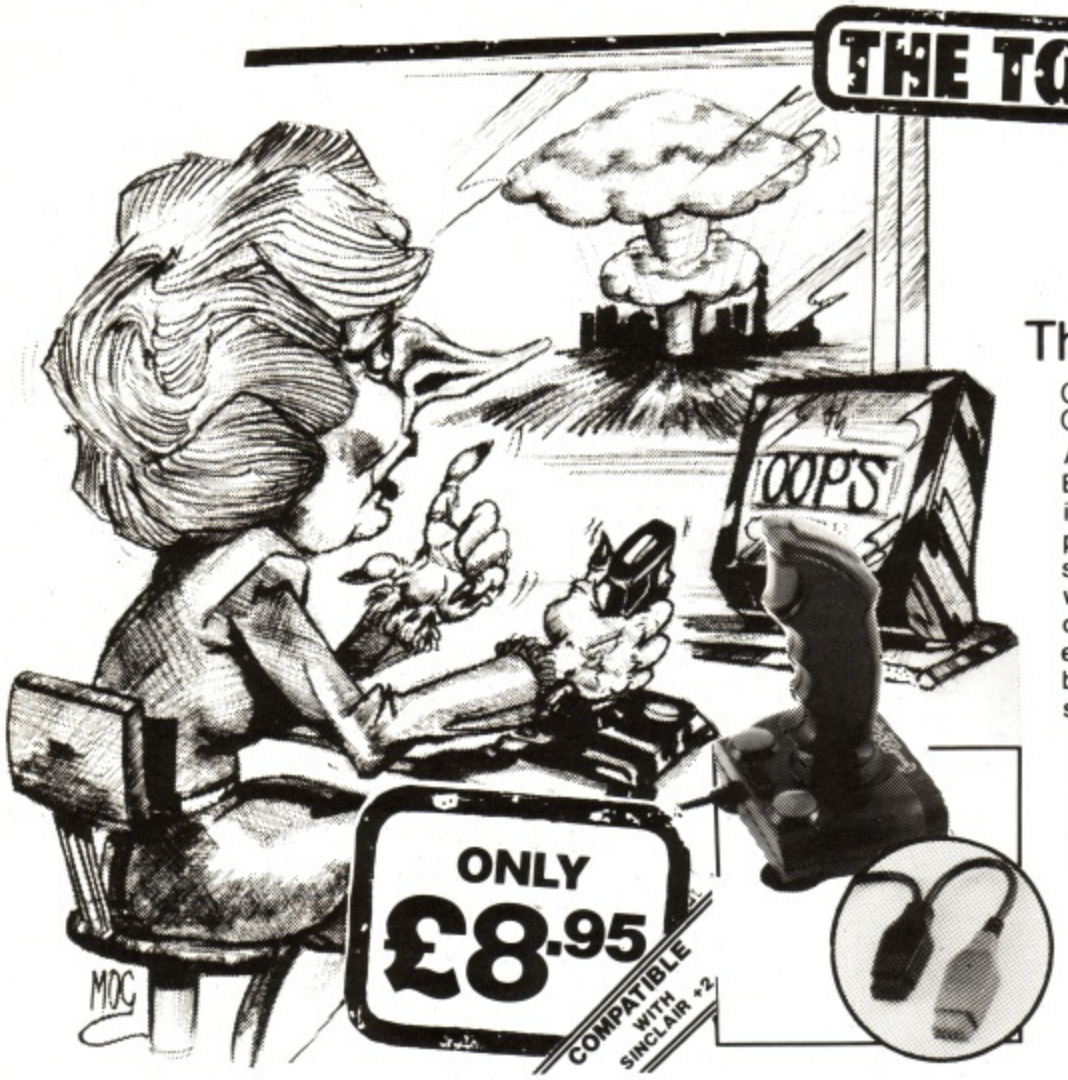
Telephone .....

Please debit my Access/Visa no. which is:

.....

SANDPIPER SOFTWARE LTD 24 ABBOT ST. WREXHAM CLWYD LL11 1TA TELEPHONE (0978) 358832

Probably the best joysticks in the world



125+

The Explosive Joystick

Compatible with ZX Spectrum, 16k, 48k, 128k, +2, Commodore 64, Vic 20, Amstrad, Atari, etc.

At only £8.95 the features on the 125 are second to none. Besides its unique internal structure, built to withstand immense punishment from even the most vigorous games player, the joystick contains no less than four extremely sensitive fire buttons. Two are housed in the handgrip which has been moulded for extra comfort and ease of operation. The trigger finger fire button provides ease and comfort for your finger and the top fire button is contoured to fit your thumb for sure fire shooting. The base fire buttons are positioned for extra control and two hand firing whether you are right or left handed.

A built in auto-fire switch provides continuous shooting at the touch of a fire button.

Including Spectrum+2 Selector Connector.

The 125 comes complete with a full 12 months warranty

Prices include VAT, postage & packing. Delivery normally 14 days.
Export orders at no extra cost. **Dealer enquiries welcome.**
Cheetah, products available from branches of

Dixons WHSMITH High St. Stores and all good computer shops.

A Right Royal Joystick

Cheetah MACH I+
MICROSWITCH JOYSTICK

- METAL SHAFT
- AUTO FIRE
- +2 SELECTOR CONNECTOR
- 12 MONTH WARRANTY

ONLY £14.95



- Deluxe, robust construction. ● Comfortable rugged hand-grip, 8 directional control with automatic centering.
- Heavy duty base with strong stabilizing suction cups.
- Highly sensitive light touch **MICRO SWITCH** fire buttons.
- Ergonomically designed control handle with indestructable **METAL SHAFT.** ● Built in **AUTO FIRE** function.

MachI+Joystick compatible with: ● Sinclair ZX Spectrum 16K, 48K, 128K, +2
● Amstrad computers ● Commodore 64 & VIC 20 Computers
● Commodore C16 & Plus 4 Computers (adaptor sold separately)
● MSX Computers ● Atari 2600 & Atari 5200 Video Game Systems
● Atari Home Computers

Prices include VAT, postage & packing. Delivery normally 14 days. Export orders at no extra cost., Dealer enquiries welcome.
Cheetah products available from branches of **Dixons** WHSMITH High St. Stores and all good computer shops.

Cheetah Marketing

CHEETAH MARKETING LTD.
1 WILLOWBROOK SCIENCE PARK
CRICKHOWELL ROAD, ST. MELLONS, CARDIFF
TEL: CARDIFF (0222) 777337 TELEX: 497455
FAX: 0222 779404





Chance your arm!

Have a shot at winning a robot arm

Spectravideo's Robot Arm has 5 axes of movement – Base, Lower Arm, Fore Arm, Wrist and Foreceps. Controlled by two joysticks the Arm can rotate and move up and down at the same time to provide hours of enjoyment.

Alternatively it could be used for educational purposes, with a computer, to learn robotics.

Whether for laughs or learning Spectravideo is giving away one of these extra arms. And 10 snappy Quick Shot turbo charged joysticks to the 10 runners up.

To win you have to show you know something about your own arm by answering the questions below.

Questions

1. What is the proper term for your funny bone?
2. Which two bones in your arm interact when you twist your hand?
3. Which muscles contract when you lower your arm?

Rules:

1. Sender of the first correct entry drawn on December 22 will receive a robot arm. The 10 runners up will each receive a Quick Shot joystick.
2. You may photocopy the form but only one entry is allowed per reader.
3. The judge's decision is final. No employees of *ACU* may enter.

ROBOT ARM ENTRY FORM

Answers

1. .....

2. .....

3. .....

Name .....

Address .....

.....

.....

Send your entry to:
Robot Arm Competition,
Amstrad Computer User, 169 Kings Road,
Brentwood, Essex CM14 4EF.

Quite simply the most realistic sports simulation game of all time.

HARDBALL

"Hardball is the best program from Amstrad since Sorcery this is not a game you are going to tire of quickly"
...AMSTRAD COMPUTER USER



Here's computer Baseball with 3-D full-size animation so real it almost looks like real TV.

Hardball puts you in the field as both player and manager with control of physical play and strategic decisions, testing your split-second reactions and your planned approach to the game.

TAPE £9.95

DISC £13.95

© Accolade Inc.

Soft 06063/07063

(Keyboard or Joystick)

AMSTRAD GOLD HARDBALL AMSTRAD GOLD HARDBALL AMSTRAD GOLD HARDBALL AMSTRAD GOLD HARDBALL

Available from Amsoft P.O. Box 10, Victoria House, Sunderland. SR1 3PY Tel: 0783 673395
and good Amstrad computer stockists

Make it easy on yourself

Peter Green offers tips on using an assembler and a sort subroutine module that leaves Basic for dead

With any luck I've persuaded you that machine code is not the esoteric black art it's generally made out to be.

However, Basic programmers have the advantage that the Amstrad CPC machines come with their language resident (built in) at no extra cost. Machine coders need to buy an assembler – a program that converts easy-to-read English like assembly codes or mnemonics into the binary code that the Z80 microprocessor needs to function.

Which to buy?

Amstrad owners are spoiled for choice here, with nearly a dozen packages on the market. As far as the production of machine code goes, they all offer the same standard facilities. For example, they all allow simple expressions to be used for assignment, as in LD A,"X" which puts the Ascii code for X in the A register, or LD HL, table+10).

So your choice really depends on user-friendliness (a tired phrase but an important quality), and any luxury features of the program. For example, one (non-Amstrad) assembler I've worked with uses CTRL-E, CTRL-X, CTRL-S and CTRL-D to move the cursor around the screen – on a machine with cursor keys! Not a good buy.

My own assembler is the Maxam/Protext combination on rom from Arnor. Maxam is the actual assembler, working on source code written with the Protext word processor.

I find this combination much easier to use than other assemblers which insist on using their own line editors, like Basic's. The rom programs are permanently resident and the range of features offered is impressive. And Arnor is very helpful with technical inquiries.

But feel free to check out the reviews in the back issues, read the ads, try a friend's package or ask for a demonstration.

By the numbers

Sharp-eyed Basic programmers will have noticed the absence of line numbers in my examples. Well, why does Basic use line numbers?

Firstly, when writing in Basic, the editor uses the line number to insert the line at the correct place in the program. Some old-fashioned assemblers still insist on using a similar system, but with a word processor-style editor you can insert code easily.

Secondly, line numbers are convenient for specifying where the program has to jump when it encounters a GOTO or GOSUB instruction.

Of course, if GOSUB 500 executes a routine to clear the screen, then being able to type GOSUB clear-screen would make the program a lot easier to understand. The text "clear-screen" is called a label. In assembler, this is exactly what we are able to do – which is just as well, because the machine code equivalent of line numbers for jump control are signed offsets and memory addresses.

These would be a real pain to work out by hand, but the assembler does all the necessary calculations for us.

Ch-Ch-Ch-Changes

Labels make the alteration of an assembler program much easier. Consider the Print subroutine I gave you last month – it works fine but there are disadvantages.

For example, it needs the length of the string in the B register. This means that, like Basic, we can only have strings up to 255 characters in length, the largest number that will fit into a single 8 bit register. And we need to know how long the string is before we print it.

Also, remember how limited a number of registers we have on a microprocessor. Can we avoid the use of B altogether, freeing it for some other duty?

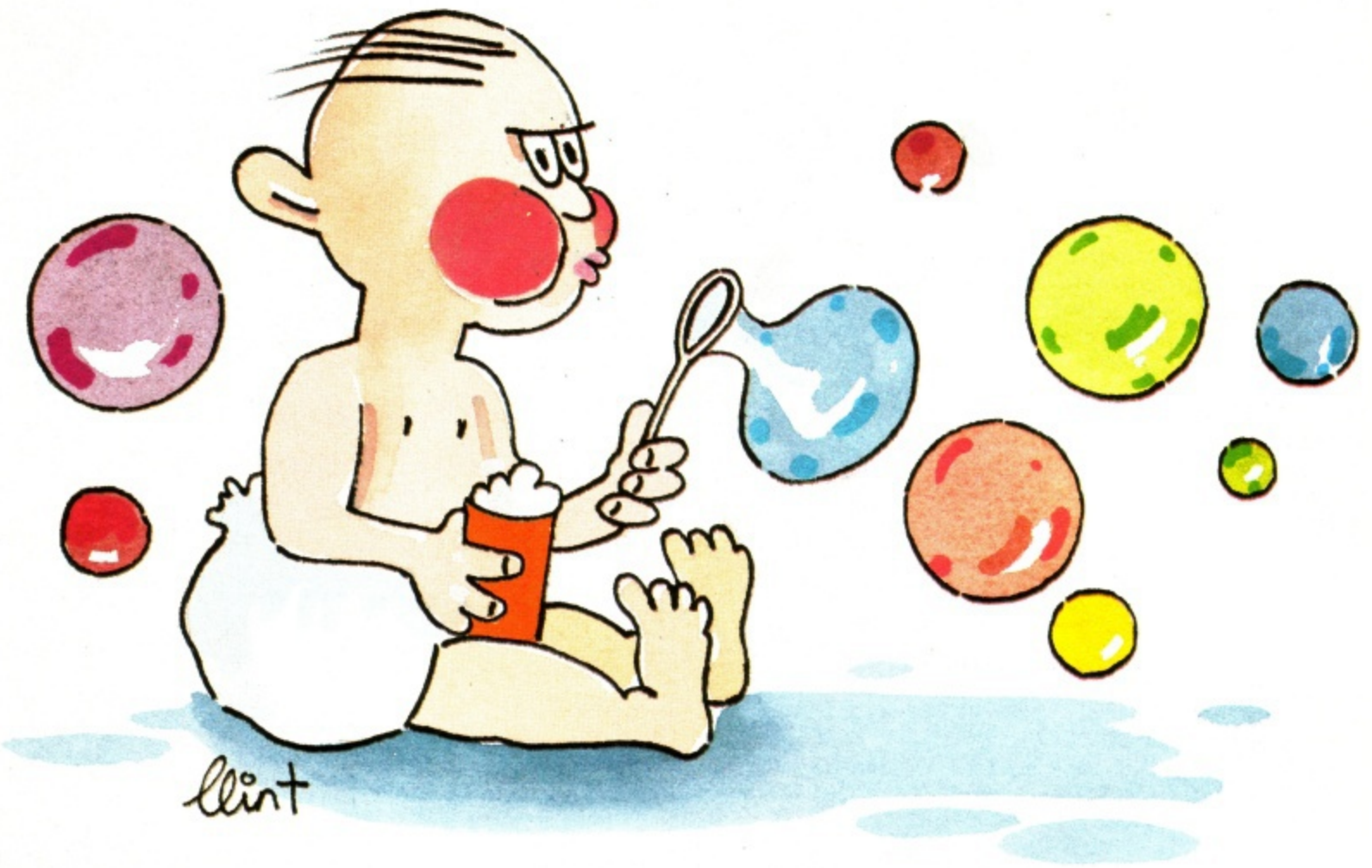
Listing 1 shows the old print subroutine, and Listing 2 is a similar routine that does not require the length of the string to work. Instead we choose an Ascii character code which we will never want

```
                LD HL,string        ;The assembler works out the actual address of the label 'string' as a 16-bit number
                LD B,5              ;We know the string is five characters long
                CALL print          ;This is a subroutine that prints B characters starting from address in HL
                RET                 ;Go back to wherever we called this routine from
.print          LD A,(HL)           ;Get a character from the address pointed to by HL
                CALL &BB5A          ;Call the firmware subroutine to print a character on screen
                INC HL              ;Increment (add one to) HL to point to next character
                DEC B               ;Decrement B, the loop counter
                JR NZ,print         ;IF B did not reach zero, THEN there are more characters to print. Go do it.
                RET                 ;ELSE B is zero, so we've printed five characters and finished. Return to
                                    ;where we called this subroutine.
.string         TEXT "Hello"        ;the message to be printed
```

Listing 1

```
                LD HL,string        ;The assembler works out the actual address of the label 'string' as a 16-bit number
                CALL print          ;This is a subroutine that prints a string of characters starting from address in
                                    ;HL and ending in a null (0)
                RET                 ;Go back to wherever we called this routine from
.print          LD A,(HL)           ;Get a character from the address pointed to by HL
                INC HL              ;Increment (add one to) HL to point to next character
                OR A                ;Was character a zero, flagging the end of the string?
                RET Z               ;IF so, THEN we've printed all the characters. Return to where we
                                    ;called this subroutine.
                CALL &BB5A          ;ELSE call the firmware subroutine to print a character on screen
                JR print            ;Go get next character from string.
.string         TEXT "Hello",0      ;the message to be printed
```

Listing 2



to print, and use it as an end-of-string marker. The print routine then works along the string, thousands of characters long if we want, stopping only when it finds the special character.

I've chosen a zero because zero is very easy to test for in machine code and isn't a very useful Ascii character – but there's no reason why you couldn't use &FF (255) or any other code.

Suppose we had made this change and had to work out the addresses of subroutines and data by hand. Both print subroutines happen to be nine bytes long, but the LD B,5 instruction no longer needed in Listing 2 saves two bytes. So all the addresses after it, like that of the routine print and the data string have changed.

In a big program it would be a terrible job to re-calculate and alter by hand all the addresses every time you made a change to the program. The assembler takes care of all this when it generates the machine code, noting which addresses the labels refer to and inserting them into the machine code in the correct binary format.

It's just an expression

Labels have other uses besides identifying the addresses of subroutines, jumps and data. They can be used in expressions to relieve you of other monotonous calculations.

Suppose you write a game with a lot of variables which have to be initialised to some set of fixed values at the start of a level. You could keep them together as two blocks, the initial and working sets, and copy the former into the latter at the start of each level.

This means you need to know the length of the data block, but don't count the bytes yourself! Label the start and end of the table, and use something like:

```
LD BC,table-end-table-start
```

so that the assembler does all the hard work for you.

Labels can also be used to replace fixed values of data or addresses to improve the readability of the program or make modification easier. The assembler has an equate command, EQU, to allow this.

So if you're writing a word processor program which word-wraps text (that is, moves a whole word on to the next line rather than splits it), you'll probably be using the width of the screen a lot in calculations. Putting a line:

```
width  EQU 80
```

in your source code means you can write width instead of 80 throughout the program, just like defining a constant in Basic. The program will be much easier to understand – and when you decide to convert it to the PCW 8256 with its 90-column screen you simply alter the line to:

```
width EQU 90
```

Much better than trying to find and alter every occurrence of the number 80 in the program, isn't it?

The good label guide

The only trouble with labels is that, unlike line numbers, you have to think them up. A good assembler will allow long labels which can be descriptive and improve readability, but older assemblers limit labels to six characters. With these you can't use MOVE-STRING, only MOVSTR, which is better than a line number but not much.

With so few functions available in machine code the assembly programmer needs to build up a basic library of useful routines or modules, such as the string print in Listing 2. These can be written once and incorporated in future programs.

I tend to use a good descriptive (and if necessary, long) label at the entry point to the module, then numbered, possibly abbreviated labels within the routine. For example, a module called LOAD-

Your key to communications!

NEW AMSTRAD DATABASE





PRESTEL

PRESTEL is a trademark of British Telecommunications

FREE Electronic Mail . . . International Telex . . . 10 National Chatlines (Interactive Bulletin Boards) . . . 70,000 users across the UK . . . Teleshopping . . . Multi-User Interactive Strategy Games

Instant computer news . . . Hardware and software reviews . . . Technical features . . . Hints and tips . . . On-line business advice and features

FREE and discounted quality software to download direct to your micro – **24 hours a day**

300,000 pages of information on the huge Prestel database

for just 20p a day

Micronet 800 – The ultimate peripheral

Micronet 800
8 Herbal Hill, London EC1R 5EJ
Telephone: 01-278 3143

To: Micronet 800, 8 Herbal Hill, London EC1
Please send me a brochure on Micronet 800

Name_____

Address_____

_____

_____ Telephone No_____

Age_____ Micro_____

AMU 8/86

PRICE PROMISE
We will beat any genuine price on the spot — phone for details.

TOP QUALITY
5¼" Discs — DS/DD 48 TPI
PACK OF TEN **£13.50**

AMSTRAD PC1512 *(EIGHT MODELS)*
Phone for latest prices.



COUNTY COUNCIL LOCAL & EDUCATIONAL AUTHORITIES GOVERNMENT BODIES, PLEASE SEND US YOUR OFFICIAL ORDER, UPON RECEIPT OF WHICH WE WILL **IMMEDIATELY FULFILL YOUR ORDER.**

8512-8256 BOOKS

Mastering the PCW 8256	£8.95
CP/M Software Bus	£8.95
CP/M Bible	£15.95
Amstrad Word Processing PCW 8256	£8.95
Introduction to Amstrad CP/M	
Assembly Language	£9.95
Using the PWC 8256	£9.95
CP/M Handbook	£14.95
Step by Step Guide To Locoscript	£5.95

BASIC DRAWING* PACKAGE D.R. DRAW & ELECTRIC STUDIO LIGHT PEN
WAS £129.90 **£99.90** PRICE INCLUDES VAT & P.P.

POCKET WORDSTAR
ONLY **£39.95**
SAVE £10 PRICE INCLUDES VAT & P.P.

ELECTRIC STUDIO LIGHT PEN Special Offer
FOR GRAPHIC DESIGN ONLY **£64.99** PRICE INCLUDES VAT & P.P.

1512 BOOKS

Basic Guide Z Book	£7.46
Using Dos +	£9.95
Using Gem on the PC1512	£12.45
Business Presentation Graphics	£12.95
Dos Manual	£17.50
Word Pro using Gemwrite	£9.95
Intro PC1512	£7.95
Basic 2 Book 2	£9.95

256K UP-GRADE
NOW ONLY **£34.95** PRICE INCLUDES VAT & P.P.

SPECIAL OFFER
D BASE II
WAS £119 NOW **£99.95** PRICE INCLUDES VAT & P.P.



8256 UP-GRADE ~~£222.00~~
TO FULL 8512 SPEC INC. DISC DRIVE & MEMORY. **£179.95** PRICE INCLUDES VAT & P.P.

SPECIAL OFFER
TASWORD 8000 } **£29.99**
TASPRINT 8000 }
~~£39.90~~ PRICE INCLUDES VAT & P.P.

PRICES INCLUDE VAT & P.P.

HARDWARE

RS232/CENTRONICS I/F	£59.95
FD2 (2nd Disc Drive)	£169.95
256K RAM UPGRADE	£34.95
EXTENSION LEAD SET	£14.95
DUST COVER	£14.95
PRINTER RIBBONS PCW 8256/8512	£6.95
3" DISCS SINGLE DENSITY/10	£39.95
10MB HARD DISC	£516.35

PRICES INCLUDE VAT & P.P.

COMPUTERS

AMSTRAD 6128 GREEN SCREEN	£279.95
AMSTRAD 6128 COLOUR SCREEN	£369.95
AMSTRAD 464 GREEN SCREEN	£179.95
AMSTRAD 464 COLOUR SCREEN	£279.95

PRINTERS — PRICES INCLUDE VAT & P.P.

MP165 165CPS DOT MATRIX	£239.95
CMP|80|NLQ|PRINTER	£199.00
DAISY JUNIOR DAISYWHEEL	£279.00
BROTHER HR15	£399.95
AMSTRAD DMP 2000 PRINTER	£149.95
DMP 3000	£199.00

SOFTWARE DISCOUNTS

All in stock and currently available.
PRICES INCLUDE VAT & P.P.

WORK PROCESSORS (1512)

Amsoft Wordstar 1512	£62.95

DATABASES (1512)

Sage Retrieve	£102.46
Compsoft Delta 4.3	£89.95
Caxton Cardbox	£53.95
Compact Nucleus	£53.99
Camsoft Cambase	£44.99
Tas — Tas Plus	£71.41

SPREADSHEETS (1512)

Amsoft Supercalc 3	£62.95

BUSINESS PRODUCTIVITY (1512)

Amsoft Sidekick	£26.95
Caxton Brainstorm	£44.99
Compsoft Dominoe	£89.95
Caxton Timekeeper	£44.99
Sage Deskset	£71.41
Compsoft One Up	£44.95

ACCOUNTING SOFTWARE (1512)

Sage Booker Keeper	£102.46
Sage Accountant	£154.21
Sage Accountant Plus	£205.96
Sage Payroll (full feature payroll)	£102.46
Map Integrated Accounts Invoicing, Sales, Purchase, Nominal, Stock)	£154.21
Map Sales Ledger and Invoicing	£44.10
Map Nominal Ledger	£44.10
Map Purchase Ledger	£44.10
Map Stock Control	£44.10
Map Payroll	£44.10
Compsoft Bookworker (Invoicing, Sales, Purchase, Nominal, Stock, Financial Reporting)	£179.95
Camsoft Integrated Accounts (Stock, Invoicing, Sales)	£134.95
Camsoft Integrated Accounts (Stock, Invoicing, Sales, Purchase, Nominal)	£89.95
Camsoft Integrated Accounts (Sales, Purchase, Nominal)	£89.95
Camsoft Sales Ledger	£44.95
Camsoft Stock Control	£44.95
Camsoft Invoicing	£44.95
Camsoft Purchase Ledger	£44.95
Camsoft Nominal Ledger	£44.95
Camsoft Payroll	£44.95

COMMUNICATIONS (1512)

Sage Chit-Chat (Electronic Mail, Viewdata)	£102.46
Sage Chit-Chat Inc Modem V21/V23 Manual	£205.95

MISCELLANEOUS (1512)

Caxton Touch N Go	£22.49
Compsoft Delta Graph	£62.95

ENTERTAINMENT SOFTWARE (1512)

Winter Games	£17.95
Crusade In Europe	£22.45
Solo Flight 2	£17.95
F15 Strike Eagle	£17.95
Hellcat	£17.95
Spitfire Ace	£17.95
Silent Service	£17.95
Flight Simulator II	£44.95
Leather Goddess	£24.95
Pawn	£19.95

***AND MANY MORE* — Phone for Latest.**

LEISURE (8512-8256)

Nominal	Now £13.99
Cirrus Chess	Now £12.99
Bridge	£17.95
Hitchhikers Guide	£26.95
3D Clock Chess	£17.95
Classic Adventure	£13.45
Invaders	£18.95

COMMUNICATION (8512-8256)

Sage 'E' Mail	£62.95
Sage Viewdata	£62.95
Modem with Viewdator OR 'E' Mail	£179.95
Modem with Viewdator AND 'E' Mail	£214.95

EDUCATIONAL (8512-8256)

Locoscript Tutorial	£7.95
Ian Key Typing Course	£22.95
Ian Key Two Finger Typing	£22.95
Touch N Go	£22.95
Hands-On CP/M Plus	£19.95
Hands-On Supercalc	£19.95
Hands-On dBase II	£19.95

WORDPROCESSING (8512-8256)

New Word	£62.10
Pocket Wordstar	£39.95
Tasword 8000	£21.95
Tasprint 8000	£12.95
Prospell	£26.95

DATABASES (8512-8256)

Gemini Data Gem	£35.95
Camsoft Cambase	£44.95
Pocket Datastar	£44.95
Pocket Reportstar	£36.95
Cardbox	£53.95
Delta	£89.95
Sage Retrieve	£62.95
Sage Magic Filer	£62.95
Microfiler with Microword	£44.95
Condor 1	£89.95
Matchbox	£26.95
Data Base II	£99.95
Compact Nucleus	£89.95

SPREADSHEETS (8512-8256)

Supercalc 2	£44.95
Cracker	£44.95
Multiplan	£62.95
Scratchpad	£62.95
Pocket Calcstar	£44.95

GENERAL (8512-8256)

Target Task	£89.95
Brainstorm	£44.95
Smart Key II	£44.95
DR Pascal	£44.95
DR C Basic Compiler	£44.95
DR Draw	£44.95
DR Graph	£44.95
Write Hand Man	£26.95

ACCOUNTS PACKAGES (8512-8256)

Compact Sales & Invoicing	£62.95
Compact Sales Ledger	£62.95
Compact Stock Control	£62.95
Compact Sales Ledger	£62.95
Compact Purchase Ledger	£62.95
Compact Nominal Ledger	£62.95
Compact Integrated Acts	£179.95
Compact Daybook	£44.95
Camsoft Stock	£44.95
Camsoft Sales Ledger	£44.95
Camsoft Purchase Ledger	£44.95
Camsoft Nominal Ledger	£44.95
Camsoft Invoicing	£44.95
Camsoft Stock/Invoicing/ Sales	£89.95
Sage Popular	£89.95
Sage Popular Plus	£139.95
Sage Combo	£134.95
Sage Super Combo	£179.95
Quest Cash Trader	£89.95
Quest Cash Trader/Analyser	£134.95
Shoebox	£134.95
Time & Cost Recorder	£62.95
Cambase Stock/Invoicing/Sales/ Purchase/Nominal	£124.95
Map Integrated Accounts	£124.95
Sandpiper	£124.95

PAYROLL (8512-8256)

Compact	£89.95
Cam Soft	£44.95
Sage	£62.95

AMSOFT PRODUCTS (6128)

Invostat	Now £13.99
Transalt	Now £13.99
Stock Invoices Sales Ledger	Now £39.99
Purchase Ledger	Now £13.99
Nominal Ledger	Now £13.99
Microscript	Now £24.99
Microspeed	Now £24.99
Micropen	Now £24.99
Micrograph	Now £12.99
Cashbook Accounts	Now £13.99
Masterfile II	Now £13.99
Starwatcher	Now £12.99
Project Planner	Now £12.99
Decision Maker	Now £12.99

LESS THAN ½ PRICE!

Overseas orders add £2 per item, (computers) £18 each including insurance, P&P. All payments in sterling.

RICHARD REEVES LTD. NORTHAMPTON NN1 1BR. Tel: (0604) 28515 24 HOUR HOTLINE SERVICE (0604) 33578

Please send me the following items:–

Qty	Product	Price (inc VAT)

12/86 M/C TYPE ☐ 1512 ☐ 8256 ☐ 6128 ☐ 464 TOTAL

Name Mr/Mrs/Miss

Address

Postcode Tel. No.

I enclose (please tick) ☐ cheque/p.o. or, please debit to my ☐ Access ☐ Visa card

URGENT SECURICOR DELIVERY ADD £7.00

Send to: FREEPOST
RICHARD REEVES LTD.
NORTHAMPTON NN1 1BR.
Tel: (0604) 28515

```
.sort                                ;enter with HL=no. of strings in list, DE=list start
                LD A,H               ;LET A = H
                OR L                 ;LET A = A
                OR L                 ;(so A=0 if and only if H=0 and L=0)
                RET Z                ;IF no. of strings = 0 THEN RETURN
                LD (list_length),HL  ;ELSE initialize listlength counter to no. of strings
.sort1          LD HL,(list_length)  ;LET HL = list_length
                DEC HL               ;LET HL = HL-1
                LD (list_counter),HL ;LET list_counter = HL (initialise string counter)
                LD A,H               ;LET A = H
                OR L                 ;LET A = A
                OR L
                RET Z                ;IF list_length = 0 THEN RETURN (because list has only one string)
                PUSH DE              ;ELSE save list start
                EX DE,HL             ;LET HL = DE, LET DE = HL (making HL = start of list, a fake 'second string' to
                                     ;allow sort2 to work correctly)
                LD B,0               ;LET B = 0 (zero the pass exchange flag)
.sort2                               ;here HL=pointer to second string of pair
                LD D,H
                LD E,L               ;LET DE=HL (pointer to new first string in pair)
.sort3                               ;move second-string pointer to next string in list
                LD A,13              ;LET A = 13 (marker byte test value, carriage return)
                LD C,0               ;LET C = 0 (zero the current exchange flag)
.sort4          CP (HL)              ;compare string character to A, which is 13
                INC HL               ;point to next character in string
                JR NZ,sort4          ;IF character <> 13 THEN GOTO sort4
                PUSH DE              ;ELSE save new first-string pointer
                PUSH HL              ;save new second-string pointer
.sort5           LD A,(DE)           ;LET A = character from first string
                CP (HL)              ;compare with character from second string
                JR NZ,sort6          ;IF A <> character THEN GOTO sort6 (with carry set if second>first)
                INC DE               ;ELSE LET DE = DE+1
                INC HL               ;LET HL = HL+1 (point to next character in each string)
                CP 13                ;have we reached the end-marker of the first string?
                JR NZ,sort5          ;IF character <> end-marker (13) THEN GOTO sort5
                SCF                  ;ELSE LET carry=1 (flag second>first, as second longer than first)
.sort6          POP HL               ;LET HL = old second-string pointer
                POP DE               ;LET DE = old first-string pointer
                JR C,sort7           ;IF carry = 1 THEN GOTO sort7 (second>first, so no exchange needed)
                EX DE,HL             ;ELSE LET HL = first-string pointer
                LD DE,temp           ;LET DE = pointer to safe temporary storage area
                PUSH DE              ;save swap area pointer
                PUSH HL              ;save first-string pointer
                CALL move_string     ;move first string into temp, including end-marker
                POP DE               ;LET DE = pointer to first string (here HL = start of second string)
                CALL move_string ;move second-string to first-string position
                POP HL               ;LET HL = pointer to swap area (here DE = new second-string position)
                PUSH DE              ;save new second-string position
                CALL move_string     ;move string at swap area to new second-string position
                POP DE               ;LET DE = new second-string position
                LD H,D
                LD L,E               ;LET HL = new second-string position too
                LD BC,&FFFF          ;LET B = &FF (an exchange was made) LET C = &FF (current exchange flag)
.sort7          PUSH HL              ;save new second-string pointer
                LD HL,(list_counter) ;LET HL = string count
                DEC HL               ;LET HL = HL-1
                LD (list_counter),HL ;LET list_counter = HL
                LD A,H
                OR L                 ; test if string count is 0?
                POP HL               ;LET HL = second-string pointer
                JR Z,sort8           ;IF list_counter = 0 THEN GOTO sort8 (reached end of list)
                LD A,C               ;ELSE LET A = C (current exchange flag)
                OR A
                JR NZ,sort3          ;IF A = 0 THEN GOTO sort3 (an exchange occurred so the first-string pointer is OK
                JR sort2             ;ELSE GOTO sort2 (make first-string pointer = second-string pointer)
.sort8          CALL still_here      ;GOSUB still_here
                POP DE               ;LET DE = list_start
                LD A,B               ;LET A = B (the pass exchange flag)
                OR A
                JR NZ,sort1          ;IF A <> 0 THEN GOTO sort1 (list not sorted yet)
                RET                  ;ELSE RETURN (no exchanges were made so list is sorted)
.move_string    LD A,(HL)            ;LET A = character from source string
                LD (DE),A            ;LET destination = A
                INC HL               ;LET HL = HL+1
                INC DE               ;LET DE = DE+1
                CP 13                ;test for end_of_string marker
                JR NZ,move_string    ;IF A <> 13 THEN GOTO move_string
                RET                  ;ELSE RETURN because the string has been moved
.still_here     LD A,"."             ;LET A = ASCII code for dot
                CALL txt_output      ;GOSUB txt_output (print a dot to reassure the user)
                RET                  ;RETURN
.txt_output     EQU &BB5A
.temp           RMEM 30 ;some assemblers may need DEFS 30 to reserve 30 bytes of memory
```

FILE would have internal labels LF1, LF2, LF3 and so on.

Modules should be as general purpose as possible so they can suit many programs by passing them suitable parameters. The Complete Firmware Specification (Amsoft SOFT 968) is essential reading for Amstrad machine coders and demonstrates clearly what I mean by passing parameters to routines.

So does our giveaway subroutine for this month. Listing 3 is a bubble sort routine which puts any list of text strings into ascending order. This is a job which would cure insomnia if you tried it in Basic, but is reasonably fast in machine code.

Each string in the list must be terminated by a carriage return character, Ascii code 13.

To use the routine simply load the address of the start of the list in DE, the number of strings in the list in HL and CALL sort. On exit, the list is sorted.

A bubble sort works by scanning through a list comparing each successive pair of entries. If a pair are in order nothing happens, otherwise they are swapped over so that entries gradually drift into their proper places in the list. When a complete pass is made through the list without any swaps taking place the sort has been completed.

If you play with a short list with paper and pencil you'll see that a bubble sort gets its name from the fact that after the first pass the largest item has sunk to the bottom of the list in much the same way that bubbles don't (The Hitchhiker's Guide To Programming). Hence on each pass through the list, we can check one less entry (to save time).

The heavily commented source code, with the comments written in Basic style to help beginners, is virtually self-explanatory. To work correctly the list must have at least two entries, so first a test is made for HL being zero (empty list) or 1 (a single entry is already "sorted").

Most of the program consists of loading characters hither and thither, comparing numbers and jumping on the results of various tests. This is pretty straightforward. The only thing that Basic programmers might have problems understanding are the PUSH and POP instructions, which have no Basic equivalent.

For now just think of PUSH as an instruction which takes the contents of a register pair and shoves them into a mysterious region of the universe. POP gets numbers from the mysterious region and puts them into a register pair, in the opposite order they were PUSHed (that is, the last value in is the first one out).

Also note the routine "still-here". This simply prints a dot on the screen every pass through the list. It has no function other than to reassure the user that, during a sort of several thousand words and several minutes, the program hasn't actually crashed!

ACU

OPUS WILL MAKE YOU A BETTER ORGANISER FOR ONLY £60

If your micro system is starting to get out of hand a smart organiser could be the solution to your problems.

At just £59.95 the Organiser desk from Opus Supplies will help to organise your system beautifully. It's purpose built to provide plenty of storage space and because it's produced alongside our range of executive computer desking it offers a level of quality you'll appreciate.

Shelving accommodates your monitor, printer computer, disc drive or cassette recorder and software, and the teak-finished unit is fitted with castors to make it fully mobile. The Organiser's assembled dimensions are: H. 31″, W. 40¼″ and D. 26″.

And our price includes VAT and FREE DELIVERY.

The Organiser desk is suitable for use with all leading home micros including the BBC, Amstrad, Commodore and Sinclair computers.

Getting organised couldn't be easier. Phone us on 0737 65080 or simply post the coupon below.



To: Opus Supplies Ltd,
55 Ormside Way, Holmethorpe Industrial Estate, Redhill, Surrey.

Please rush me the following:
(PRICES INCLUDE VAT AND CARRIAGE)

_____ Organiser Desk(s) at £59.95 each (inc. VAT)

I enclose a cheque for £_____ or please debit my credit card account with the amount of £_____
My Access ☐ Barclaycard ☐ (please tick) no. is:

_____

ACU 12/86

Name _____

Address _____

_____

_____

Telephone

_____

_____

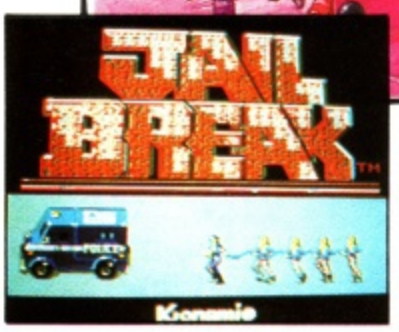
Opus.
Opus Supplies Ltd.

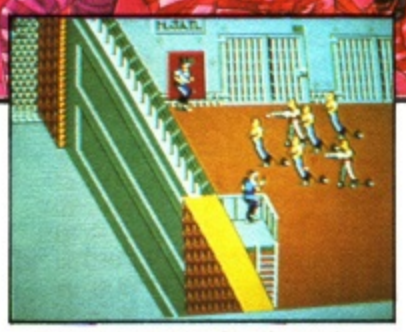
The Latest Smash Hit from

KONAMI

JAIL BREAK™









Screen shots from Arcade version

Coming Soon for

SPECTRUM £7.95
COMMODORE 64/128 CASSETTE £8.95 DISC £14.95
AMSTRAD CPC CASSETTE £8.95 DISC £14.95
MSX CARTRIDGE £15.95

Available from all leading retailers and in case of difficulty send cheques or postal orders to:
NMC LTD., PO Box 67, London SW11 1BS.
Tel: 01 228 6730

On the first day of Christmas my true love sent to me.
A joystick and a thingi.

What do you want for Christmas? How rich are your relatives? Well we can all dream. This is what Simon Rockman wants to find under the pine needles, walnut shells and tinsel.



Under £5

1. Thrust £1.99
The budget game from Firebird. If you can only afford one game this Christmas then make it Thrust. The ideal prezzy to ask for from the Grandad who thinks that five bob is a lot of lolly.

2. Kane £1.99
A Wild West rootin' tootin' shootin' game. Large sprites, plenty to do, programmed by Software Projects – sold by Mastertronic.

3. Knight Tyme £2.99
A Mastertronic MAD game and you'd be mad not to buy it. Outa your planet, and into space. If you were Spell bound now you should be Space bound in the game with a la carte menus.

4. Blank disc £4ish
This may sound like a really naff thing to ask for but a blank disc in the hand is worth ten in the shop, if the shop is closed.

5. ACU Binder £3.95
Do you lose your back copies of Amstrad User under piles of listings and discs – I know I do. If I was sensible I'd have sent off for a binder, now I'm going to have to ask Auntie Ada to buy me one for Chrissy.

6. Carbon ribbon for the PCW £4.95
Improve your image with a better ribbon. Once the head has made a pass the ribbon doesn't want to know again – but it leaves a good impression. Just the thing to blacken your borders and darken your dumps.

Over £5 but under £10

7. Superior Speech £9.95
Listen hear. Software which talks, a disc which discusses and a tape which tells tales. Superior's clever program lets you program your CPC to sing (?) Jingle Bells and be generally festive.

8. Disc box £5.95
Don't scoff, I used to think that a shoe box was a better and cheaper way of storing discs – but a real 3in disc box forces you to be organised – like a techie filofax. Holds ten discs without cases.

9. Dan Dare £9.95
It would be easy to fill this section up with games but the program of the moment must be this one. Dan from the planet Virgin battles to rescue Digby.

10. Thingi £6.99
Take a bent bit of plastic, a trumped up paper clip and a bit of velcro (Did you know that Velcro was invented for the moonshots?) and what do you get? Yup a manuscript holder which everyone looks at and says "What a rip-off, this is just a bent bit of plastic, a trumped up paper clip and a bit of velcro" – but everybody finds jolly useful.

11. ExBasic £9.95
One for PCW owners only. Mallard Basic is a bit short on the graphics side, so Nabitchi Computing has a clever set of routines which make circles simple and lines a laugh. Just 'cos it's cheap don't underestimate this.

Not too much change from £20

12. Amstrad assembly language course £12.50
If machine code is a closed book to you then try opening this one. Inside you'll find an assembler and the simplest guide to low level programming this side of the Z80.

13. Konix Speedking joystick £12.95
My fave joystick of all time, a bit weak in



Get the whole family around the computer at Christmas. There are 3,000 questions to answer, graphics and sound. It's harder to cheat at and costs less than the paper version.

Neat bits and bobs under £50

19. Cheetah Amdrum £34.95
A digital drum which can't be beaten. Plugged between your Arnold and an amplifier it'll deafen the neighbours – with a bit of programming you can sound like Phil Collins. With a radical haircut you can look like him too.

20. Amstrad SSA – 1 Speech synthesiser £29.95
Although the SSA-1 is obstensibly sold as a speech sythesiser it is really best used to get the most from stereo games. Once you have played Defend or Die with an SSA-1 hanging off the back you'll think that it's the only way to play.

21. Micropower rom board £34.95
Once you have used sideways roms you find it difficult to understand how you managed without them. The best romboard around hails from the frozen North. The box takes eight roms and connects with an edge connector.

22. Electric Studio light pen £29.95
Photography might be Latin for drawing with light but if you want to pen pixelwise then this is the cheap way to do it. There's a Joyce version but that costs £60 more.

23 Omni-Reader £49.99
The Omni-reader is pretty smart, it has a special "eye" which can read text and send it down a serial port as an Ascii string. You'll need an RS232 interface and it can only read selected typefaces.

24. Protext rom £39.95*
Once you've bought your rom board you're going to want something to stick into it. Protext is the best word processor to grace the Arnold, it's fast and friendly. Look out for ProSpell and ProMerge Plus.

25. Utopia rom £29.95*
Another Arnor add-on. This general rom offers disc formatting, automatic RUN"DISC and a graphics dump, plus loads of other things which seemed a good idea at the time.

26. & 27. Romatic Robot Multiface £34.95 or Mirage Imager £49.95.
There's not much to choose between these two – both take the contents of memory and dump it to disc. The Multiface doesn't work with as many programs but offers more and is certainly better value for money.

* *Not illustrated.*

the fire button league but with super quick responses and a very comfortable hand hold. Don't be put off by its appearance, this is one of the best things on this list.

14. & 15. Rainbird Art Studio or Music system £15.95
If you have a creative spark smouldering within you then this is the software to light the flame. Budding Hollies will score with the music maker and potential Picassos with light up the screen.

16. Subscribe to ACU £12.00
A present which lasts a year. For a mere £12 and no pence you can savour the wit and wisdom of you favourite magazine. There's probably a really good special offer to convince you further but the subscription department at the back of this mag will fill you in.

17. SOFT 968 CPC 464/664/6128 firmware guide
Curl up in bed for a good read. Thrill to the delights of KL DEL TICKER. Discover the inner meaning of MC BOOT PROGRAM and learn lots of phrases which sound good at the computer club. Seriously, an essential guide for machine code programming.

18. Trivial Pursuit £14.95
A board game you won't get bored with.

Lash out up to £80

28. DK Tronics TV adapter £69.95
Turn your CTM640 or CTM644 into a tele. Monitor Dallas, play with programs and programmes. You could even use it to hook up alien computers. Just think – a colour TV in your bedroom for half price. Green screens look a bit, well um, green. (Fine for cricket).

29. AMX Mouse £69.95
Squeak, squeak. How do you expect to be able to control your icons without a mouse? Complete with a simple art package and rumour has it there will be a newspaper style page make up system one day.

£100 to spend

30. 256K DK Tronics ram pack or Silicon disc £99.95
The more ram the better. Not only does it sound good when you are talking to friends, but it can be very useful. The 256K ram pack comes with bank switching software, some wonderful utilities and makes a CPC 464 hardware compatible for the CPC 6128.

31. Second disc drive £99.99
One drive good, two drives better. There are some jobs which really call for two drives, notably CP/M applications which need separate program and datum discs. If you've a 6128 don't forget to buy an extra disc lead.

32. Vidi digitizer £89.95
Have you got a video? You have? Good. The Rombo Vidi digitiser takes video input and turns it into a picture on your CPC. Digitize Dirty Den, program with Play School, get One Man and his Dog into ram. See the review in this issue.

Hey big spender – up to £160

33. Volex teletext adapter £125
A must for the would-be financial wiz-kid. The Volex teletext adapter takes television signals and turns them into Ceefax and Oracle, news, sport and financial information. There are some Amstrad programs to download and a topical computing section.

34. Pace modem & Comstar £149.95
Your link to the outside world, the Comstar software allows you to use both Prestel-type viewdata systems and Telecom Gold-type scrolling systems. The best general comms set-up around. There are better and flashier but at much higher prices.

35. DDI – 1 Disc Drive £159.95
A computer without a disc drive is like Christmas without presents. Some people think that a disc drive is like a turbo-charger, you don't miss it if you haven't got one. Anyone who has used discs wouldn't be without a drive.



36. Amstrad DMP-2000 £159.95
An Epson compatible printer at an Amstrad compatible price. Full graphics and an excellent paper feed mechanism make this an excellent buy. The print quality is impressive and the speed reasonable.

Only £250

37. Pace series 4 modem £189.95
The bees-knees of modems. Auto dial, auto answer, auto baud rate scan, line buffering, stored numbers, LCD display and Hayes compatible. The basic model offers 1200/75 and 300 baud. The more expensive ones (up to £500) run at 1200 and 2400 full duplex.

It's a £400 world

38. A new 6128 £399
Is your 464 getting old? Does your little brother hog the keyboard? Do you spend your time twiddling your thumbs waiting for games to load like the man in the



Cheap at the price.

41. A Rolls-Royce just like Alan Sugar for £85,000
(But Alan Sugar isn't a Rolls Royce). To have a car just like Alan Sugar you'd need the numberplate S 85 and a telephone. This is the ideal carrying case for a CPC 464 – as recommended by all millionaires.



Where to buy.

You can't always rely on Santa. Sometimes you have to actually spend money to get hold of the things you need. So where can you get your mits on these goodies? Turn to Page 91 and find out.



adverts? You do? Well a shiny new 6128 would soon fix that.

£1,000 is a round figure

39. Xerox 4020 Colour Printer £1,000 approx
For first class colour output you can't beat the Xerox 4020. Beautiful colours with over 4,000 shades. And with 240 dots per inch resolution it produces stunning results. For straight text it's a bit slow at 40 characters per second but it is very quiet.

Christmas Crackers

These are just the kind of crackers any Amstrad user would love to find in his Christmas stocking – packed with party games that make full use of the computer's power!

And all for just £6.95 (tape) or £9.95 (disc).

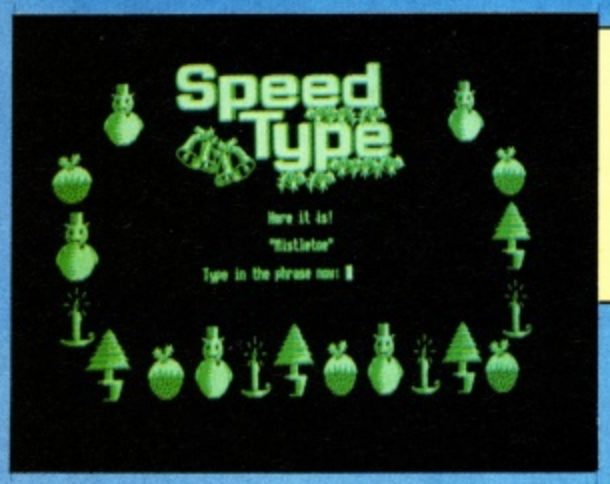
It's the best buy you'll make this Christmas!

6 games for the CPC range

Pull the Cracker. *Just like the real thing – and there's even a prize at the end.*
Jet Set Santa. *Guide him on his jet pack to collect and deliver the presents.*
Snowplough. *Clear the snow – but watch out for dangerous rocks and flying snowballs.*
Kristmas Krimble. *Fast-action arcade fun as you explore grim Krimble Castle.*
Snap. *Colourful family fun in this seasonal variation of an old favourite.*
Name the Carol. *Quick-fire answers win the game. Or you can just listen to the music.*







5 games for the PCW range

Snowplough. *Clear the snow – but watch out for dangerous rocks and flying snowballs.*
Anagrams. *How fast can you sort these Christmas words into the right order?*
Speed Type. *See how fast you can hit the keys in this typing test with a real festive flavour.*
Snap. *Lots of family fun in this seasonal variation of an old favourite.*
Christmas Box. *Use your powers of logic to decide what's inside the presents.*

Put some sparkle into your Christmas!

Please send me Christmas Crackers

- ☐ CPC tape (£6.95*) *6101*
- ☐ CPC disc (£9.95*) *6102*
- ☐ PCW disc (£9.95*) *6103*

**Europe add £1. Overseas Airmail add £2.*

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

Name _____

Address _____

_____

_____

Signature _____

☐ I enclose cheque payable to Database Publications Ltd.

or

☐ Please debit my Access/Visa card number.

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

ACU 12

PRODUCE PICTURES LIKE THESE IN "MINUTES" USING A DMP2000 PRINTER AND THE

DART SCANNER

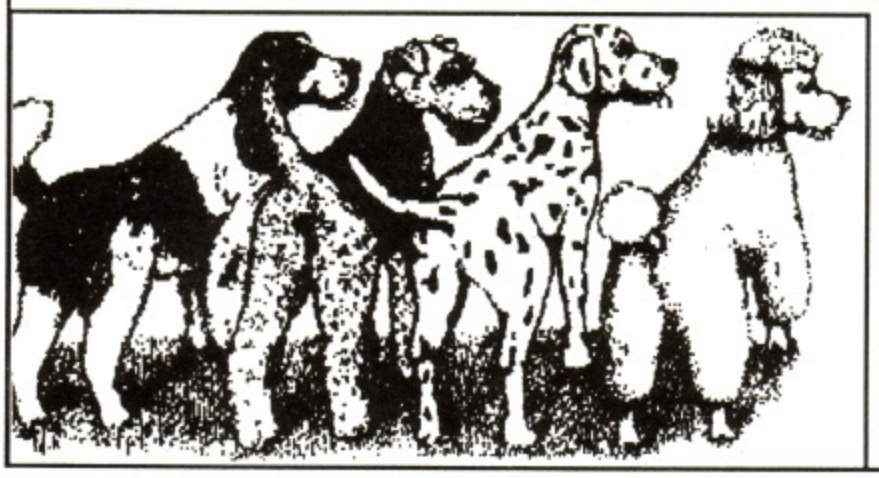
A remarkable new image scanning system which enables your to recreate & store pictures, documents, drawings, photographs etc.



- **No camera or video source needed** Simply feed your original into DMP2000 printer (does not affect normal printing operations)
- **Compatible with AMX Pagemaker** and any light pen or mouse which works with standard screen format
- **For all CPC computers**

Features:
Scan – Magnification x1, x2, x3, x6
Print – Full Size/Half Size, Load & Save to Tape or Disc, Area Copy, Scrolling Window, Zoom Edit, Box/Blank, Clear Area, Add Text, Flip Screen, On screen Menu.

Applications:
Advertising/Artwork, Letterheads/Logo's, Newsletters & Leaflets, Games Screens.



Package Comprises:
Scanner head, Interface, Software on Cassette or Disc

R.R.P. £79.95
including VAT and P&P

DART Electronics

Unit B5
Oulton Works
School Road
LOWESTOFT
Suffolk NR33 9NA

Telephone: (0502) 513707

Trade & Export enquiries also welcome

HSV COMPUTER SERVICES LIMITED

CONTINUOUS STATIONERY

	QTY 250	500	1,000	2,000
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	14.95	—
TRUE A4 100 GSM VELLUM MICRO PERF ALL EDGES	6.50	9.95	16.25	—
TRUE A4 100 GSM VELLUM MICRO PERF ALL EDGES (Coloured – Cream, Blue or Grey)	7.25	13.50	25.50	—
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

PRINTER RIBBONS	Each		Each
AMSTRAD 8512/8256	£5.25	OKI MICROLINE 80/82/83	£1.75
AMSTRAD DMP2000	5.25	PANASONIC KXP1090, 91, 92	4.75
CANON PW1080/1186	3.25	SEIKOSHA GP80	2.75
EPSON FX/LX/MX/RX80	3.25	SHINWA CP80	4.75
JUKI 6100 S/S	1.75	STAR SG10/SG15	1.75
JUKI 6100 M/S	2.75	TAXAN KAGA	3.25
MANNESMANN TALLY MY80/80+	4.75	WALTERS WM80	4.75

DISKS

3" CF2 . . . 1 – £3.65 5 – £17.50 10 – £31.95
5.25" DS/DD 48tpi . . . 10 – £6.95 20 – £13.50 30 – £19.95

DISK STORAGE BOXES	Price Each
HINGED LID – Holds 24 (uncased), 12 (cased)	5.95
HINGED LID – Holds 28 (uncased), 14 (cased)	8.95
HINGED LID LOCKABLE – Holds 30 (uncased) Holds 15 (cased)	9.95

ALL OUR PRICES INCLUDE CARRIAGE & VAT – NO EXTRAS TO PAY!

HSV COMPUTER SERVICES LIMITED, 40-42 New Market Square, Basingstoke, Hants RG21 1HS (0256) 463507

HSV

pride utilities

UNIT 14, WHITE HILL HOUSE, 6 UNION STREET, LUTON, BEDS LU1 3AN
THE UTILITY PEOPLE TEL (0582) 411686

FOR YOUR AMSTRAD 464/664/6128

TRANSMAT
£7.95 CASS £11.95 DISC

Easy tape to disc transfer. This professionally used and respected utility has set the standard in tape to disc transfer that others attempt to mimmick. Rated highly by the computer press.

Transmat's many features include • Easy operation • Auto or non auto modes • Relocator for programs which overwrite the disc area • Erase • Catalog files • Rename • Disc header reader • Select user area • A or B drive working • Transmats itself.
Also available on ROM only £19.95.

£17.50

8 BIT PRINTER PORT
NEW!

A full 8 bit Printer Port obtained with this adaptor. This simply connects between the standard port and the printer lead, no other connections necessary. Will enable the user to have full graphics possibilities, definable character sets, etc.

FIDO
£11.95 DISC
NEW!

A general file and disc organiser. If you can never find the program you want, then FIDO is your answer. Its many featurs will allow you to completely organise all your files/discs and manipulate them using a specially designed database. This menu-driven disc can store up to 200 discs or 2,150 progrms. Full disc utility section • security password system (to protect your database) • Separate programs runner • Will search and list • Sort into alphabetical order • Printer option • Finds free space • Very Simple to use • Well up to Pride's usual high standards.

NOW ON ROM ODDJOB
£12.95 DISC £19.95 ROM

STILL THE BEST DISC UTILITY PACKAGE

A complete disc utility with all the programs YOU have told us you wanted all together in one amazing package. A total of 39k of disc space used.
Just look at some of the features:
• A complete directory editor with which you can examine the disc directory and easily alter the contents.
• Recover erased programs.
• Hide programs from the directory.
• A complete sector editor to examine and/or alter the contents of files in HEX or ASCII.
• Map out your disc and locate where files are on the disc.
• Prevent programs from acidentally being erased.
• An inwelligent disc copier that can copy those damaged/non-standard sectors on a single or twin-drive system.
• Format in half the time on either drive. Ideal for 5.25 inch second drives.
• Transfer your little used programs/files from disc onto tape to reclaim expensive disc space.
• Increase the speed of your disc drive by up to 20%.
• Load and list protected BASIC programs.
• All instructions are supplied on disc on a separate help menu.
• Simple to use with single-key selection.
• Makes full use of the disc drive. A to A, A to B, B to A, etc.
• Compatible with all AMSTRAD CPC computers.

All this for the incredible price of £12.95 on disc only
ODDJOB is constantly upgraded—check with us the current version No. and if you wish, return the disc with £2 for upgrade.
NOW A ROM VERSION ODDJOB AVAILABLE – £19.95.

£1.99 CASS

ADDLABS
Create your own professionally finished address labels with this super program supplied with 50 blank address labels for most printers.

£5.95 CASS

SPIRIT
The perfect advanced software complement to Transmat for those knowledgeable in computing–Spirit offers all the tools you need in one economic package to transfer those genuine headerless programs onto disc.

To use Spirit you need a dissassembler and some knowledge of machine code.

£7.95 £11.95 CASS DISC
NEW!

PRINTER PAC II
The screen copier. The complete printer utility for most popular dot matrix printers including the DMP2000 • full proportional shading • full size dumps • variable buffer option to release the computer • text dumps • all modes catered for.

£7.95 £11.95 CASS DISC
NEW!

SUPER SPRITE
Create fast moving animated games easily.

An extremely powerful and versatile piece of software at a realistic price. SUPER SPRITE is a menu-driven friendly program which will offer you hours of enjoyment designing your own sprites. Included is a demo to show you the possibilities of designing and writing your own animated software. The complete instruction book gives examples of how to create and animate sprites for your own programming.

£6.95 £10.95 CASS DISC

SCRIPTOR
An essential software utility for the DMP-1 Amstrad printer. SCRIPTOR offers • 6 definable character fonts • lower case descenders • futuristic • italics • joined writing • bold and heavy • contains DESCRIBE allowing you to define your own characters.

£6.95 £10.95 CASS DISC

SYS X
An RSX program offering more than 30 Basic commands for your Amstrad. An ideal programming aid.

IF YOU HAVE ANY DIFFICULTY OBTAINING OUR PROGRAMS PLEASE USE THE ORDER FORM BELOW

ORDER FORM ACU 12/86

All prices include VAT and P&P. For Europe add £1 per title. For Australasia add £1.75 per title. For rest of world add £1.50 per title. INC AIRMAIL CONTRE REMBOUSEMENT • £2.50
EUROCHEQUES accepted in Sterling

NAME _____

ADDRESS _____

	Cass	Disc	Rom	Prot
TRANSMAT				
SYS X				
PRIDE PRINTER PORT				
SPIRIT				
FIDO				
PRINTER PAC II				
SUPER SPRITE				
SCRIPTOR				
ODDJOB				
ADDLABS				

WHY WAIT AGES FOR PROGRAMS TO LOAD
GET YOUR TAPE SOFTWARE ONTO DISC

GOLDMARK SYSTEMS
ACU 12/86, 51 COMET ROAD, HATFIELD, HERFORDSHIRE AL10 0SY
Telephone: (07072) 71529

Our aim, here at GOLDMARK, is to provide the solutions (and a help line) to transfer your tape-based software to disc. Most of our routines require the use of TRANSMAT, a Tape to Disc Conversion program by Pride Utilities. These conversion routines are called TIE's – "TRANSMAT INFORMATION EXCHANGE Sheets". Each issue of TIE contains between 8 and 12 solutions. TIE's were initially published by Pride at the beginning of 1985. GOLDMARK took over from Pride in April 1986 because many more Amstrad owners were buying their first disc drive or upgrading to a 6128, making it even more imperative that they should receive all the help they require to transfer their software to disc. NONE OF OUR PRODUCTS SHOULD BE USED TO INFRINGE COPYRIGHT LAWS.

We have produced a large "professional" Tape to Disc solution Book (THE GOLDMARK BOOK), which includes an index and contains over 100 solutions incorporating TIE's 1 through to 6. Purchasing THE GOLDMARK BOOK entitles you to use the HELP LINE. We are also producing TIE sheets every month (number 6 was published in April). THE GOLDMARK BOOK and the TIE sheets are not stapled photocopies but are professionaly produced. Both THE GOLDMARK BOOK and TIE sheets can be purchased individually. However, one of the facilities we offer is membership of the GOLDMARK CLUB.

By joining **THE GOLDMARK CLUB** you will receive THE GOLDMARK BOOK together with our NEWSLETTER book and all TIE sheets and newsletters as they are published each month up to and including March 1987. You will also receive FOUR free utilities during your membership, large reductions on our range of software/hardware and of course use of the HELP LINE. Our membership year is from 01/04/86 to 31/03/87. Regardless of when you join you will receive all that has been issued since April 1986. Your name will then be added to The Goldmark Club mailing list until March 1987. (Purchasers of TIE's 1 to 4, THE PRIDE BOOK, or THE GOLDMARK BOOK can claim a £2.00 discount – ask for details)..

TAPE TO DISC ROUTINE SERVICE Send us your original cassette and instructions and we will return it together with a routine for you to carry out your own conversion. The cost for each program is £3.00. Multiple part games are £3.00 for each part – please check with us first for prices.

EPROM SERVICE We will transfer your own software, Masterfile464 or Mastercalc464 to Eprom providing it is less than 16K. Where Masterfile/Mastercalc are concerned we must have the original software (which we retain). The cost is £17.00

SPEED-TRANS is a utility specifically designed to transfer most programs protected with SPEEDLOCK. Among those it will transfer are Batman, Jet Set Willy, Rambo, Scrabble, Raid, Winter Games, Nomad, Yie Are Kung Fu etc. This utility is TRANSMATTABLE to disc.

VIEWTEXT. This utility (written by Pride and only available from us) will allow you to see the text contained in binary files. It is particularly useful for programs that require passwords etc. to play the game (e.g. Hacker and other adventure games). This utility is TRANSMATTABLE to disc and is one of the FREE utilities given to GOLDMARK CLUB MEMBERS.

TRANSIT. This utility (again by Pride and only available from us) will copy individual files from drive A-A, A-B, B-B and B-A. IT DOES NOT REQUIRE THE USE OF CPM. It is a necessity for those with a 5.25 second drive. It is menu-driven and, as with all our products, is extremly easy to use. It is also another GOLDMARK CLUB FREE utility.

LORD OF THE RINGS conversion cassette. Side 1 of this utility will AUTOMATICALLY transfer the three game parts to disc (including the screen). Side 2 is for NON-DISC owners and will reduce the original loading from around 14 minutes to only 3 minutes. This utility really saves time when you keep getting killed!

QCLONE is a disc to disc copier that is the equivalent of DISCOPY and COPYDISC put together but without the need to enter CPM. It is also very fast as it ignores empty tracks. Please note that it will not copy files by names. It copies the whole disc sector by sector. It will not copy non-Amstrad formats. It will read/write to all disc drive combinations and is ideal for use with a 5.25 second drive. It is TRANSMATTABLE to disc.

All prices include P&P	**UK only**	**Europe**	**Rest of World**
TIE sheets	£2.00	£2.50	£2.50
THE GOLDMARK BOOK	£5.00	£5.50	£5.75
THE GOLDMARK CLUB (1 yrs Membership)	£20.00	£25.00	£26.00
SERIOUS/UTILITIES	**Cass**	**Disc**	**Eprom**
Music System	£12.75		
Advanced Music System		£25.95	
Masterfile 464		£24.95	
Masterfile 6128		£29.95	
Mastercalc 464		£19.95	
Mastercalc 128		£29.95	
Mini Office II	£11.95	£15.95	
Maxam	£17.50	£21.95	£34.95

SERIOUS/UTILITIES	Cass	Disc	Eprom
Office Mate	£8.50		
Office Master	£13.95		
Pitman Typing Tutor	£7.75	£10.66	
Promerge		£20.95	£29.95
Prospell		£20.95	£29.95
Protext	£17.50	£21.95	£34.95
Utopia			£25.95
Display Language (D'Lan)		£11.95	
Viewtext	£3.00		
Transit	£4.00		
Speedtrans	£5.50		
Qclone	£4.00		
Pride's Picture Show		£9.75	

HARDWARE	
Britannia's Super Romplus Board (14 Roms)	£39.00
ACCESSORIES	
Amsoft Discs	£3.75
DMP 2000 Ribbons	£5.50
100 Disc Labs.	£1.65
100 Cassette Labs.	£2.00
100 Address Labs.	£1.30
BOOKS & MANUALS	
Concise Firmware	£17.50
DDI Firmware Spec	£8.95
Concise Basic Spec	£16.95

ALL PRICES ARE INCLUSIVE FOR THE UK. EUROPE ADD £1.00 PER TITLE. REST OF THE WORLD ADD £1.50 PER TITLE ACU 12 /86

FOR FURTHER INFORMATION please telephone the above number between 0900-1000 or 1800-2100 or send a large SAE . Please send your cheque (Sterling please) or UK postal order to the address above – we accept EUROCHEQUES.
Our Australasia agents are TECH-SOFT Computer Wholesale, 324 Stirling Highway, Claremont, W.A. 6010. Tel: 385 1885

The lucky 12

Results of our October Least Significant Bit contest

Little did we think that there would be so much interest in our competitionette run in October's LSB. Twelve free copies of Soft 968 to give away and all you had to do was give us a good reason why you should be the lucky recipient.

We were surprised how many people craved for knowledge of such esoteric mysteries as how to do bank switching and the jumpblock address for Fill.

Many and various were the methods employed to prise a "Bible" out of our hot little fingers. Bribery, threats, flattery, abuse, humour, drama and all this was from one little old lady in Surrey, the rest of you were much worse.

Some people are under the impression that the 968 firmware manual is a magic cure-all, capable of zapping bug-ridden programs into intelligible code. They will be sadly disappointed to discover the truth about 968. The moment you get one is when your troubles really begin.

The mystic spells and forgotten memory addresses unlock a world of demons and madness that only the sanest individuals can survive. Nine six eight is not an answer but a challenge.

Anyway, we have compiled the best of your reasons and printed them here. If you wrote and told us to send a Soft 968 so that you could beat your wife over the head with it, then read on, you may be immortalised in print and it might be you who gets beaten over the head.

If you haven't won the competition you may be glad to know where you can get hold of a manual. They should be available from Amsoft Mail Order. Their address is Victoria House, PO Box 10, Sunderland, Tyne and Wear.

Rhymes instead of reasons

Let's all try the rhyming couplet wheeze, as an easy way to enter, it's a real breeze. When pen was put to paper, some lines were short of punch, few made us laugh or not even half, but here is the best of the bunch . . .

Ode to Soft 968

At last it's here,
No need to fear,
Soft 968,
Should be worth the wait.

I don't want to moan,
But I was always on the phone,
Getting nowhere,
And loosing my hair.

But now I see that,
One could drop on my mat,
If you think my rhyme,
Was worth the time

This appalling p.. po.. poe... no I can't call it that, this appalling rhyme comes courtesy of John Holbrow of Dilton Marsh, Westbury, Wilts and just as soon as we can find some crinkly brown paper and string we'll be posting him one of our precious copies of the firmware manual.

Nutters

You'd have to be mad to want a firmware manual to read, especially when there are much more readable items in the world, such as Enid Blyton, a True Love photo story or an Omni-reader test sheet. Steven Herod of Sandiacre, Notts sent us a transcript of a conversation with his shrink. *(Can't spell psychiatrist eh? – Ed)*

"Well doc, it's like this – I've got this home computer". "Ah". "An Amstrad 6128." "I see, zis is very interestink". "Well you see none of the books I've read, looked at, or coloured pictures in, including the pop-up ones, explain it you see. I keep trying to write machine code to access the disc and it won't!" "Ah, zis is serious. Vot you vant is ze long quiet rest you know, viz ze good book to read". "And all these nonexistent RSTs, they're



driving me potty!" "Ah, you're an impetuous fellow". "And I hate this silly white jacket 'cos the sleeves are too long and they still won't give me a sharpener for my Batman crayons and . . ." "Nurse! Bring me ze new super sedative, ze von mit ze shiny black folder . . ."

If you think madness is a daft reason to get a firmware manual how about low intelligence? John Thompson of Linwood, Paisley has sent us his credentials. He writes:

As a member of DENSA at the age of 15 years 217 days, I think a firmware manual would provide me with the type of relaxing easy reading I enjoy. Not many people of my age have an IQ of four figures, even less have a negative sign preceding it. So, if you wouldn't mind, please relieve yourself of one Soft 968.



The Blues

There's nothing like a good sob story to soften the heart of a magazine editor and convince him to part with a manual. Here's the best of them:

You must have seen the Volkswagen advertisement on television about the fellow who had gambled and lost but could still rely on his trusty VW. It is the way I feel about my computer ownership.

I bought a 664 only two weeks before the 6128 was on sale. I bought a 256k memory from DK'tronics only to read the glowing reports on the Vortex 512k board. I actually ordered the mythical Soft 946 innocently thinking that if it was mentioned in my 664 manual that it would be available.

After many frustrating telephone calls I learned it did not exist and I was recommended to buy an "unofficial" book which only covers the 464. I still yearn for the firmware manual as there are many routines I want to explore further.

There is just one more reason I would like one of your complimentary copies of Soft 968; I need another book to prop under the right hand rear corner of my 664 to stop it tilting over when the DK memory pack is in place!

Must close now as my VW is double parked.

That was from Lionel P. Shrago of Kemnay Inverurie, Aberdeenshire. If you thought you had a good sob story Lionel how about this one from Tim O'Donoghue of Allesley Park, Coventry.

There now follows some of the very good reasons why I should be one of the lucky 12 to win a Soft 968: 1) Because I fell out of a 4th floor window. 2) I have been in Leeds General Infirmary for 10 weeks and would like something to read. 3) Because I live in Coventry and no one visits me in hospital "'Cos it's a 250 mile

round trip". 4) Because you should be crying after reading such a sob story (It's not that hilarious – Ed). *5) Because Mike Mordecai is cuddly. 6) Because I "Baggsied" one first. 7) Because I'm Alan Sugar's long lost brother. 8) Because I've got very sore feet. 9) Because a Soft 968 in my hand is worth two in the bush. 10) Because when I succeed in world domination I will give you America as a present (no not a bribe m'lud). 11) Because, because, because, because, because of the wonderful things he does. 12) Because I've given 12 good enough reasons to win all 12 Soft 968s but being such a kind soul I will let 11 other lucky readers have one each.*

Thank you very much for reading my letter this far and hopefully my Soft 968 should be waiting for me at home when I eventually get out of hospital. (Why, are you in for another 10 weeks? – Ed).

Another list of reasons was compiled by Bill Pointon,while skiving in the staffroom of Concept Man, Exeter, which he manages. He was very surprised to see our philanthropic offer and warned against a nervous breakdown while reading his entry.... So prepare yourselves:

1) Young (23) very good looking (Modest as well! – Ed). *2) Married. 3) House owner with huge mortgage* (ah). *4) Had to take in lodgers to survive. 5) I hate my lodgers. 6) They hate me and my 6128. 7) I'm exeedingly poor.* (Laying it on a bit thick – eh?) *8) I've looked for Soft 968 for six months.* (Who hasn't?) *9) I haven't got one.* (Who has?) *10) Stockroom manager of my shop is stupid. 11) Deputy manager is a manic depressive. 12) I've never won anything. 13) I belong to the home computer club. 14) I buy every Amstrad magazine. 15) I don't comprehend m/c but am willing to learn. 16) Soft 968 would look good next to my unused assembler. 17) I want to review it and earn some money.*

If you didn't think that lot was O.T.T he continues in similiar vien:

18) I've caught a disease off my cat and then it ran away. Soft 968 would cheer me up. 19) I'm in love with my wife's sister and want to impress her. (It'll take more than that.) *20) I'll give you a quid. (Is that all?)*

In desperation he tries his hand at poetry:

Oh, for a Soft 968
'cos I've heard it's really great
I've only got 55p
So please give me one free

Oh,how can you charge me
A fine upstanding pillar of society
For a Soft 968
Which I heard is really great

If you don't give me a 968
I'll get really irate
And then get all my mates (2)



To come and duff you up.

It doesn't even rhyme, but we had to give him one for persistence, and just to shut him up.

Mark Davies tried to impress us with bits of Gujarati and Punjabi written on toilet paper, or continuous stationery as he called it, reason being that he's writing a word processor for various Asian languages.

While I have managed to implement a lot of it using a borrowed CPC464 spec I have no idea where the 16k block switching calls are hiding or even exactly what they can do. I also need detailed information about the disc operating rom.

If you don't send a manual I will try to buy one any way. I could show you my UB40 but then if I was really hard up I could always sell the computer to get the money to buy the firmware spec. Hoping you think the project is worth supporting. (We do.)

UB40 also gets a mention from Allen Gillespie, in County Antrim, who describes himself as *"a long serving member of the Maggie's 4 Million club. As my local DHSS refuses to accept my 6128 as a dependent I think I deserve a Soft 968."* (Sounds like a good enough reason to me – Ed.)

To rival the little old lady who sits behind K.J Doel at night school is his reason for desperately needing a firmware manual.

While professing to just copy the rest of us, or what the tutor writes on the board,



her sprites leap out of the screen like Nureyev with his tights on fire, while mine creep about like something going to a funeral.

Keith Searing blames it all on his wife (the usual scapegoat).

I was forced to choose a CPC6128 because my wife didn't like the idea of me playing with Joyce's software, but she now appears keen to learn more about Arnold's firmware! Please don't bring out a hardware manual – she might not be able to restrain herself!

The most ingenious, but rather threatening, reason must be attributed to Gordon "smartass" Brown.

If you add 464, 664, 6128 and the number of the firmware manual, 968, together you get 8224. Convert this to hexadecimal (what?) *and you get 2020, which besides being the description of my vision and a television programme, is also the calibre of the Winchester (rifle,*



not drive) that you will be severely shot with if I don't get a copy of the manual by return! (Well we'll get the boys on to you – the Ed, shaking.)

Q. What do you buy the man who has everything?

A. Soft 968 of course, is Steve Gibbon's cocky reply.

P.S: If that's not a good enough reason it was my birthday on September 30! - Happy belated birthday. Enjoy your present from *ACU.*

Last but not least, in fact my favourite reason, not very imaginative, didn't take hours of thought, but short, sweet,and blatantly honest comes from Tony Riley:

The best reason to present me with a copy of the C firmware manual is because I bleedin' want one!!!

Well you're bleedin' going to get one.

ACU

MASTER-TYPE

A complete home typing course on disk.

Teaches you to "Touch Type" in 12 to 40 hours. Assumes no previous experience.

130K program in three sections designed to guide you through the keyboard step by step, and on to achieve a minumum speed of 25 words a minute on the first pass of all the exercises.

All exercises to be "Mastered" with pre-defined efficiency in order to advance to the next level.

While some "Tutors" report your errors after they occur master-Type requires errors to be corrected immediately they occur, nipping potential bad habits in the bud.

15 LEVELS with 60 EXERCISES

Head up keyboard display
Saves exercise number
BLOCK audit
BLOCK summary

Only from: *Scot Byte*

Available on disk
£19.95
inclusive
CPCs & PCWs

Scot Byte
45/47 Cross Street
Fraserburgh
SCOTLAND
AB4 5EL

CHATTERBOX. * NEW FROM K.D.S.** For the PCW *** **£150**
Complete communications system. Comprehensive features inc. RS & Centronics interface & multi-standard baud rate modem. Auto Dial/Auto Answer. All in one self-contained unit.

RS232 & CENTRONICS INTERFACE (For the PCW) **£53**
Connect to other printers, computers & modems. Items below are for the 464, 664 and 6128 models.

CENTRONICS PRINTER "T" SWITCH. (can be used on PCW with RS/Centronics interface) **£22**
Connect 2 printers (inc. Daisy Wheel) to your Amstrad. Switchable under software control.

POWER CONTROLLER. (Can be used on PCW with RS/Centronics interface). Featuring 8 switching relays. Up to 5 amps AC/DC. **£40**

MINI-MAX. ***NEW FROM K.D.S. *** **£70**
Quality modem for use on any computer with RS232 interface. Has multi-standard baud rates and Auto Dial/Auto Answer. Attractively cased.

CPC SERIAL INTERFACE * NEW FROM K.D.S. ***** **£40**
Connects to most modems, other computers and serial printers. Multi-standard baud rates. Comms. Pak software built in on ROM (features similar to those of the Communicator 104).

SIDEWAYS ROM BOARD **£26**
Now new 5 way board. Takes 8 or 16K ROMs

8 BIT PRINTER PORT **£17**
Send all character codes (i.e. 0 to 255) to your printer. Uses standard Print 8 commands etc. Unique design. No power input required.

COMMUNICATOR 104 (CPC) **£153**
Complete communication system with built-in interface. Multi-standard baud rates, Auto Dial/Auto Answer etc. Comms. Pak software built in on ROM. Contact bulletin boards, Prestel, BT Gold, Micronet etc.

VAT TO BE ADDED TO ABOVE PRICES

Send cheque or P.O. with order.
Free MicroLink subscription with every modem purchased. Send S.A.E. (9" × 4") for details or S.A.E. (10" × 7") if free communications guide required as well.

K.D.S. ELECTRONICS, Dept. G.
15 Hill Street, Hunstanton, Norfolk.
Tel: 04853 2076

KDS ELECTRONICS

Akadimias

TUTOR SERIES
"A" LEVEL REVISION TESTS

CURRENT TITLES:

BRITISH & EUROPEAN HISTORY

( ) HY01 TUDOR ENGLAND, by Professor D.M. Loades.
( ) HY02 STUART ENGLAND, by Dr. A.D. Dyer.
( ) HY03 BRITISH HISTORY 1714-1815, by Dr. A.J. Crozier.
( ) HY04 NINETEENTH CENTURY ENGLAND, by Roberta Canning.
( ) HY05 BRITAIN IN THE AGE OF TOTAL WAR, by Dr. A.J. Crozier.
( ) HY06 RENAISSANCE EUROPE, by Dr. J.P. Canning.
( ) HY07 SIXTEENTH CENTURY EUROPE, Forthcoming.
( ) HY08 SEVENTEENTH CENTURY EUROPE, by Dr. A.D. Dyer.
( ) HY09 EUROPE 1700-1789, by Dr. A.D. Dyer.
( ) HY10 EUROPE IN TRANSITION 1800-1900 BY Dr. I. Talbot.
( ) HY11 EUROPE IN THE AGE OF TOTAL WAR, by Dr. I. Talbot.
( ) HY12 THE FRENCH REVOLUTION, by A. Axworthy.
( ) HY14 GLADSTONE & DISRAELI, by Patrick Derham.

ENGLISH LITERATURE – SET TEXTS

( ) EG01 ANTONY & CLEOPATRA, ed. by Dr. Margarette Smith.
( ) EG02 THE TEMPEST, ed. by Paul Davies.
( ) EG03 HENRY IV PT.1, ed. by Paul Davies.
( ) EG04 MANSFIELD PARK, ed. by Dr. Margarette Smith.
( ) EG05 THE TRUMPET MAJOR, ed. by Paul Davies.
( ) EG06 JOINT MATRICULATION BOARD POEMS, ed. by Paul Davies.
( ) EG07 HAMLET, ed. by Dr. Margarette Smith.
( ) EG08 CHAUCER PROLOGUE, ed. by Mel Jones.
( ) EG09 ALEXANDER POPE – RAPE OF THE LOCK & EPISTLE TO ARBUTHNOT, ed. by Dr. M. Smith & Dr. A. Ferguson.
( ) EG10 GERARD MANLEY HOPKINS - SELECTED POEMS, ed. Mel Jones.
( ) EG11 OSCAR WILDE - IMPORTANCE OF BEING EARNEST, ed. by Professor W. Tydeman.

SCIENCE & SOCIAL SCIENCES

( ) SC01 'A' LEVEL SOCIOLOGY, by John Borland.
( ) EM01 'A' LEVEL ECONOMICS, by B. Lambert.
( ) BG01 'A' LEVEL GENETICS, by Ruth Kenealy Jones, B.Sc.
( ) PY01 'O'/'A' LEVEL PHYSICS DEFINITIONS, by Dr. D. Wright.

Now available for
THE AMSTRAD PCW AND CPC SERIES
(disc only) at £21.45 inclusive

Buy Direct from:

AKADIMIAS SOFTWARE
Department of History,
University College of North Wales,
BANGOR, GWYNEDD LL57 2DG
Tel: (0248) 351151

01/10/86

"Quite the best and most flexible personal accounts system I've seen – doubles as an inexpensive business system" Computing with the Amstrad September 1985

"Money Manager is good enough to make most programs of this type give up in shame" Popular Computing Weekly 17-23 April 1986

Unbeatable value

CPC464
CPC664
CPC6128

MONEY MANAGER

SAVE £5 on RRP of £29.95 when you order direct from Connect Systems

ONLY £24.95 Incl. VAT, p&p

Unrivalled features

PCW8256
PCW8512

Financial management software for personal and/or small business use.

Money Manager is an easy-to-use system for recording all financial transactions, and for analysing them in a number of very powerful ways in order to facilitate sound financial management. It is ideal for controlling the finances of a small business, or for users wishing to control their personal finances in a business-like way. Use it to check bank statements, keep track of expenditure, monitor cash flow, make budgeting forecasts, prepare business financial statements, pacify your bank manager, convince the tax and VAT inspectors, avoid nasty surprises, etc. etc.!

12 months of entries are kept in a file stored on your disc. At any time, you may load a file into the computer memory, add to or edit the entries, analyse them, print statements, and then save the updated file for later use. Entries may be historic (for record keeping) or forecast (for budgeting). You may have any number of separate files, and make copies of files for archive purposes. You may advance the period covered by a file month by month.

Up to 100 separate transactions may be entered per month. Each entry consists of:

- The day of the month, e.g. 23rd of June.
- An account number, one of up to 9 defined by you to suit your circumstances e.g. 1=Barclays, 2=Visa, 3=Halifax etc.
- Reference, e.g. ABC123 for a cheque number or invoice reference.
- A class code, one of up to 50 defined by you to suit your circumstances e.g. h0=Household expenses, h1=Mortgage, h2=Rates or p0=Production, p1=Raw materials, p2=Assembly, p3=Packing, etc.
- A description so that you can see what each transaction was for, e.g. "New gearbox" or "Box of 10 discs".
- An optional single character mark which you may include for further classification, e.g. b=business, p=private, etc.
- The amount of the transaction, which may be plus or minus.
- A marker to indicate whether the entry is exempt, zero rated or taxable for VAT, or alternatively the actual VAT paid.

You may select categories according to account, class and mark (e.g. all entries, or all motoring expenses for business using a credit card, etc.) and produce reports on the screen or printer as follows:

- Full detailed statements, showing each transaction for any month or for the whole year.
- Detailed monthly VAT statement showing input and output amounts excluding VAT, the actual VAT and the total amount, plus totals and net VAT due.
- Tables showing the totals in each class for each month of the year.
- Tables showing the totals in each class for each account.
- Tables showing monthly maximum, minimum, average balances, turnover, cashflow etc.
- Bar graphs of any category month by month.
- Pie charts of annual totals for various categories (CPC version only).

Plus: standing orders – entries optionally sorted into date order – item search facility. Comprehensive manual and full set of practice data included.

Full telephone support.

Send cheque or credit card number or phone for immediate despatch.

Access

Connect Systems

3 Flanchford Road, London W12 9ND 01-743 9792 8am-10pm 7 days a week

VISA

TRANSFORM LTD. Amstrad

DUST COVERS

464/6128 Keyboard	£3.75p
Monitors	£4.50p
PCW 8256	£9.99p

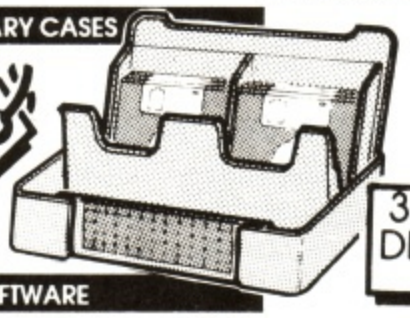
DISK STORAGE BOXES

3" Box (holds 20 discs)	£13.25p
3" Box (holds 40 discs)	£17.00p
5.25" Box (holds 40 discs)	£18.00p
5.25" Box (holds 80 discs)	£21.75p

LIBRARY CASES

£5.55p p&p 50p

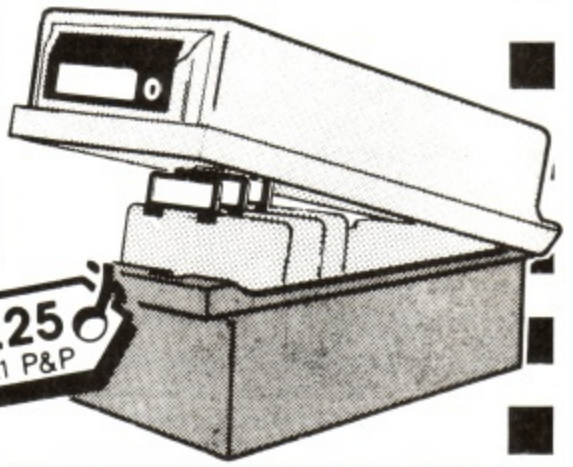
Holds 10 3" discs without cases



JUMBO BOX £17.00 HOLDS 40 ADD £1.00

3" AMSOFT DISCS £3.50 INC VAT

£13.25 ADD £1 P&P



SOFTWARE

Tasword 464 Cassette	£19.95p
Tasword 464/664 Disc	£24.95p
Tasword 6128 Disc	£24.95p
Tasword 8000 Disc	£24.95p
Tasprint 464/664/6128 Cassette	£9.90p
Tasprint 464/664/6128 Disc	£12.90p
Tasprint 8000 Disc	£16.50p
Taspell 464/664/6128 Disc	£16.50p
Taspell 8000 Disc	£16.50p
Tascopy 464/664/6128 Cassette	£9.90p
Tascopy 464/664/6128 Disc	£12.90p
Tasdiary 464/664/6128 Disc	£12.90p
Masterfile 464 Cassette	£21.95p
Masterfile III 6128 Disc	£39.95p
Mastercalc 464 Cassette	£21.45p
Mastercalc 6128 Disc	£25.45p
Sage Popular Accounts	£99.99p
Sage Invoicing	£69.95p
Sage Payroll	£69.95p
Supercalc 2	£49.95p

PRINTERS

Interfaces

PCW 8256 Serial/Parallel	£49.96p

Dot Matrix	EX VAT	
Seikosha SP1000 RS232	£150.00p	£172.50p
Seikosha SP1000 Centronis	£179.00p	£206.86p
Brother M1109	£185.00p	£212.75p
Epson LX86	£215.00p	£247.25p
Taxan Kaga	£250.00p	£287.50p
Epson FX85	£368.00p	£423.20p
DAISY WHEEL		
Silver Reed EXP 400	£215.00p	£247.25p
Borther HR15XL	£430.43p	£495.00p

Delivery of monitors & printers £5.75p

DISPLAY LANGUAGE

DLAN 464-664-6128

Advertise your products, services with this program by Campbell Systems. The print facility allows you to produce leaflets, labels, menus using 15 different fonts.

DISPLAY LANGUAGE

CASSETTE £9.95P DISC £13.95P

Access

TRANSFORM LTD (DEPT. AU) 01-658 6350

Mail order only. 24 West Oak, Beckenham, Kent BR3 2EZ

VISA

Fast, useful – and fun

David Radisic combines three of his favourite things – a laservision player, Kate Bush and his CPC 6128.

While wandering round the Amstrad User Show I came across Rombo selling a Digitiser. "Wow!" I exclaimed, "just what I've always wanted". So after chatting to them for a few minutes I tried to obtain one for "review purposes".

Alas, they did not hand one over, even though I dropped Simon Rockman's name a few times during the conversation (could this have been the reason?). Desperate methods were needed here, so the only thing that could be done was to buy one – and me a life long scrounger.

Handing over my cheque for the best part of £90 I was given a small brown box with a sticker saying VIDI Interface and a disc containing the relevant software for my CPC 6128. The software is available on rom, but since the Vidi interface doesn't include a socket I settled for the disc based program.

Software and documentation

The Vidi manual is a short introductory "preliminary" set of photocopies – not the finished manual – and does not contain the complete instructions. This is not too much of a limitation since once the Vidi is plugged in and the software is running frame grabbing can begin by typing:

|VIDEO

The connection to the Vidi is through a standard phono connector and requires any composite video signal, such as that from a VCR or Video camera. When grabbing frames the best result is achieved from a static screen image. Unfortunately most VCRs in pause mode generate an erratic sync signal, which means the Vidi may have problems finding a frame and a bit of careful tweaking is needed to get things going.

You can only grab a perfectly still image in mode 0, so this is effectively restricted to use with a video camera and tripod, or a video disc player.

Computer control

|VIDEO allows frames to be grabbed continuously, even from live TV (through a VCR), while you can select and change various settings such as brightness and contrast. This will no doubt be the most used feature of the Vidi, as everything is available through a small menu.

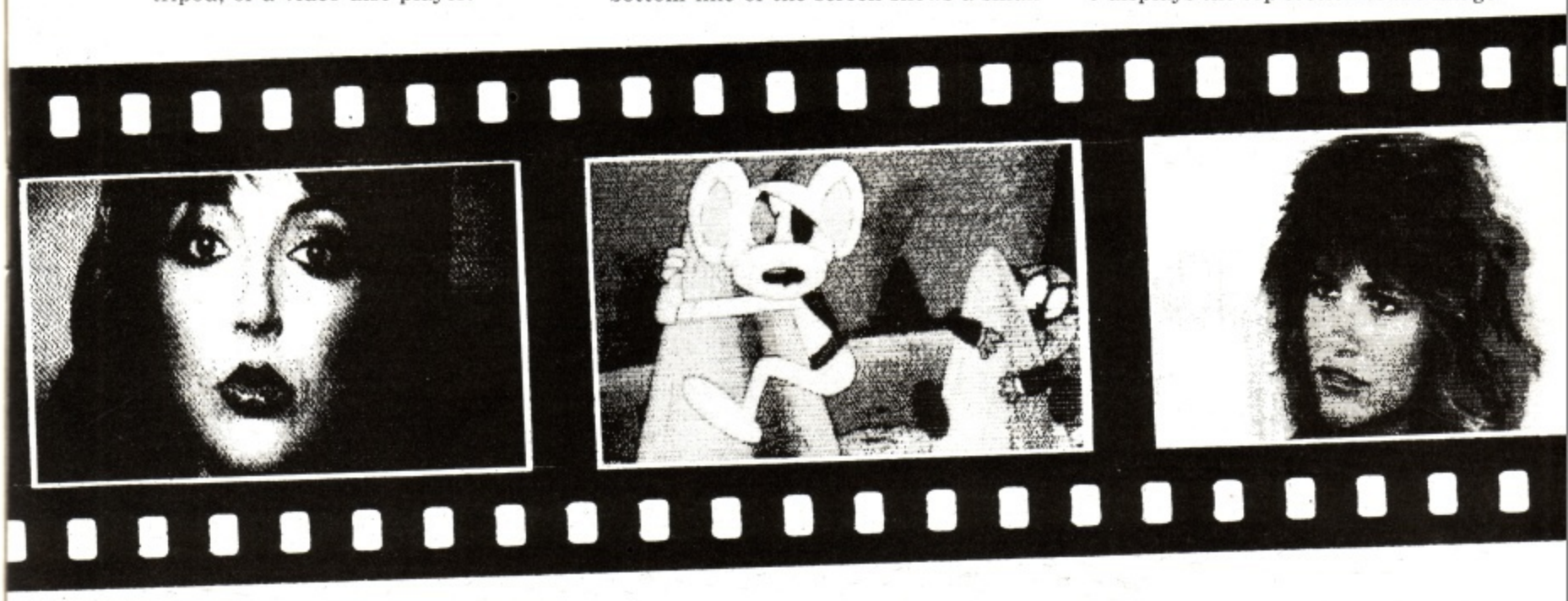
In the |VIDEO mode about 3-5 frames a second are grabbed and displayed in either mode 1 (four shades/colours) or mode 2 (two shades/colours). A mode 0 (16 shades/colours) option exists which is actually displayed in Mode 1 while frame grabbing but saving or printing in Mode 0 is rather more involved.

While in the |VIDEO routine the bottom line of the screen shows a small menu containing eight selections. A cursor highlights one of these and can be moved left or right through each of them. The selections do actually exist as RSXs as well and so could be used within a Basic or machine code program of your own design.

Menu selections include CON – contrast level from 0 to 15 and the RSX command, |VCON. BRI controls the brightness level, which can be anywhere from 0 to 15: |VBRI is the RSX equivalent.

The screen can only display 200 of 312 video lines at a time. To compensate for this a vertical adjust command allows you to select the part of the video image you want displayed and can be adjusted between 0 and 127.

0 displays the top section of the image



and 127 displays the bottom. The default is set to 64, but after some experimenting I found a setting of 30 to be best for most of the action from TV. The RSX equivalent is |VPOS.

The menu offers any of three modes for frame grabbing. The modes are, of course, exactly the same as the mode command in Basic.

Mode 2, being only two shades, gives high resolution (640 by 200) but for most purposes does not produce very satisfactory results. It is best used for designing silhouette pictures, which can be quite pleasing. The RSX equivalent of the mode selection is |VMODE.

Following the mode option comes the ink settings. This is exactly the same as the INK command in Basic – selecting an ink will show the current colour setting. This can then be modified to any of the 27 colours/shades supported by the CPC to suit the video picture being displayed.

In a Mode 1 frame the intensity levels are not as expected, being in the order 0..1..3..2 rather than 0..1..2..3. If this causes any problems when using the pictures in your own programs there is an |RSX called |VCONVERT which swaps pens 2 and 3 so that everything is back to normal.

Save screen and print screen options complete the menu selections, saving mode 1 and 2 screens just as they appear during frame grabbing. When save is selected the menu line at the bottom of the screen will be replaced with a filename prompt.

The default filename is VSCREEN0. If the filename ends in a number it will be incremented on subsequent saves so a new filename doesn't have to be typed in each time. This saved file is a screen image binary file and can be loaded very easily, for example by first setting the mode and then executing a LOAD" VSCREEN0",&C000.

When saving a Mode 0 screen image the screen is changed from it's mode 1 display to 0. The Vidi software will then grab 16 frames, one at a time, in each of the brightness levels (0 to 15). Each frame is overlayed with the previous ones to build up the final image. This can take from about ten to fifteen seconds, the end result being a high quality picture in 16 shades/colours.

Altered images

Once you've captured your picture of Ronald Reagan the fun begins. A way of editing your finished images with Screen Designer would be to create a dummy Screen Designer file with the same name as your video image file.

This produces two files with type parts .SDS and .SCN. The .SCN file can then be deleted. If you then rename your video image file from a .BIN to a .SCN file and go into screen designer the image can be loaded and edited.

Printing a digitised image is done in one of three ways, depending on which mode is set. Mode 2 is printed horizontally on the paper in two tones. This picture is slightly smaller than a green screen monitor display.

Mode 1 prints out exactly the same size of picture as Mode 2 but using four shades. Mode 0 is printed vertically on the paper and is about the same size as a colour monitor display. This printout, of course, uses 16 shades.

The quality of the printout is very good, especially for Mode 0 frames, and results are best viewed from a distance of about five feet. Having the |VPRINT built into a rom is very handy as it works with any type of screen image, although it can only use the preset shades.

There are two other RSXs included: |VGRAB which grabs one frame and displays it in the current mode and |VRESET, which resets the menu selection settings to their default values.

More powerful frame grabbing applications could be written by using the built in RSXs. Rombo Productions has some ideas and will issue updates to its software/roms as new versions become available. Rombo is looking for any ideas, programs or images that anyone comes up with, for future projects.

Conclusion

Of the few digitisers – for any micro – that I have seen, I would say that the Rombo Vidi compares very well and has a very bright future. I look forward to the next version of the software – let's hope it includes a colour frame grabber or an animation system which uses digitised images for Max Headroom style films.

The verdict? A very good, fast, cheap and useful interface which will go a long way and give a lot of people a lot of fun for a some time. If there are enough of us using these things in the future the magazine may well decide to hold a competition for the best digitised image, or best animation sequences.

If I hadn't done so already I'd buy one.

Product: Video Digitiser
Supplier: Rombo Productions, 62 Meadowbank, Ladywell, Livingston, West Lothian, EH54 6EL
Tel: 0506 39046
Price: £89.95

ACU





Application Form

Name
Position
Company
Address
Postcode Daytime tel:

Commencement of Service
Please indicate month of commencement ☐☐ 19☐☐
Allow 7 days for validation of mailbox

Date of first payment to be on 15th of month following commencement. Please complete billing authorisation form A, B or C.

* *Telecom Gold is a trademark of British Telecommunications plc.*

I/We hereby apply to join MicroLink
(✓)☐ I enclose my cheque for £5 payable to Database Publications as registration fee to MicroLink.
(✓)☐ I also wish to use Telex. I authorise you to charge an additional £10 to my initial bill for validation.
☐ I confirm that I am over 18 years of age.
☐ I confirm that I accept the terms and conditions for the time being in force, copies of which are available on request

I intend to use the following computer model _____

Signature _____
Date _____

A. Direct Debiting Instruction *(Enter full postal address of UK Bank Branch) to:*

I/We authorise you until further notice in writing to charge to my/our account with you on or immediately after 15th day of each month unspecified amounts which may be deited thereto at the instance of Database Publications Ltd – MicroLink by Direct Debit. Bills are issued 10 days before debit is processed.

Name of Account to be debited
Account Number Sort Code

B. Please debit my/our Access/Mastercard/Visa/ *American Express No.
**Overseas subscribers only*

I/We authorise you until further notice in writing to charge to my/our account with you on or immediately after 15th day of each month unspecified amounts which may be debited thereto at the instance of Database Publications Ltd – MicroLink. Bills are issued 10 days before charge is applied to your account.

Signature _____ Date

C. Please invoice the company/authority.
(✓)☐ If you select this option, which is ONLY AVAILABLE to government establishments and Public Limited Companies, we will require an OFFICIAL ORDER to accept unspecified amounts.

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

FOR OFFICE USE ONLY:
Mailbox assigned _____
Start date _____
Password _____

ACU 12

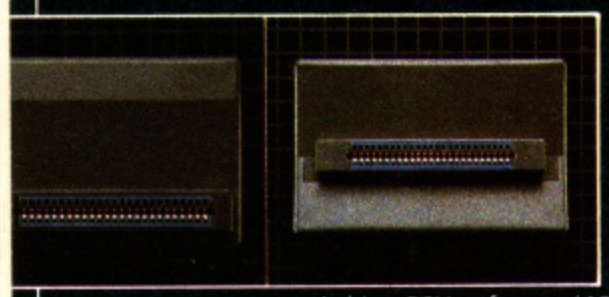
256K SILICON DISC



- This is the fastest storage system available for Amstrad CPC computers and is compatible with CPM 2.2, CPM+ and all DK'Tronics peripherals including the 64K/256K memory expansions. When used with CPM+ and our 256K memory the edition disc capacity is a massive 442K (more than the PCW 8512 Ram Disc). It automatically logs on as drive B or drive C in two drive systems and does not require extra power supply.
- The 256K Silicon Disc is designed to be used with at least one normal disc drive attached. When fitted the directory uses 2K thus leaving 254K for storage, over 70K more than the normal discs.
- Data and programs can be exchanged between the Silicon Disc and a normal disc, application programs can then work on the data at vastly increased speed especially on systems with only one normal drive.
- Software is contained in an expansion ROM and there are two environments in which the Silicon Disc can be used, BASIC under AMSDOS where all the normal AMSDOS commands are fully supported LOAD, SAVE, MERGE, CAT etc and within CP/M 2.2 CP/M+ where commercial programs are designed to run on multi drive systems.

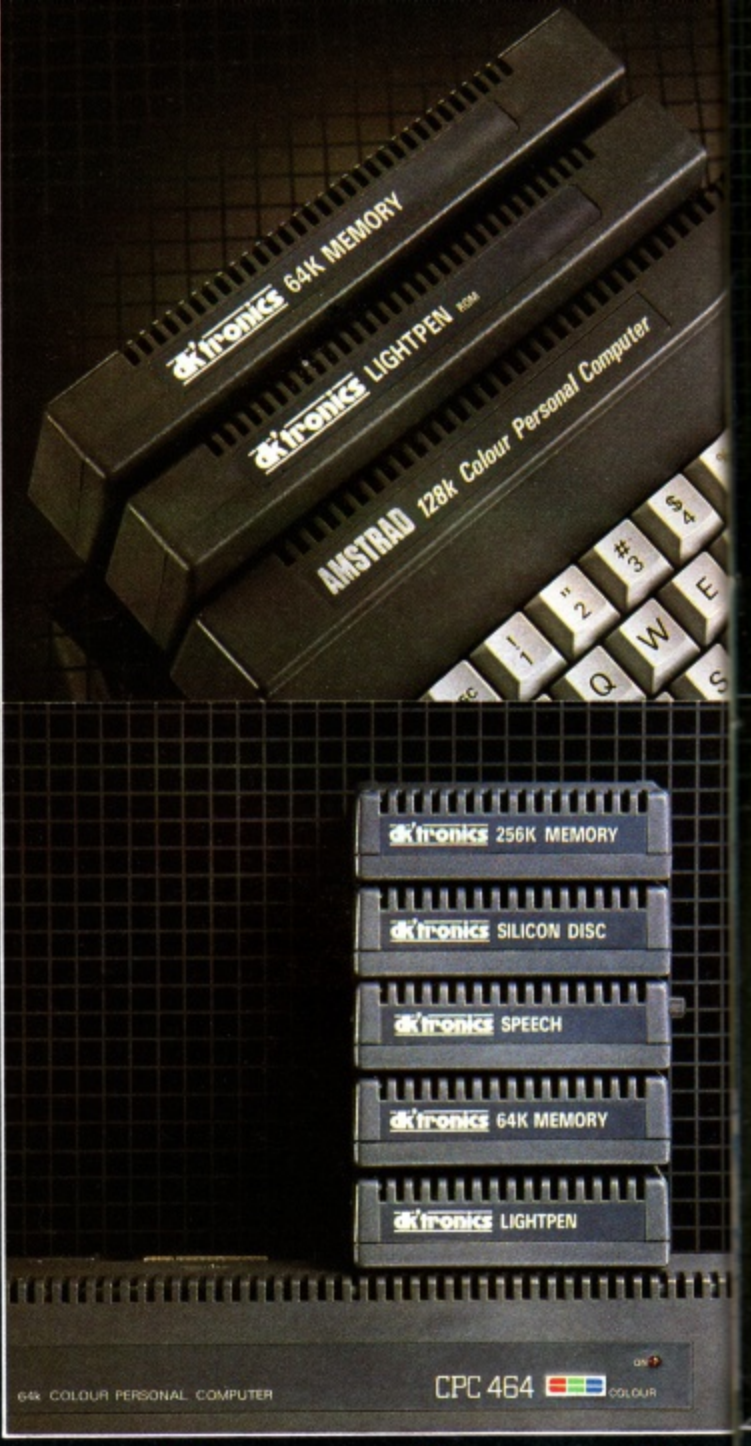
£99.95 including VAT (464 and 6128)

64K and 256K MEMORY EXPANSIONS



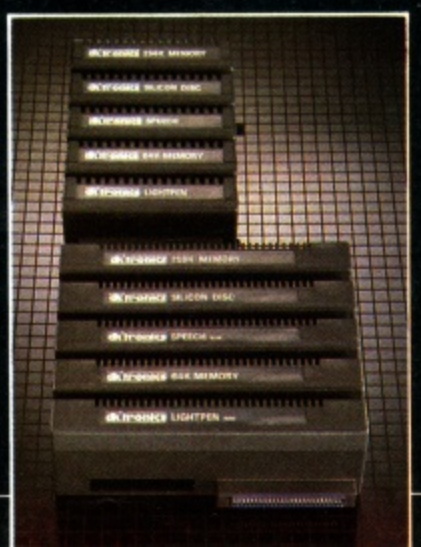
- The memory expansions increase the Amstrad 464's internal memory to give a total of 128K or 320K. The 621's memory is increased to 320K. It is compatible with all DK'Tronics peripherals including the 256K Silicon Disc.
- It is supplied with bank switching RSX software (464 software on cassette 6128 on disc.
- The software adds some BASIC commands which makes it possible to use the second 64K (or 3rd or 4th and 5th in the case of 256K) for storage of screens, windows, graphics and basic arrays. This ability means that you can write much larger basic programs and sophisticated programs that use pull-down menus with ease.
- With an expansion fitted on the 464 it then has the same memory configuration as the CPC 6128. It will then run CPM+ with its massive 61K T.P.A. area, opening up an even larger software base to 464 users. When using either of the expansions with CPM 2.2 on the 464 and 6128 computer the T.P.A. is increased to 61K.
- The RAM is accessed by means of bank switching using a single I/O port. Memory is actually switched in and out of the 64KZ80 address space in 16K sub blocks (as are the ROMS). The port determines which particular combinations of the original four 16K sub blocks and any new sub blocks from the expansion RAM will occupy the 64K address space at any time. All of this switching is done automatically by the software supplied.
- The contents of the expansion RAM are retained if the computer is reset and if the RAM is used for machine code the contents will remain even if the computer crashes.

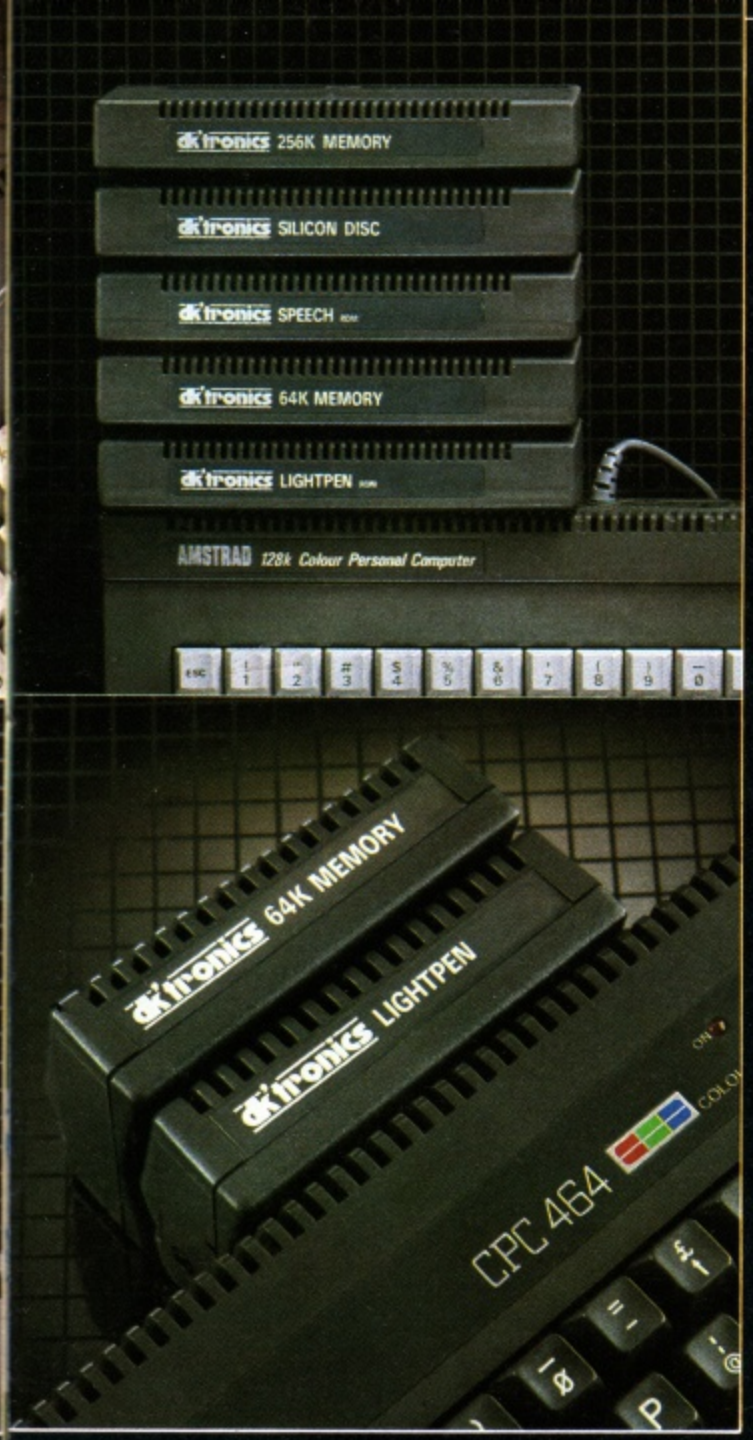
64K **£49.95** including VAT (464 only)
256K **£99.95** including VAT (464 and 6128)



L E A D
F R O M B

DK'Tronics have produced this ra
enlarge the potential of the 464
and have been designed to com





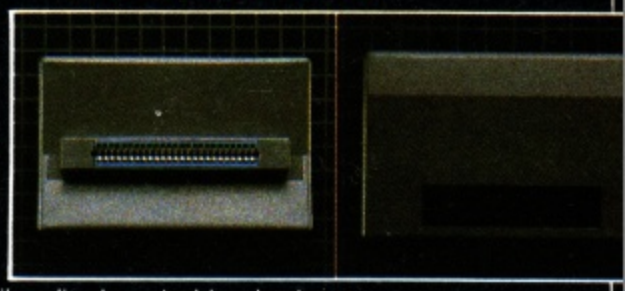
D I N G
B E H I N D

is range of powerful peripherals to
464 and 6128 Amstrad Computers
compliment their style and colour.

dk'tronics
POWER BEHIND YOUR AMSTRAD

DK'Tronics Limited
Gorleston, Great Yarmouth, Norfolk NR31 6BE.
Phone 0493 602926 (24 hours), Telex 975408.

GRAPHICS LIGHT PEN



The sophisticated graphics package includes a colour palette, nudge control for one pixel accuracy, brush choice, text handling and user defined characters.

It can magnify, shrink, colour fill and create circles, rectangles, lines and curves.

Complex pctures can be easily edited at pixel level using a scratch pad which is magnified to the full screen.

There is picture storage and retrieval, and a pen callibration utility and there is also an Amstrad/Epson compatible printer dump utility supplied on cassette.

There is a cassette version for the 464 and a ROM version for the 464 and 6128.

Cassette **£19.95** including VAT (464 only)
ROM **£29.95** including VAT (464 and 6128)

SPEECH SYNTHESISER



This simple to use speech synthesiser includes a powerful stereo amplifier and two high quality speakers which greatly improves the sound quality of the internal mono speaker.

It uses the popular SPO/256 speech chip and has an almost infinite vocabulary.

It is supplied with a text to speech converter software for ease of speech output creation. Everything you wish to be spoken is entered in normal english without special control codes or characters making it extremely easy to use.

The voicing of the words is completely user transparent and the computer can carry on its normal running of a program whilst the chip is talking. The speech output from the SPO/256 is mono and directed to both speakers.

There is a cassette version for the 464 and a ROM version for both the 464 and 6128.

Cassette **£29.95** including VAT (464 only)
ROM **£39.95** including VAT (464 and 6128)

HOW TO ORDER

DK'Tronics products are available in all good computer stores but may be obtained by completing the order form below and returning it to DK'Tronics or by telephoning and quoting your Barclaycard or Access number.

Orders are normally despatched within 24 hours and if you have any further queries concerning our products do not hesitate to give us a ring or send us a large stamped addressed envelope for our latest free 84 page technical manual covering our Amstrad product range.

Please send me _____

Name _____ Signed _____

Address _____

_____

_____

I enclose Cheque/PO/Cash for:- Total . _____

or debit my Barclaycard/Access number

CP/M+ is a registered trademark of Digital Research Inc.



The definitive adventure for the CPC?

John Baker gets to the heart of Heartland

● Make a map – otherwise you'll never complete the quest within your time limit.

Attics are strange places. Dark and musty, close inspection reveals all sorts of long forgotten junk; cots, old train sets, chamber pots, ZX 80s, boxes of papers and books that haven't been touched since the year dot. Sounds familiar?

Now imagine youself reading one of those books, only to find yourself inexorably drawn into its world of mystery and magic – all the stuff of classic fantasy, and the main plot line behind Odin's latest offering for the Amstrad CPC, Heartland.

Odin Computer Graphics, to give the company its full title, consists of eight programmers, four artists and one musician – the kind of mix that is becoming so common among the leading software development teams.

This blend of programming skill and artistic flair has undoubtedly reached its current peak on the CPC with this title, a conversion from their existing Spectrum game.

Now the Arnold gets its fair share of conversion jobs – some good, some not as good as the "originals". But believe me, Heartland is one of the first games, to my mind that is significantly superior to its predecessor *(Sorcery? – Ed)*.

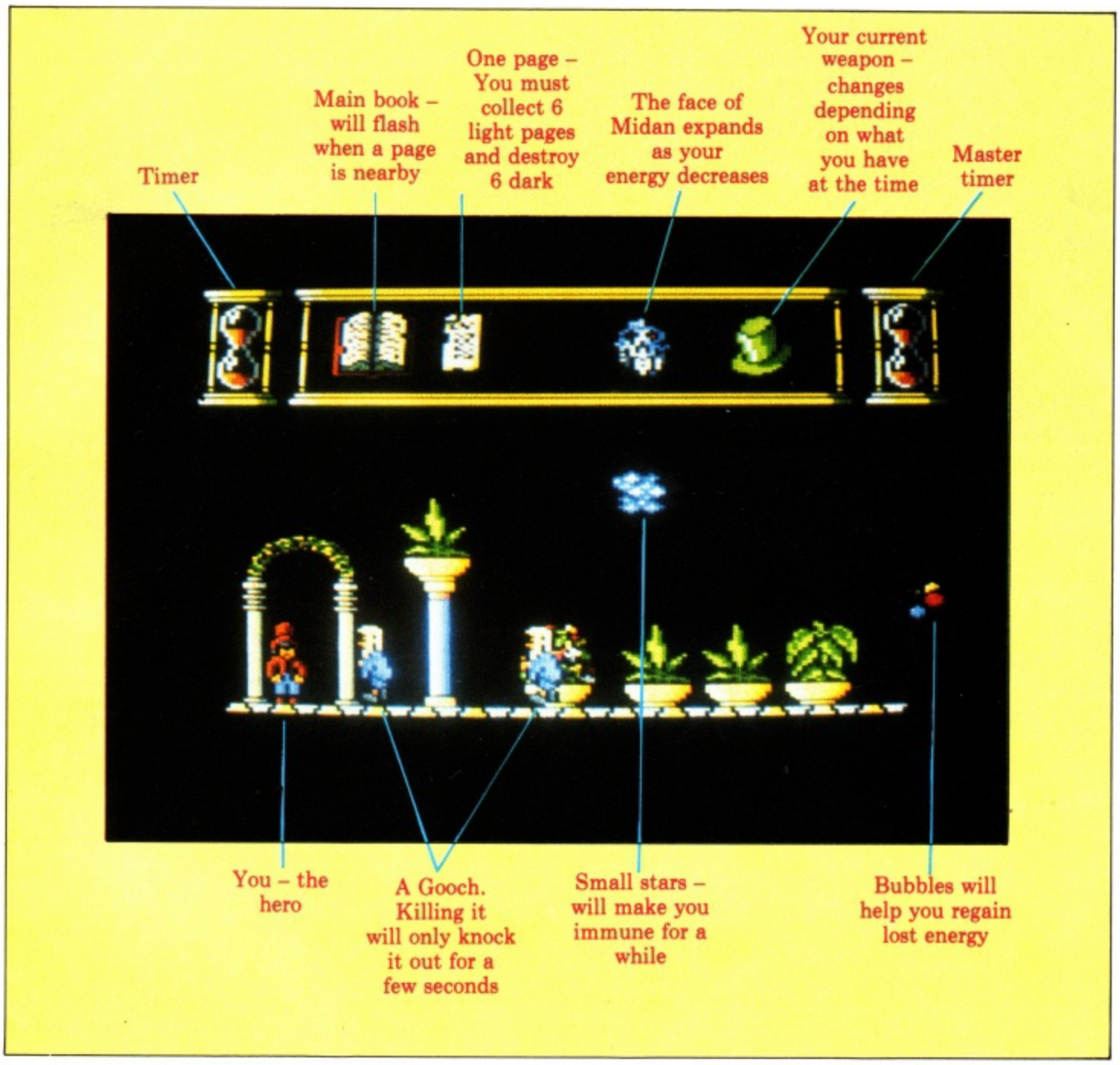
Heartland on the Spectrum was good enough – some of the Speccy mags went ga-ga over it – but I felt, on that format, the graphics just weren't detailed enough to invoke that feeling of the unreal that the game promised.

Evidently Odin must have thought that too, as for the CPC every single graphic has been re-designed and re-drawn in glorious 16 colours (that makes 128k of graphics data alone!) and the scrolling and animation is some of the smoothest you'll ever set your eyes on. The sound effects aren't half bad either.

Combine this lot with an enchanting plot, fiendish gamesplay and a strict time limit and you end up with the definitive arcade adventure for the CPCs to date.



The beginning: The bed and the book in the garden



The game has you taking the part of the Wizard Eldrich (looking strangely like a certain Mad Hatter) who must travel around the various levels of Heartland (there are five in all, The Garden, The Moonbase, The Caves, The Castle and The Village) to locate the Book of Heartland.

Then you must collect the six "light" pages that comprise the last chapter of the tome, while destroying the six dark pages created by the Evil Arch Enemy, Midan.

This is made slightly more difficult by the fact that Midan has detected your presence in Heartland, so is doing his best to wipe you out with his minions and spells – and weakening the magic of the book itself, thereby limiting the time you have availible in each land. It's tricky!

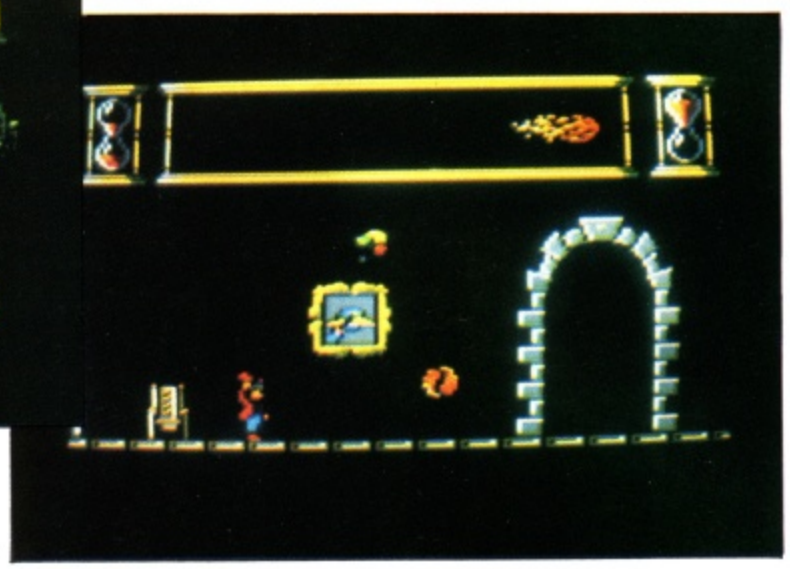
Gameplay

Control of Eldrich is via joystick: Simple left/right, up for jump and fire to zap

- *Take care when jumping across gaps – one slip is fatal!*
- *Grab fireballs whenever possible – they're lethal!*



Caves – hats off!



Inside the castle

● *Try to zap evil spells as soon as they come on-screen – they're bad news.*

with whatever you're packing at the time.

Weapons can be gained by catching them as they float about on-screen. There are three types: Top Hats will blow the opposition away with three hits; Swords require only two; while Fireballs, awesome things of destruction, only use one hit to get rid of the foe.

However, Swords and Fireballs are used up quite quickly, whereas Top Hats last indefinitely. The graphic display on the top of the screen shows your current weapon.

● *Watch out for Wizards – they're like mobile flame throwers.*

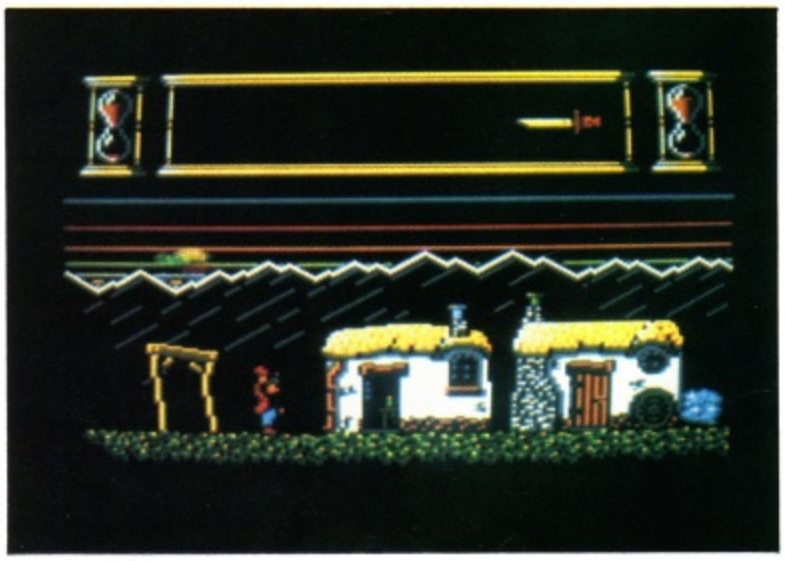
The first thing you must do – you start off by your bed in The Garden – is to find the Book, but don't worry, as Odin make this fairly easy. You just catch it as it floats by. The book is the most important piece of your equipment, as it will flash in a location where a page is present.

There are about 40 locations to a level with two pages on each.As soon as you have collected two the book will flash again, and you must make your way back to the bed. Now the next level will automatically load. Of course, it's not that easy.

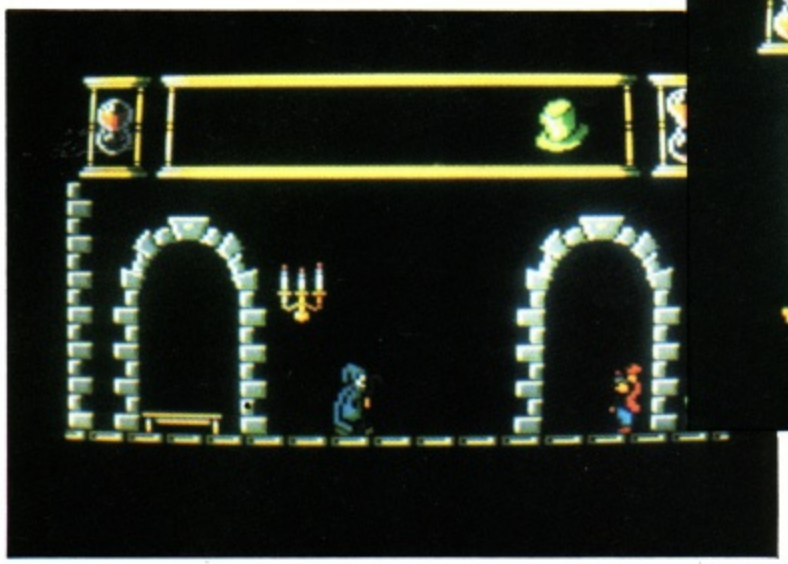
Enemies

Each level has one charactaristic type of enemy – Wizards on the Castle level for

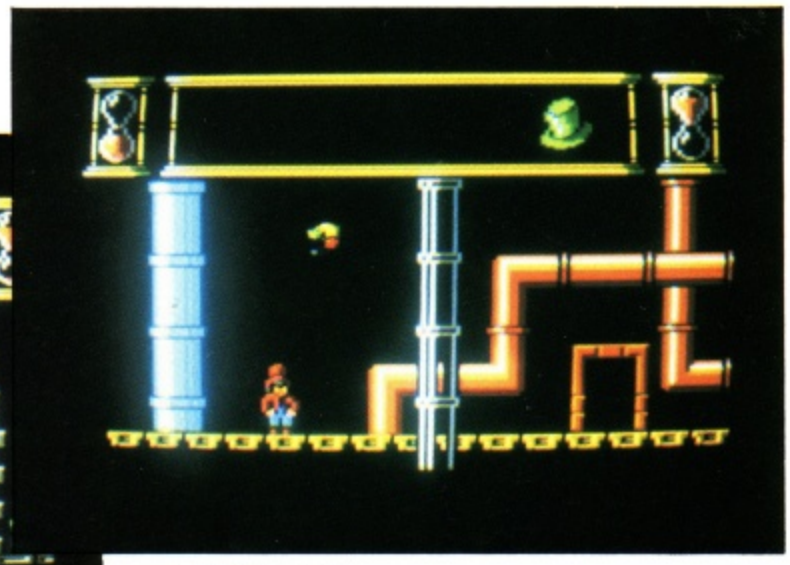
● *If there's a page floating about, don't shoot – zapping it will mean you can't finish the game!*



In the village



Watch out for wizards!



Moonbase level

instance (watch out, they spit fire), Spacemen on The Moonbase, Woodmen in The Village (see those axes fly), Gooches in The Garden.

Colliding with any of these (or being hit by them) will increase the power Midan has over you – it's indicated by the opening and closing "iris" of his ugly mug above the main display. When fully revealed you're dead!

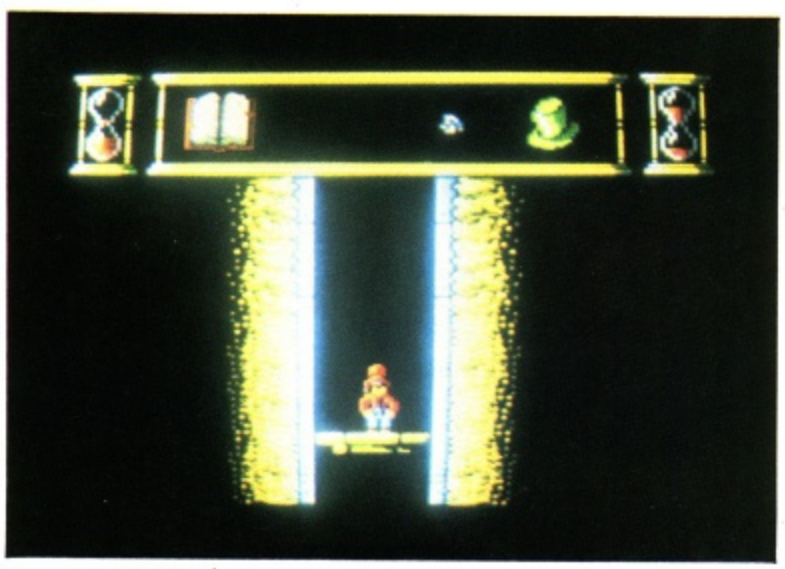
Energy can be regained by catching refreshing bubbles, while temporary immunity is won by colliding with silver sparkles. On the other hand, if you find yourself pursued by a cluster of large stars (and I don't mean the Nolan Sisters) shoot them fast (maybe I do mean the Nolan Sisters) as they'll sap your strength fast if you let them.

Overall

Each screen of each level is beautifully designed – you just can't fail to be impressed – but Heartland isn't just about graphics. Smooth animation, excellent sound, and highly developed gamesplay make this the slickest, most entertaining Amstrad arcade adventure to date.

If you enjoy games of this type it's a must for the Christmas list. If you don't, try it – Heartland may well charm you into thinking otherwise.

● *Hang a "Do not Disturb" sign on the door – the lack of save or pause facilities (naughty, naughty Odin) means you can't leave the keyboard for a moment.*



The lift – going up



ACU



While other computers are still
starters orders, you're off and ru

The Amstrad 6128 has a built-in advantage over most other home computers.

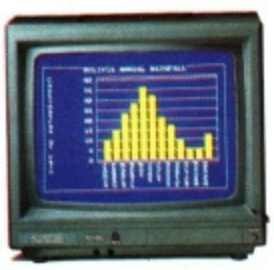
Its fast loading disc drive unit.

An ordinary cassette driven computer can take as long as 15 minutes to load.

Whereas the 6128's built-in disc drive will load the same programme in seconds.

Which means you don't waste valuable playing time loading.

And it also means you can quickly get into more sophisticated programmes, using more of the 6128's big 128K memory.





Loads more business programmes

There are hundreds of games to play on the 6128, but it also has its serious side.

It can handle spreadsheets, database and account management programmes.

It can file and index, produce standard letters and compile reports.

And it will even keep track of rates, mortgage and H.P. payments for you if you want it to.

The 6128 comes complete with green screen or full colour monitor, as well as keyboard with

——AVAILABLE AT: ALLDERS · BOOTS · CLYDESDALE · COMET · CONNECT · CO-OP · CURRYS · DIXONS · ELECTRIC SUPREME · LASKYS · JOHN LEWIS · JOHN MENZIES · POWER CITY · RUMBELOW

ll under
running.



built-in disc drive.

But if you want still more, additional disc drives, printers and joysticks are all available.

You could be off and running on a 6128 for as little as £299 (green screen) or £399 (colour monitor).

At those prices, you won't be surprised to learn that it sells almost as fast as it loads.

WITH GREEN SCREEN AROUND	£299
WITH COLOUR MONITOR AROUND	£399

· ULTIMATE · W.H. SMITH · WIGFALLS · AND GOOD INDEPENDENT COMPUTER STORES ——

Please send me more information fast.

Name_____

Address_____

_____

6128/ACU 12/86

The Amstrad 6128.

With disc drive and 128K memory.

Amstrad P.O. Box 462, Brentwood, Essex CM14 4EF.

The best selling Computer Game is now available for the New Generation. Don't Get Mad – Get Even!



Full game or questions only available on
Spectrum 48/128, CBM 64/128, BBC B,B+, Master, Amstrad CPC
Cassette and Disk

Boots · W.H. SMITH TOPSOFT 20 TITLE · John Menzies

and all local stockists

YOUNG PLAYERS™ EDITION – OUT NOW

HORN ABBOT INTERNATIONAL ™

© 1986 HORN ABBOT INTERNATIONAL

TRIVIAL PURSUIT is a Trade Mark owned and licensed by Horn Abbot International Ltd.
Published by Domark Limited, 204 Worple Road, London SW20 8PN. Tel: 01-947 5624.
Trivial Pursuit was programmed by Oxford Digital Enterprises.

DOMARK

GALLUP SOFTWARE CHART

			Last month	Market strength
1	**Thrust** *Firebird*	Not surprisingly Number 1 for the second month. Simple and clever space game. A cross between Asteroids and Lunar Lander.	1	100
2	**Speed King** *Mastertronic*	Good value, fast moving racey motorcycle game.	2	94
3	**Apprentice** *Mastertronic*	Sorcery on a budget. Enjoy waving spells and conjuring up magic.	ne	73
4	**Kane** *Mastertronic*	Excellently animated, budget priced Wild West shoot out.	4	62
5	**Ninja Master** *Firebird*	Lots of kicks in this four part test of Japanese fighting skills.	3	51
6	**Trivial Pursuit** *Domark*	Quirky questions and polished presentation give you as many endless hours of fun as the board game.	ne	47
7	**Conquest** *Mastertronic*	A conversion of a Derek Brewster story. A must for all adventure game enthusiasts.	ne	41
8	**5 A Side Soccer** *Mastertronic*	Lead your team to victory in this all action sports simulation.	ne	38
9	**Harvey Headbanger** *Firebird*	Jolly arcade game which demands quick wits and fast responses. Best for two-players.	5	38
10	**Starstrike 2** *Realtime*	Excellent 3D inter galactic battles. Very clever, action packed, highly addictive.	ne	34
11	**Ghosts and Goblins** *Elite*	Faithful conversion of the coin-op original. Difficult but addictive. Great fun once mastered.	6	30
12	**Jack the Nipper** *Gremlin*	Have fun being as naughty as possible. Great graphics and wicked sense of humour.	14	30
13	**Dan Dare** *Virgin*	Their best game is based on the comic strip. Stylish, thrilling adventure to save Earth from Mekon's Asteroid.	ne	28
14	**Green Beret** *Imagine*	Play macho man. Take on a whole army single handed with only a knife and the occasional flame thrower.	8	28
15	**Elite** *Firebird*	The famous space trading game with plenty of mid-flight action. Highly addictive and an essential purchase.	12	27
16	**Bomb Scare** *Firebird*	3D game in the alien 8 mould. Bit of a bore unless your a die hard cartographer.	ne	25
17	**Video Poker** *Mastertronic*	Computerised card games tend to be naff. Stick to the real thing.	ne	25
18	**Storm** *Mastertronic*	Gauntlet-style view from above arcade game. Very addictive with a huge map.	7	24
19	**Tomahawk** *Digital Integration*	Fun helicopter flight simulation. Plenty of things to shoot with strategy if you want it.	re	23
20	**Knight Games** *English*	Enjoy fighting in armour in true Middle Ages style.	9	22

Non-mover Up Down New entry **DECEMBER 1986** Chart compiled by Gallup/MicroScope

ALIENS



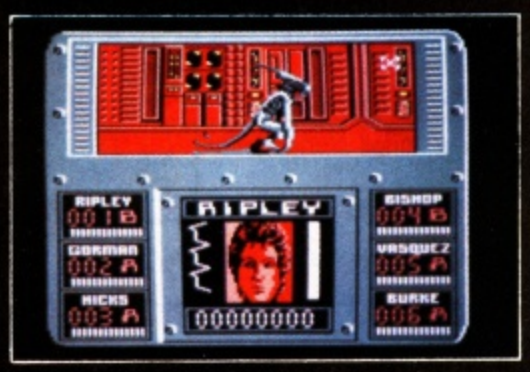
Don't argue with Rod Cousins

Let's hope you've either seen Aliens, don't want to see it or are too young to get into the cinema because this is about to ruin the start of the film.

At the end of Alien, Ripley, played by Sigorney Weaver is left floating through space in an escape capsule after an alien picked up on an otherwise uninhabited planet had devoured the rest of the crew.

She goes into suspended animation (deep sleep) and drifts for decades until the capsule is picked up by a salvage team. On awakening she learns the planet has been inhabited and but that all contact has been lost with the colonists. A SWAT squad is sent in to destroy the aliens, with Ripley acting as adviser on the mission.

In the game you control the six members of the squad, including Ripley, Bishop the android (who prefers to be known as an artificial man – with white blood) and Burke, the man who has been sent on behalf of the company. He wants to safeguard the company's interests since it owns the recycling plant on the ill fated planet.



Ripley's in trouble – you can save her

The foe

The six members of your team must seek out and destroy the aliens to prevent them from taking over the base. There are four types of foe. Alien warriors, face huggers (yeech!), alien queens and eggs. A slight deviation from the film allows there to be more than one alien queen – otherwise shooting her would end the game far too quickly.

Your mission

In the film the squad enters the alien base in a Captain Scarlet style tank. The lucky guy who gets to stay inside the tank can watch what is going on with a control panel. It is this which is mimicked by the game.

You view the action through the eyes of Ripley, Gorman, Hicks, Bishop, Vasquez and Burke. You can monitor ammunition and room number for each person, your overall score and status – fit, ill or under attack.

The game allows you to control each of the individuals, move from room to room and fire the smart guns. Beware of being trigger happy. One shot is enough to draw a nearby alien to you. To kill an alien requires one shot to the head or three to the body – and you need to be fast. After the first body blow the alien is on you like a ton of slime.

You know if you are not alone – the proximity meter sounds to warn of approaching creatures, friend or foe. As your character turns the view scrolls in a kind of Battlezoney way. It is the sense of not knowing who, or what, is behind you that makes Aliens scary.

In between attack waves blast shutters close to show your score and the number of aliens, face huggers and eggs which have been blasted, shot or fried.

You can have some characters obeying orders while you take control of another. So you can get Burke to move forward nine rooms while you take Ripley through another area a room at a time – the game comes with a map of 255 rooms showing the shape of the base.

You can use your gun to jam doors open or shut, but having seen the film makes me doubt the merits of the latter course. It is useful if you are being chased but you need to be quick – if you shoot an alien in front of a door then you can't get past as it bleeds acid which blocks your path.

Special rooms

There are some special rooms. There is a medical block and the queens' chambers at the end of a maze and you need to get to the armoury to obtain rounds for your smart gun. And the central control room contains the generator – if the aliens take that over you lose all the lights and have to work within a torch beam.

To stop the rooms from being taken over you need to shoot the bio-mechanical stuff which oozes over the walls. This is quite fun but beware of shooting when there are aliens about.

Playing the game

The game has been programmed by SoftMachine: The Amstrad graphics were ported from the Commodore 64 and look excellent. We only saw a



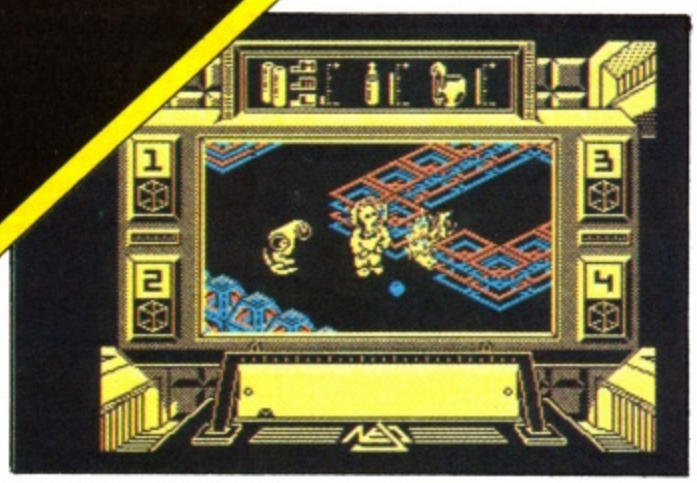
Mev Dinc showing how to play Prodigy



A warrior stalks the base

pre-release version and the scrolling was a bit jerky, but the animation of the aliens was superb. When you know there is an alien about and you can't see it you tremble, if you find the creature as it homes in for the kill you jump.

Film tie-ins are often used as an excuse for a poor game. With Aliens this is not the case, it is an excellent program – just don't play it in the dark.



A scene from Prodigy

More than just Aliens

Though owned by Activision, an American giant based in L.A., software house Electric Dreams does not live in big brother's shadow. It has a lot going on with several projects nearing completion.

The two companies are kept very separate, with Electric Dreams based in Southampton and Activison in London. The former has established its independence over the last year, after a time when it looked like being another Activison label.

The two now have different flavours, Electric Dreams being more arcade oriented and Activison concentrating on programs like Hacker which have a strategy element.

Both have well known titles in their stables – Howard the Duck and Labyrinth are two films to which Activison has the rights while Electric Dreams has Aliens, Big Trouble in little China and its greatest hit, Spindizzy.

Working with Activision has given Electric Dreams much greater buying power and a route into the difficult American market. This has been so successful that the American Electric Dreams label has been used by other British software houses to sell games like Transformers.

There are some great things planned too . . .

Hijack

You are a troubleshooter, head of a security division in the Pentagon, with a hijack to resolve and hostages' lives resting on your decisions.

You're not alone: you have people who will help you – and the president keeping an eye on you.

The program is a 2D spritey game, a little like Mission Elevator. You start in your office and as you walk around, a window on the screen shows what you can pick up.

You move through the building using lifts, look through filing cabinets or even empty the bin. In your searches you will find the codes needed to open doors later in the game.

There are three ways to solve the problem – financial political or military – and a cast of thousands: Military and polictical advisers, assistants, financial and publicity officers, a secretary and of course Mr President himself.

He can authorise finance but it is easy to upset him – to placate him, get the publicity officer to send out press releases. The CIA and FBI can be called into play when the need arises.

To resolve the hijack you will need to pool resources and investigate avenues. Manipulate your employees and finally save the hostages. Good luck.

Prodigy

This is a non-violent game, written by Mev Dinc. You have to escape from a huge lab complex and protect your baby, Nejo.

The lab consists of four zones, Veggie, Ice, Fire and Tech. You need to maintain your oxygen level by entering the ice zone and popping balloons in the correct order. Solving puzzles, dodging monsters and stealing the security cameras helps you to escape.

A system of teleports moves you from zone to zone, so despite the distance involved you can flip back to get more oxygen when you need it.

Tools within the game include a bucket of water which can be used twice to put out fires before you need to re-fill it. Refilling is done in the shower, which is also used to clean the baby.

A major obstacle is a moving maze which stubbornly refuses to slide in the way you want unless you turn your back on the tiles.

A novel feature is that action carries on even when it is off the screen, such as the baby continuing to do baby-like things.

Completing the game – even if you are really good – will take two or three hours.

Electric Dreams

ACU

SIREN SOFTWARE

Top Quality Utility Software for your Amstrad



THE ULTIMATE TAPE TO DISC TRANSFER PROGRAM
The only one to automatically transfer headerless, normal and turboloaders at the touch of a key.
Contains four programs giving you far more power.
Will transfer the majority of your software, even programs that other copiers will not copy.
Will handle a wide range of different turboloaders.
Absolutely no programming ability needed.
Complete with full easy to follow details of how to transfer over 100 different programs using Discovery.
All parts of the package are very easy to use.
Full details will enable even the first time user to transfer their programs.
This really is so much better than any other transfer program. We will refund your money twice should you find a better one.
AMSTRAD ACTION MAGAZINE said of our old Discovery program, "Probably the best of the tape to disc copiers". Discovery Plus is definitely the best.
Compatible with the 464, 664 & 6128. ON DISC ONLY £14.99

Updates
If you have our old discovery program, to receive this latest one, return it to us with a cheque or P.O. for £5.99 (if you have it on disc) or £8.99 (if you have it on tape). Please send the Tape/Disc box with it.

Transmat/Amshelp Owners
Send us your Transmat or Amshelp disc (complete in box) and receive a £2.50 discount on this superior product.

MASTER DISC REALLY DOES IT ALL!

DISC £12.99 464,664,6128

1. **IMAGE**
Make back-up copies of your discs. Even copies some discs that some other copiers will not.
2. **DIRECTORY EDITOR**
Unerase files, rename files, hide files, protects files etc.
3. **SPEEDFORM**
Format your discs lightening fast. Possibly the fastest formatter ever written.
4. **SECTOR EDITOR**
Complete sector editor, look at and change sectors etc.
5. **DEPROTECTOR**
Deprotect basic programs.
6. **DISC HEADER**
Displays information about your programs on disc
7. **TAPE HEADER**
As above but for tapes.
8. **TRANSFILE**
Transfer individual files from disc to disc or disc to tape.
9. **DISCMAP**
Shows how files are stored on disc.
10. **TYPESFILE**
Displays on screen/printer any ASCII file.
11. **DUMPFILE**
displays in HEX/ASCII format the contents of a file
12. **ZIP DISC**
Speed up your disc drive by 20%.

"The IMAGE program is vital for making back-ups of disc software that use a strange format or unformatted tracks." AMTIX June 86
"So far we have yet to find a disc that it cannot copy from – it even copies unformatted discs." AMTIX June 86
'.....some of the utilities are really excellently done." Popular Computing Weekly
"The package seems to work very well on the full range of machines." AMTIX June 86
"Each section is fully documented with clear and precise instructions." AMTIX June 86
"This SIREN package really does offer you quite a lot for your money." Amstrad Action June 86



HANDYMAN
The disc enhancement package

HANDYMAN is a must for all disc owners, this unique program will allow you to use 207K per side of a standard Amstrad disc on a standard Amstrad disc drive.
HANDYMAN has many other powerful features:-
...An easy to use disc menu maker.
...A full disc/file search & editor.
...Trans file will enable you to transfer files from one disc to another.
...Disc release will transfer a whole disc to tape
...Disc restore will transfer from tape, discs put on a tape with disc release.
...Filemate – dump displays on screen or printer files in HEX/ASCII format.
...Filemate – list lists on screen/printer an ASCII file with line numbers.
...Filemate – type as list but without the line numbers.

CPC 464/664/6128

HANDYMAN ON DISC ONLY £12.99





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 back up about 90% of all Amstrad software.
...choice of 10 save speeds up to 4000 baud.
...Removes protection from basic & speedlock programs.
"Simply the best, the tape to tape backup copier to beat all tape to tape backup copiers". AMSCLUB
...Written specifically for the 464, this is not a Spectrum conversion..

TAPE UTILITY ON TAPE ONLY £6.99.
AMSTRAD CPC464 ONLY.

OVERSEAS ORDERS PLEASE ADD £1.00 FOR POSTAGE
SELECTED ITEMS AVAILABLE FROM:-
SEMAPHORE: CH-1283 LA PLAINE. GENEVA. SWITZERLAND
PR8 SOFTWAREDIENST. ERBACHSHOF, 8702 EISINGEN. WEST GERMANY
U.K. TRADE ENQUIRES WELCOME.
TRAFFORD TECHNOLOGY CENTRE, 43 ELSINORE ROAD, MANCHESTER
M16 0WG. TEL 061-848 9233

SILICON SYSTEMS

AMDRIVE

The 3" Second drive for the CPC range of computers – as featured in **Amstrad Computer User's** Reader Offer last month. Drive mechanism by Hitachi, case, power supply and cables by Silicon Systems. Guaranteed for 12 months, all you need to supply is the computer and a mains plug.
Normally £89.95
Special price to ACU readers
£79.95 including VAT and postage

MEGADRIVE

The **Megadrive** is the **Big** drive for the CPC range of machines giving a massive **1,000,000 bytes** of unformatted storage on 5.25" discs. Supplied complete with an interface and all connecting leads the **Megadrive** has a built-in power supply and comes with utility software. Built to Silicon Systems usual high standards the **Megadrive** has a 12 month guarantee.
Normally priced at £229
we are offering ACU readers the chance to purchase in November and December at **£209.00** inclusive of VAT and postage

AMRAM

At last – **sideways RAM** for the CPC range – this unique peripheral allows you to save any **ROM** to disc, load any rom to **AMRAM** where the computer thinks that it is a **ROM!** Supplied with a sophisticated package of icon driven software which allows you to edit and customise **ROMS.**
AMRAM has been tested with all known commercially available ROMS and is **fully compatible with them ALL!**
Available now at **£39.95**

2.2 PLUS

The CP/M Utility of the year for **CP/M 2.2 USERS.**
Enables you to run almost all known CP/M 2.2 software on your Amstrad CPC computer. Also features 60KTPA, a full Heath-Zenith Terminal Emulation, 16K print spooler and silicon disc management if you have the RAM pack(s) fitted.
£19.95 on disc **£17.95** on tape complete with 30 page manual.
Please state which computer i.e. 6128/664/464 you are using

OVERSEAS ORDERS PLEASE ADD £1.00 FOR POSTAGE
SELECTED ITEMS AVAILABLE FROM:-
SEMAPHORE: CH-1283 LA PLAINE. GENEVA. SWITZERLAND
PR8 SOFTWAREDIENST. ERBACHSHOF, 8702 EISINGEN. WEST GERMANY
U.K. TRADE ENQUIRES WELCOME.
TRAFFORD TECHNOLOGY CENTRE, 43 ELSINORE ROAD, MANCHESTER M16 0WG. TEL 061-848 8959

Joyce gets a dictionary

LocoScript can now spell. Rupert Goodwins looks at the pros and cons of LocoSpell.



For the vast army of Joyce users who have remained faithful to LocoScript and shunned the siren song of CP/M and Wordstar the announcement of Loco-Spell – LocoScript with added spelling checking – should be welcome indeed.

Given the level of professional use made of the PCW series, it's perhaps not surprising that LocoSpell has been much asked after at shows, in bars and wherever two or more LocoScripters have been gathered together. Here it is, but does it work?

LocoSpell looks almost exactly like LocoScript, with all your favourite facilities left untouched, but with the addition of various options. These are available at any time during the editing of a document, and ask the computer to check all or part of the document against the current dictionary.

LocoSpell comes with two dictionaries, a standard one of some 32,000 words, and an extended version with 77,000. Both are supplied by Longmans, who are well known for their specialist wordbroking.

You can also compile your own personal dictionaries to use in addition to the supplied ones, and Locomotive are talking about providing some for specialist applications, such as the legal or medical professions.

Installation

LocoSpell is started up in familiar fashion by restarting the Joyce with the disc in drive A. Halfway through the procedure, however, it announces that it's LocoScript (with LocoSpell), Copying A:LOCOSPEL.DCT.

This is the dictionary being moved to drive M, the ram disc. Using this method, the checker can run much faster than if it was using the dictionary on an ordinary disc to check against.

Then the much loved disc management screen appears. Apart from the file in Drive M, it looks and acts precisely as the unreconstructed LocoScript. You can insert new discs, select and create files, and edit just as you did before.

LocoSpelling

Your new LocoSpell first shows its colours (green) during editing, when you press the f7=Modes key. As well as the four standard options, there's a new menu entitled Check spelling.

This houses another four options: All of document, Just forwards from here, Single word and User dictionary upkeep. All fairly obvious, with Just forwards from here using the current cursor position to start checking from and Single word just checking the word beneath the cursor. User dictionary upkeep allows you to check the words you've added to your personal file, of which more anon.

Selecting All of document puts LocoSpell into action. It starts at the top and word by word checks the verbiage within. If it finds a word that it doesn't know about it highlights it and puts up a menu detailing the actions you can take.

The word itself is printed at the top of the menu, with LocoSpell's suggested alternative below it. You can choose to use this replacement, or use it and edit it, or just edit the offending word. You can also check the dictionary around the area of the proposed replacement, ignore the word altogether, mark it as correct or add it to your personal dictionary.

These options can either be selected using the cursor keys in the traditional manner or by typing the initial letter. The default action is to take LocoSpell's suggestion and replace the original misshaped word with it. This works quite well, but of course can be hopelessly wrong.

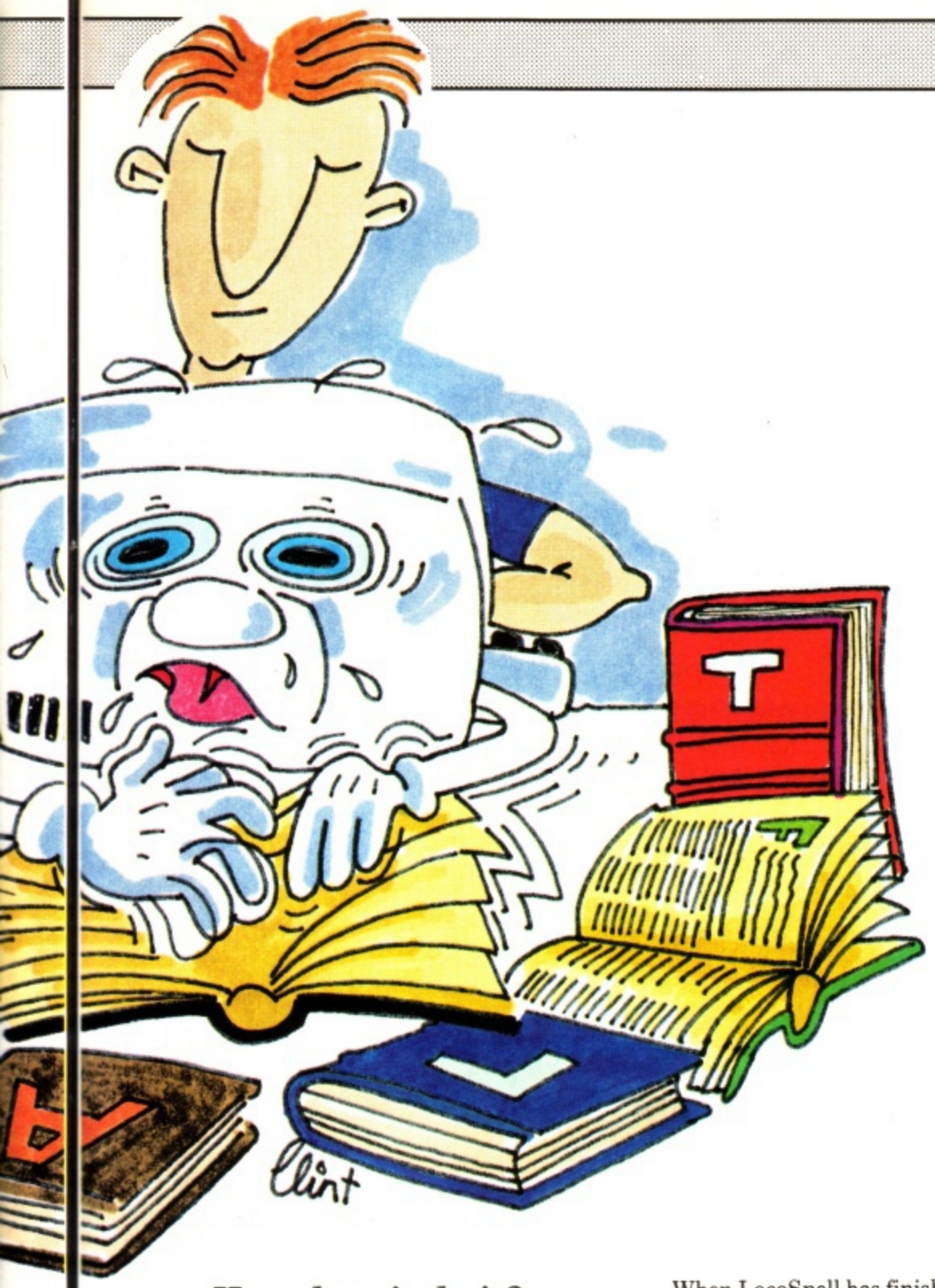
Consulting the dictionary is fairly painless. Your miscreant word is displayed at the top of a list of 18 nearest spellings. You can either edit your word, in which case 18 new selections are displayed, or scan up and down the list with the cursor keys.

Moving off the top or bottom causes the list to change as more words are retrieved from the dictionary. Finally, pressing Enter installs the currently highlit word in the Replacement box of the corrections menu.

The first few times you use LocoSpell, you'll probably spend most time adding your sort of jargon, proper nouns and your 100 fav. abbrvs. into your dictionary. It depends on your field (and style) of writing.

You'll also start using your olde-style ink and woodpulp dictionary, both to check that your word really exists (even though LocoSpell has never heard of it), and to find out what that strange replacement word proffered in place of your malediction means.

And there are some strange words in LocoSpell's dictionary. Tuataras feature, as do kungs, kudus and kyphotic labdanums. It's really quite an education!



How does it do it?

So how does LocoSpell decide on a word's validity? Firstly, it looks for 'killer' characters. These, if present, automatically cause the program to give up, pass the word and go onto the next one.

Killers include most of the special symbols such as ß, &, § and numbers (so PCW8512 passes). Single letter words (I, a, and so on) are passed, as are any words over 32 characters long.

While this could conceivably cause problems with some specialist applications, the fabled letter to the bank manager won't be affected unless you want that loan for biochemical research. A word is also ignored if it has (SiC code) in it.

And if a word is still being examined after all those checks it gets compared against the relevant part of the current main dictionary and then the User dictionary.

If it finds a match LocoSpell goes on to the next word, otherwise it highlights the prodigal particle and goes into the correction menu described above.

When LocoSpell has finished its check it comes up with a wordcount and a count of the words that you've added to your user dictionary.

It asks whether you want to add these permanently, and then dumps you back in your document. And there you have your perfectly spelled, wonderfully laid out and carefully counted work of literary art.

Knot perfect

Butt be wear! Spooling chequers cairn knot sore tout awl yaw mouse takes. Fur exam pill, thighs sent an says wood parse thee taste, butter vary floored inn money wheys. Sew doughnut eggs pecked too prod ewes whirred purr flecked prows jest buy Low cow chucking it!

So using LocoSpell is painless. It's not particularly fast (about a line of text a second), but it is easy and logical, and it does work.

However that's only half the story. LocoSpell lives and dies by its dictionaries. As described, two are supplied, but you can add dictionaries almost willy-nilly. And thus springs forth the need for dictionary maintenance.

Memory hungry

The troubles start almost immediately if you have a 256k machine. Drive M in this case is only big enough for the 32,000 word dictionary, so you have to use the larger dictionary directly from floppy disc.

The way in which LocoSpell looks for the dictionaries to use is similar to LocoScript and templates; if it can't find one in the group it's working in it starts to scan other groups on the same disc, and other discs, until it finds something it can use.

So if you've got a number of user dictionaries, or one of the technical ones mentioned earlier, some care is needed in planning where to store them. Dictionaries can be added together, and this can help to rationalise a sprawling set of personal files.

Having said this, the system can be set up to almost any requirement, as long as you keep your wits about you, by copying, moving and deleting files on various discs. This is covered in some depth in the manual.

Owners of fat Joyces have a much better time of things than those stuck with the anorexic version, as all the big stuff is only really happy with 800k discs and 300k-odd M drives.

Ah yes, the manual. The LocoSpell documentation is up to the standard of the original LocoScript tomes, wink wink. But the approach works much better for LocoSpell, as there are far fewer options and a much more linear way of working than for a full blown word processor.

Everything's there, and there's a Step-by-step quick reference guide at the back. It also describes how to combine Locomail with LocoSpell, should you so wish. Once you've got your system set up, you'll probably never need to refer to it, as LocoSpell itself is fairly self explanatory.

In conclusion then, LocoSpell does the job admirably. Not very fast, true, but much, much faster than checking by eye.

It has a few problems with plurals and odd declensions, quite often it will recognise the singular of a word but not the plural. Nevertheless, it has to be the first spelling checker to consider.

Like LocoMail, its easy integration with LocoScript makes it very easy to use, especially for the hardened LocoScripter. It works well on a 256k machine, but better still on a dual drive, 512k PCW.

If you use your Joyce at all regularly then it must be an essential purchase. And a good excuse to upgrade! ACU

Arnor LTD

CHIPS WITH EV

SOFTWARE ON ROM IS SO CONVENIENT YOU WILL

PROTEXT

£39.95



A comprehensive and professional word processing package, now established as the No.1 W.P. Package.

Features:-

SUPER FAST ★
LARGE TEXT FILES ★
OUTPUT TO ANY PRINTER ★
ACCEPTS FILES FROM OTHER W.P.'s ★
INSTANT ACCESS FROM ROM ★

PRESS

"I am stunned by the speed at which PROTEXT performs the text operation, there is nothing like it on the AMSTRAD .... knocks Pocket Wordstar into a cocked hat"
. . . AMTIX !

"Far more facilities, accessed far faster with far more versatility than are available to Locoscript or Wordstar users .... provides facilities for a business user not found on dedicated word processors costing 5 times as much as the hardware and software combined."
.... PRESTEL, MICRONET 800

"They took their time with it and it was worth the wait." . . . .*ACU*

"Don't miss it, it is superb"... *POPULAR C. WEEKLY*

The best AMSTRAD WP at any price." .... *YC*

PCW VERSION AVAILABLE!!

£26.95



THE MAJOR ADDITION TO ANY WORD PROCESSING PACKAGE:-

A top-selling program for use with or without Protext.

PROSPELL

FEATURES

★ HUGE DICTIONARY
★ CHECKS AT UP TO 2000 WPM
★ CHECKS FILES FROM TASWORD NEWWORD, WORDSTAR etc.
★ LOOK UP OPTION
★ FIND WORDS/ANAGRAMS – GREAT FOR CROSSWORDS

£24.95



£34.95



PRESS

"An outstanding buy." . . . *POPULAR C. WEEKLY*
"A very superior Amstrad spell-checker" .... *AMTIX!*
"Look no further than PROSPELL." . . . .*ACU*
"Fast efficient, easy to use." . . . .*YOUR COMPUTER*
"All in all a great program for just about all the word processors you will ever come up against for the Amstrad range."
....*AMTIX!*

VERSION AVAILABLE FOR LOCOSCRIPT FILES!!

£34.95



PROMERGE COMPLETING THE SET, THIS PRODUCT EXPANDS POTENTIAL EVEN FURTHER.

COMPREHENSIVE MAIL MERGE ★
AUTO REFORMAT ★
SELECTIVE PRINTING ★
ROM VERSION GIVES TWO FILE EDITING AND BACKGROUND PRINTING ★
COMPATIBLE WITH DK' TRONICS EXPANSION RAM ★

£24.95

PRESS

Hopefully PROMERGE will open up a new market of small business for ARNOR."
POPULAR COMPUTING WEEKLY



VERYTHING ?

Arnor LTD

ILL WONDER HOW YOU EVER SURVIVED WITHOUT IT!

NEW RELEASE

BCPL

Bored with basic? Do you want to try something new? BCPL is a flexible, fast, general purpose language, widely used by writers of editors, compilers & operating systems (CP/M Protext was partly written in BCPL!) Arnor's BCPL is a full implementation which compiles to machine code. CP/M and Amsdos are included in one package so programs will run on all CPC and PCW computers. (**FREE** Rom in every package!) There is a comprehensive I/O Library, including graphics. Several example programs are supplied including a full screen editor and a space invaders game. Compilation is very fast, typically 15s for an 8K program. Can compile Protext/Maxam text directly.

PCW VERSION AVAILABLE !!



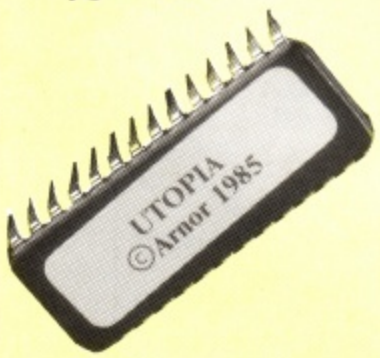
£39.95
(INCL FREE ROM)



UTOPIA THE MOST POWERFUL 'TOOLBOX' TYPE ROM

INCLUDES
- 27 SHADE GRAPHICS SCREEN DUMP ★
- COMPLETE DISC SECTOR EDITOR ★
- A HOST OF CP/M TYPE FACILITIES NOW ON ROM ★
- BASIC PROGRAMMING AIDS LIKE FIND & REPLACE ★
- OVER 40 NEW COMMANDS IN ONE ROM ★

£29.95



PRESS

"UTOPIA seems to be in a class of its own" . . . *AMTIX!*

"More realistic than most toolbox Roms, . . . if you are not a wheel inventor get UTOPIA" . . . *ACU*

"UTOPIA is by far the best utilities Rom . . . It's worth buying a rom board just to plug it in" . . . *AMSCLUB*

"UTOPIA is an excellent Rom and one which I can thoroughly recommend" . . . *COMPUTING WITH THE AMSTRAD*

MAXAM THE CLASSIC USED BY AMSTRAD THEMSELVES

£26.95

★ SUPER FAST ASSEMBLER ★ MIX MACHINE-CODE WITH BASIC ★
★ COMPLETE DISASSEMBLER, MONITOR AND MEMORY EDITOR ★
★ FULL SCREEN EDITOR ★



PRESS

"This piece of software should be held up as an example of what can be done by programmers who care. It is brilliant! . . . Hang the expense buy one now! . . . *ELECTRONICS & COMPUTING*

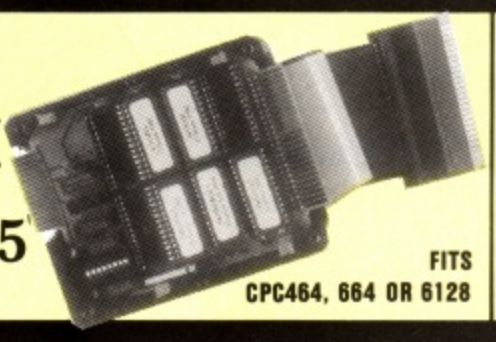
£39.95



WANT TO KNOW MORE? SEND FOR CATALOGUE *FREE*

ROMBO ROM BOX

£34.95



FITS CPC464, 664 OR 6128

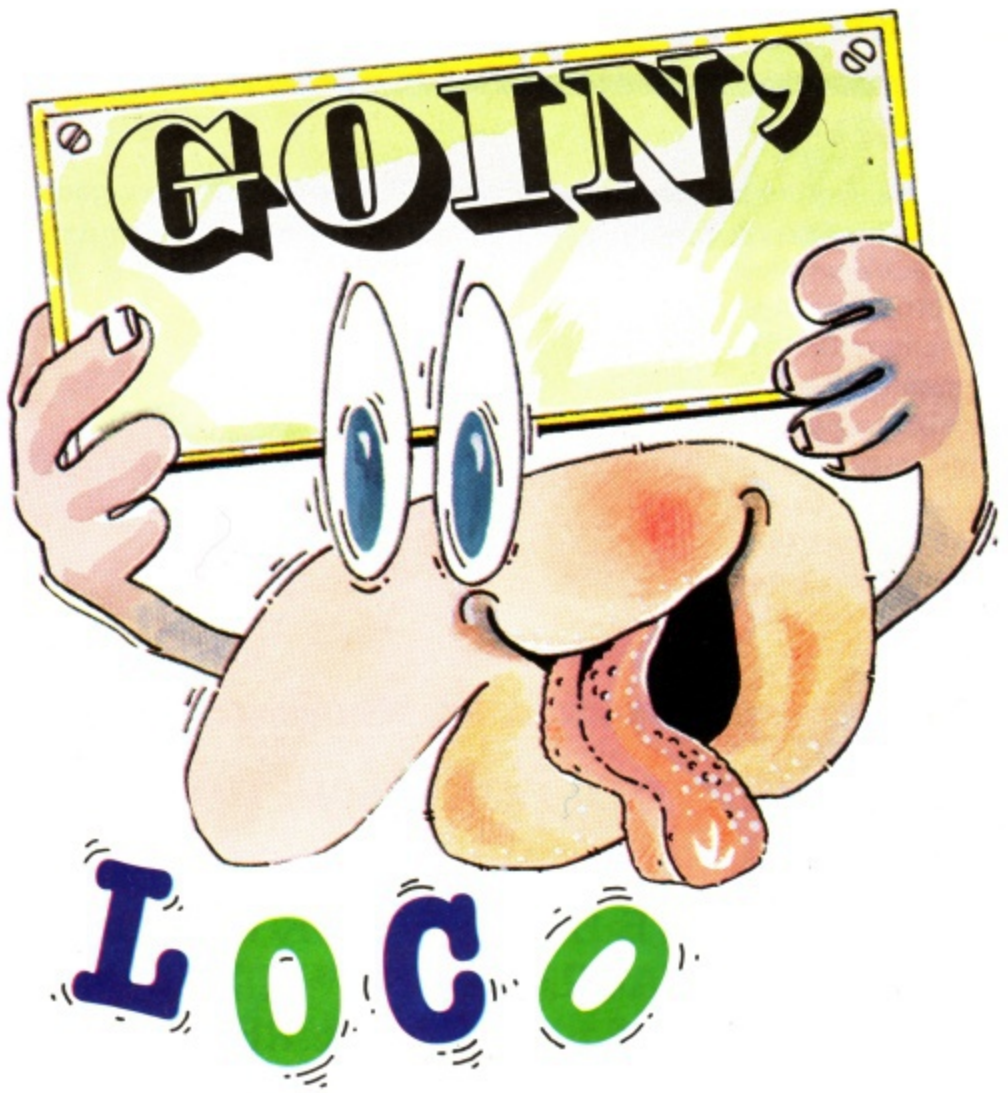
All Arnor Software is available from your local computer shop or directly from:-

(All Prices Include VAT, P&P)

Access VISA

ARNOR LTD (DEPT.RBT)
118 WHITEHORSE RD.
CROYDON CR0 2JF
01-684-8009
(24 hours)

(Overseas Orders Same Price: Dealer Enq's Welcome)



Alexander Martin looks further into graphics functions

Last month I looked at the graphics commands Plot, Draw and Move and their relatives (I must get a new joke, this one's wearing out). This month I am going to talk about the graphics functions which return useful information about what's going on in the graphics world – almost as interesting as reading Campaign. Then we'll have a look at a few applications.

Cursors, foiled again

If you remember, there is a pair of numbers hidden away in the computer called the graphics cursor. This is the position where the last graphics command ended up.

There is a useful pair of functions which tell you where this place is, one for the X coordinate and one for the Y. The function Xpos returns the position across the screen and the function Ypos the position up it.

Again remember that Xpos doesn't return the number of pixels across the screen but a value which gives it's position for all screen modes. Ypos always gives a value that is twice the number of pixels in the current screen mode. All screen modes have the same number of pixels up and down – 200 – but in coordinates there are 400 positions.

The use of a coordinate system makes the graphic system more flexible and better but more complex. One advantage is that it means a circle drawn on the screen will be properly proportioned and not elliptical. And a square will be square if it is the same number of positions across as up.

Arc Venture

Here is a demo that shows Ypos and Xpos being used to return the coordinates at the edge of a circle. Xpos and Ypos are used separately to get the current location rather than recalculate it in line 80.

```
10 DEG 20 MODE 1
30 ORIGIN 320,200
40 FOR d=0 TO 360
50 MOVE 0,0
60 DRAW SIN(d)*99,COS(d)*99,1
70 LOCATE 1,22:PRINT USING "X: R#RR#RR#R
    Y: R#RR#RR#R";XPOS,YPOS
80 x=XPOS:y=YPOS
90 DRAW 0,0,0
100 PLOT x,y,2
110 NEXT d
```

A relatively testing time

The other graphics functions are Test and Testr. These are similar to Plot commands, using an X and Y coordinate to examine a pixel position.

The result returned by the Test commands is the value that the ink is set to at the screen position being tested. Test and Testr move the graphics cursor to the position being tested.

Test has many uses. Often it is used in Basic games as a way of testing for collisions. For example, in a bat and ball game the next position of the ball is tested and if the pixel is the same value as the bat, then it must be the bat and the ball is bounced.

Test can also be used to copy or pick up an image from the screen by repeatedly scanning across and reading the pixels. Test is used by Basic screen dump programs to scan the screen image and convert it to characters.

The first test

The first of my demos for Test is a pattern drawing program. The graphics cursor is moved around, randomly drawing square shapes. As the cursor is moved, the next position is tested and if it is not ink 0 (the backgound in this case), the ink to plot with is changed.

```
10 MODE 0
20 DRAW 0,398,1:DRAW 638,398:DRAW 638,0:
   DRAW 0,0
30 FOR n=0 TO 3:READ x(n):NEXT
40 FOR n=0 TO 3:READ y(n):NEXT
50 DATA 0,4,0,-4
60 DATA 4,0,-4,0
70 x=320:y=200:dir=1:i=1
80 '
90 '
100 r=r-1:IF r<0 THEN r=INT(RND*15):dir=
    dir+1:dir=dir MOD 4
110 xa=x(dir):ya=y(dir)
120 x1=x+xa:x1=MIN(638,x1):x1=MAX(0,x1):
    x=x1
130 y1=y+ya:y1=MIN(398,y1):y1=MAX(0,y1):
    y=y1
140 p=TEST(x,y):IF p<>0 THEN i=i+1:i=i M
    OD 14:IF i=0 THEN i=i+1
150 PLOT x,y,i
160 GOTO 100
```

Who is the fairest of them all . . .?

The next mega listing mirrors the contents of the left side of a Mode 0 screen on to the right. Type it in, enter Mode 0 and list the program to fill the screen with text. Now run the program and '!otserp yeh' a couple of minutes later you get a mirror image.

```
10 FOR x=0 TO 320 STEP 4
20 FOR y=0 TO 400 STEP 2
30 a=TEST(x,y):PLOT 640-x,y,a
40 NEXT y,x
```

Think big

Now for something bigger. This program

scans a line of text printed on the screen and draws it enlarged. Note the For Next loops include Step commands. Not only does this speed up the process, it ensures that pixels are only read once.

```
10 MODE 0
20 a$="It's Big!"
30 LOCATE 1,1
40 PRINT a$
50 FOR x=0 TO (LEN(RIGHT$(a$,10))*32)STE
   P 4
60 FOR y=0 TO 16 STEP 2
70 MOVE 0,382:pix=TESTR(x,y)
80 MOVE 0,300:PLOTR 2*x,2*y,pix
90 MOVE 0,200:PLOTR 3*x,3*y,pix
100 MOVE 0,100:PLOTR 4*x,4*y,pix
110 MOVE 0,0:PLOTR 5*x,5*y,pix
120 NEXT y,x
```

Let's play tag

Right, now we've done the functions let's go on to look at Tag. Clever little title that. Tag is short for Text At Graphics.

The purpose of Tag is to print text at the graphics cursor instead of the text cursor position. This allows you to do all sorts of exciting things like putting place names on maps.

The text can be positioned to the nearest pixel or overlap another piece of text. Characters do not have to slot into character positions.

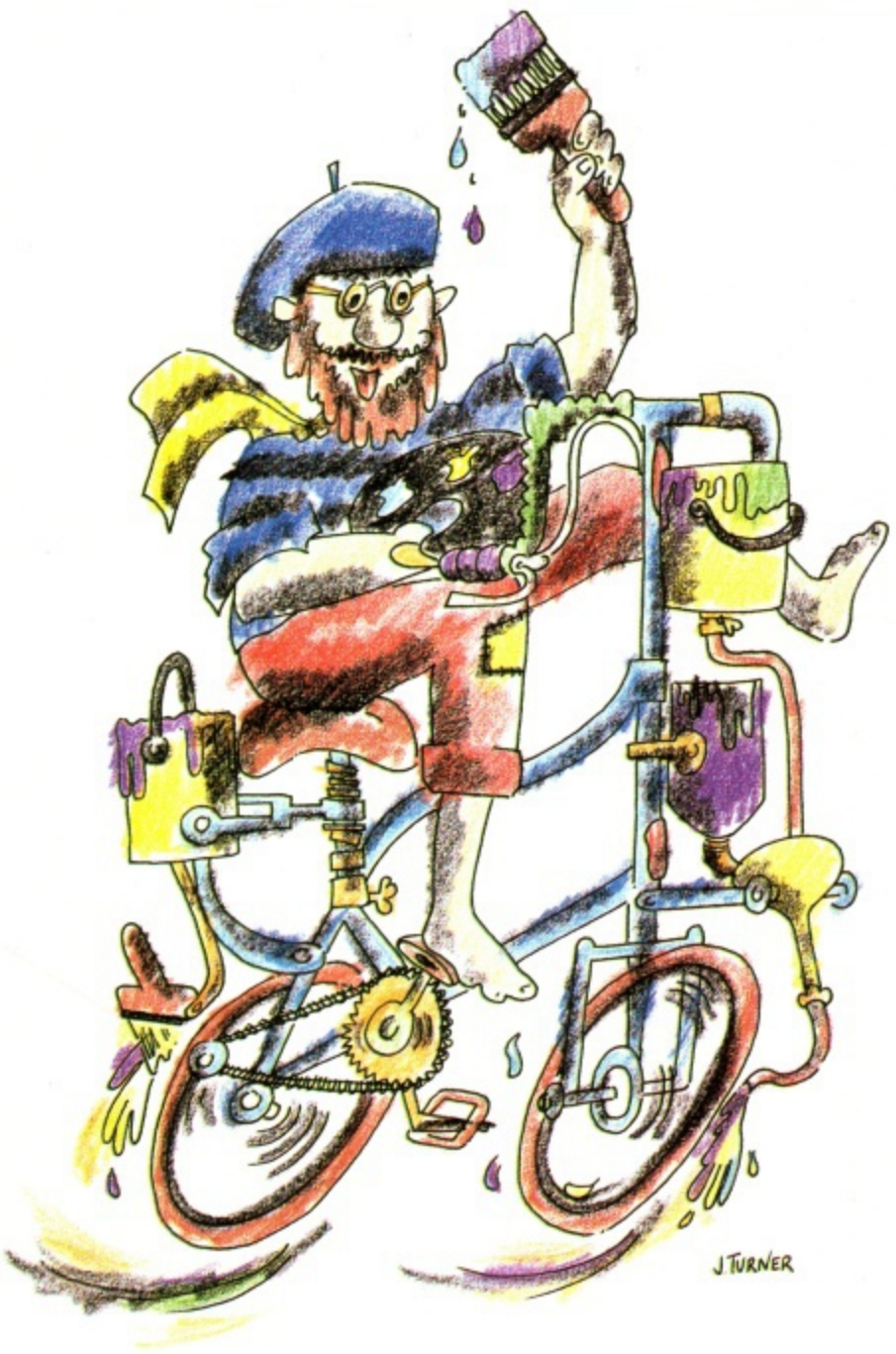
Tag can have a stream number attached to it. This is so that normal text at character positions can be kept conveniently separate from the text at graphic positions.

Tag is a bit too slow to be used to smooth scroll an image in a Basic game or other application, but it is very useful for all sorts of other purposes.

This is a simple demo of Tag. Anything that you type into the keyboard will be printed out as a character. Try control and the cursor keys. It is worth mentioning that any control characters printed using Tag will have no effect.

Any character sent to the graphics stream will be assumed to be a printable character. This includes carriage return and line feed issued at the end of a print command. Use the semicolon symbol at the end of the command to suppress this.

```
10 TAG
20 MOVE 100,100
30 PRINT a$;
40 a$=INKEY$:IF a$=""THEN 40
50 GOTO 20
```



The next program is a bit more exciting than the others. It uses the control character Chr$(5), which sends the next printed character to the graphics stream and is one character equivalent to Tag.

The program fills up the screen with small blocks and then starts off a ball. This bounces around the screen knocking out the blocks until you stop the program.

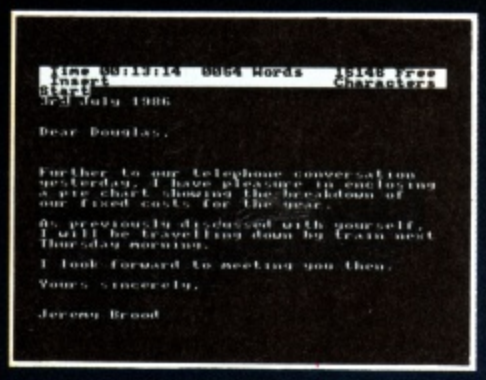
Having written the program I decided that it would be possible to monitor the computer's progress at clearing the screen of blocks. So I put in a couple of lines that draw a graph showing how many blocks had been hit in a certain amount of time.

```
10 DEFINT a-z
20 MODE 1
30 DIM xcord(64),ycord(36),scr(64,36)
40 FOR x=2 TO 640 STEP 10:xcord(x1)=x:x1
   =x1+1:NEXT
50 FOR y=46 TO 398 STEP 10:ycord(y1)=y:y
   1=y1+1:NEXT
60 t$=CHR$(23)+CHR$(1)+CHR$(5):b$=CHR$(2
   3)+CHR$(0)
70 block$=t$+CHR$(
   255)+b$
80 SYMBOL 255,96,240,240,96,0,0,0,0
90 '
100 '
110 FOR y=0 TO 34:FOR x=0 TO 63:
120 IF INT(RND*2)=1 THEN scr(x,y)=1 :MOV
    E xcord(x),ycord(y):PRINT block$;
130 NEXT x,y
140 '
150 '
160 x=10:y=10:ax=1:ay=1:ox=9:oy=9
170 MOVE xcord(x),ycord(y):PRINT ball$;
180 '
190 WHILE-1
200 IF x+ax=-1 OR x+ax=64 THEN ax=-ax
210 IF y+ay=-1 OR y+ay=36 THEN ay=-ay
220 ox=x:oy=y:x=x+ax:y=y+ay
230 IF scr(x,y)=1 THEN scr(x,y)=0:MOVE x
    cord(x),ycord(y):PRINT block$;:GOSUB
     300
240 MOVE xcord(ox),ycord(oy):PRINT ball$
    ;
250 IF t!<TIME THEN t!=TIME+3000:x=MAX(x
    -1,0):tx=tx+10:MOVE gx,gy:DRAW tx,n*
    4,3:gx=XPOS:gy=YPOS:n=0:PLOT gx,0,1
260 MOVE xcord(x),ycord(y):PRINT ball$;
270 WEND
280 '
290 '
300 IF toggle THEN toggle=0:ax=-ax ELSE
    toggle=-1:ay=-ay
310 SOUND 1,20,4
320 n=n+1
330 RETURN
```

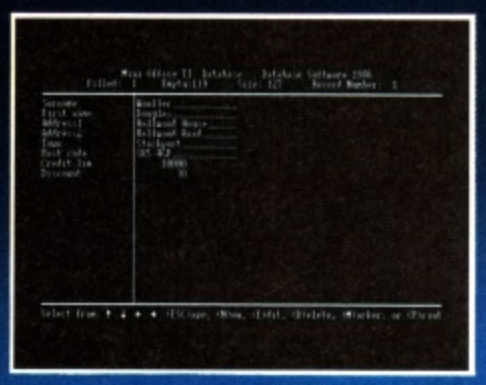
While we are talking about graphs here is short program that draws a simple one from data. If you know very little about programming but the idea of drawing a graph of your own appeals to you then study this and see if you can adapt it.

```
10 CLS
20 DIM month(12)
30 DATA 30,40,60,25,38,48,22,40,42,53,75
   ,32
40 FOR n=1 TO 12
50 READ month(n)
60 NEXT n
70 MOVE 0,0:DRAWR 0,300:MOVE 0,0:DRAWR 3
   00,0
80 '
90 MOVE 0,0
100 FOR n=1 TO 12
110 DRAW n*20,month(n)*4
120 NEXT n
```

All this in just

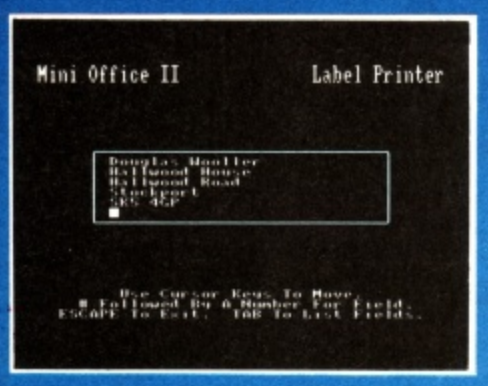


WORD PROCESSOR
Compose a letter, set the print-out options using embedded commands or menus, use the mail merge facility to produce personalised circulars – and more!



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!





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 t

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.

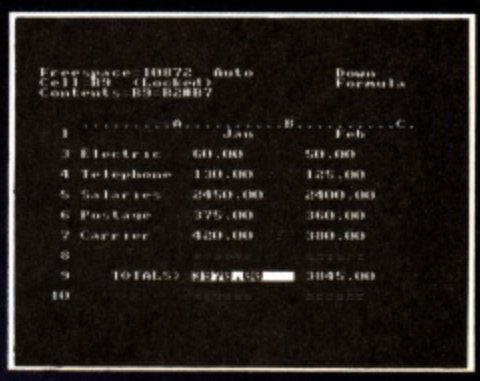
This is the package thousands of Amstrad owners have been waiting for – and at a price everyone can afford!

t ONE package!



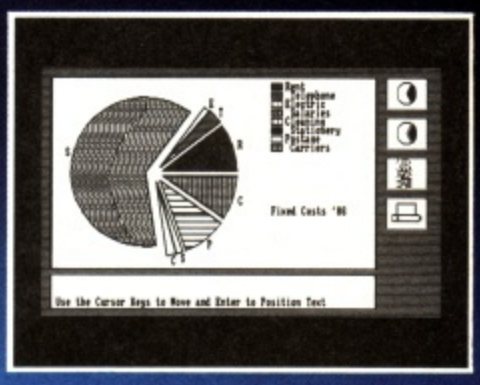
SPREADSHEET

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!



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!



ce that can't be matched!

DATABASE SOFTWARE

Amstrad CPC 464, 664, 6128

Cassette	*£14.95*
3" disc	*£19.95*

Database Software,
FREEPOST,
Europa House,
68 Chester Road,
Hazel Grove,
Stockport SK7 5NY.

Order at any time of the day or night

Telephone Orders:	*Orders by Prestel:*	*MicroLink/Telecom Gold*
061-429 7931	**Key *89, then 614568383**	**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 (✓)

Expiry date /

☐ Access/Mastercharge/Eurocard/Barclaycard/Visa

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

☐ Cheque/PO made payable to Database Publications Ltd.

Name _____ Signed _____

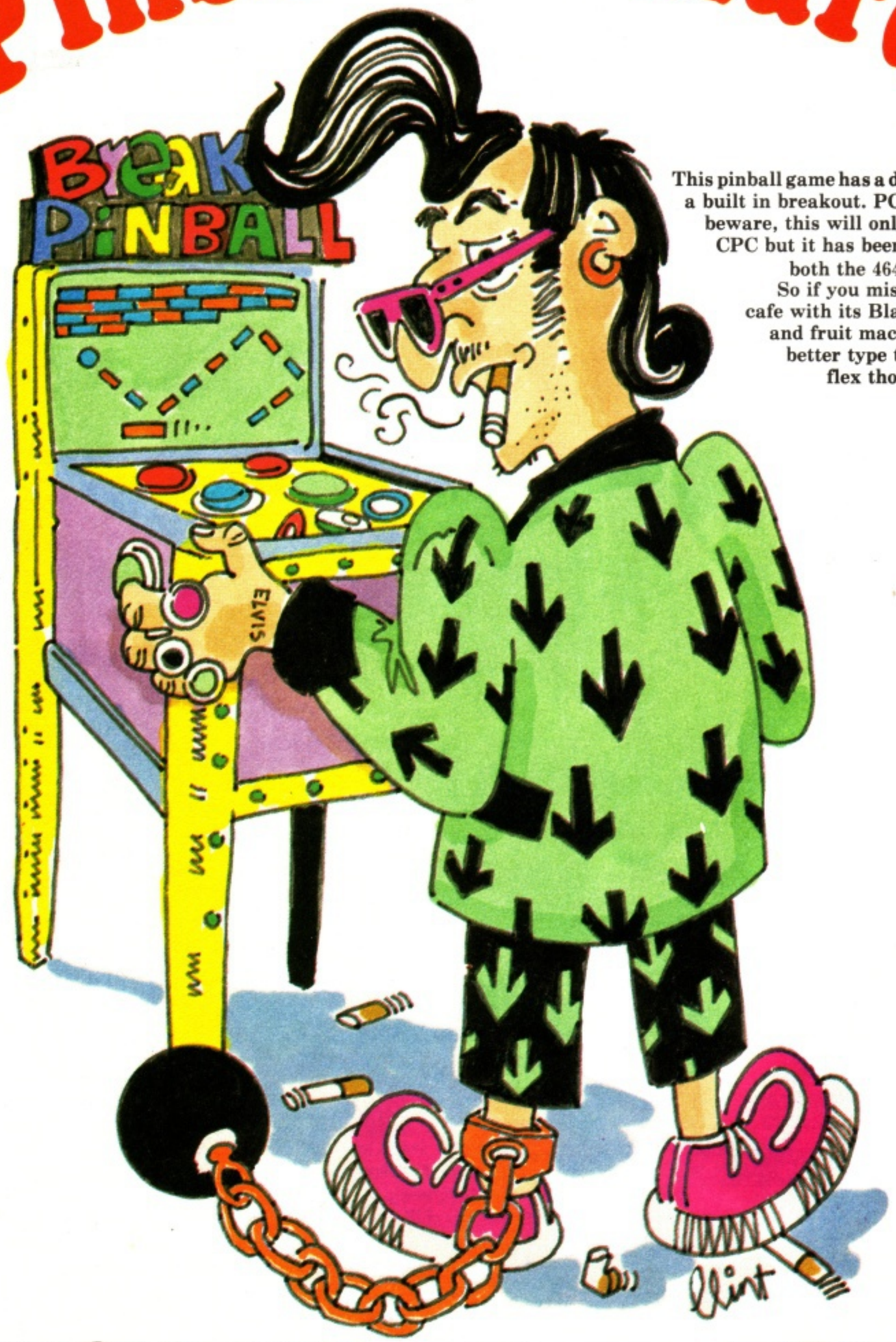
Address _____

_____ Tel: _____

Please allow 28 days for delivery

ACU 12

Be a Pinball Wizard



This pinball game has a difference – a built in breakout. PCW owners beware, this will only run on a CPC but it has been tested on both the 464 and 6128. So if you miss the local cafe with its Black Knight and fruit machine you'd better type this in and flex those fingers.

```
10 REM ============================
20 REM ========== PINBALL ==========
30 REM ======= by D. CROMWELL ======
40 REM ============================
50 REM == ALL REMS ARE REMOVEABLE ==
60 REM === AND CAN    BE OMITTED ===
70 REM ============================
100 SYMBOL AFTER 256
110 MEMORY 24999:SYMBOL AFTER 33
120 RESTORE 2240:FOR j=25000 TO 25074
130 READ a:POKE j,a:NEXT
```

```
140 REM ====== GAME SET UP ======
150 GOSUB 1850:GOSUB 1480
160 PEN 2:LOCATE 3,8
170 PRINT"Press <SPACE> to start game";
180 FOR j=1 TO 3:LOCATE 2,j+3
190 PRINT STRING$(15,"%");:NEXT
200 WINDOW 34,39,5,20
210 PRINT"SCORE:           0"
220 PRINT:PRINT:PRINT" High Scores "
230 FOR j=1 TO 5
240 PRINT USING"######";h(j);
250 NEXT:WINDOW 1,40,1,25
260 pn=240:sc=0:in=0:bal=5
270 PEN 1:LOCATE 32,24:PRINT "(((((";
280 MOVE pn,46:DRAWR 46,0,1
290 WHILE INKEY(47)=-1:WEND
300 LOCATE 2,8:PRINT SPACE$(29);
310 x=31:y=24:dx=0:dy=0
320 LOCATE 31+bal,24:PRINT " ";
330 LOCATE 31,24:PRINT "(";
340 FOR j=1 TO 100:NEXT
350 PEN 1:LOCATE 31,25:PRINT "*";
360 FOR j=1 TO 100:NEXT
370 PRINT CHR$(8);")";:PEN 2
380 WHILE dx=0:GOSUB 770
390 FOR j=1 TO 20:NEXT
400 GOSUB 720:WEND
410 WHILE y<25:GOSUB 880
420 GOSUB 720
430 WEND
440 REM ====== LOST BALL ======
450 SOUND 7,500,10:PEN 1:LOCATE x,y
460 PRINT CHR$(130);:bal=bal-1
470 PEN 2:LOCATE 30,10:PRINT " ";
480 IF bal>0 THEN 290
```

```
490 REM ====== GAME OVER ======
500 SOUND 3,60,200,10,0,1
510 LOCATE 13,8:PRINT"Game Over";
520 FOR k=1 TO 1500:NEXT
530 FOR j=1 TO 5:IF sc>h(j) THEN 550
540 NEXT:GOTO 630
550 FOR k=5 TO j+1 STEP -1
560 h(k)=h(k-1):NEXT:h(j)=sc
570 LOCATE 7,8:PRINT"You have achieved t
    he";
580 IF j=1 THEN LOCATE 10,9:GOTO 620
590 pl$="th":IF j=2 THEN pl$="nd" ELSE I
    F j=3 THEN pl$="rd"
600 j$=STR$(j):LOCATE 14,9
610 PRINT j$+pl$;:LOCATE 10,10
620 PRINT"highest score"
630 WHILE INKEY$<>"":WEND:FOR j=1 TO 150
    0
640 IF INKEY$<>"" THEN 660
650 NEXT
660 LOCATE 3,8:PRINT"Press <SPACE> to pl
    ay again";
670 LOCATE 10,9:PRINT SPACE$(13);
680 LOCATE 10,10:PRINT SPACE$(13);
690 MOVE pn,46:DRAWR 46,0,0
700 GOTO 180
```

This is one of hundreds of programs now available FREE for downloading on

MicroLink

```
710 REM ====== BAT CONTROL ======
720 po=pn:IF INKEY(34)<>-1 AND po>64 THE
    N pn=pn-16
730 IF INKEY(27)<>-1 AND po<368 THEN pn=
    pn+16
740 MOVE po,46:DRAWR 46,0,0
750 MOVE pn,46:DRAWR 46,0,1:RETURN
760 REM ====== BALL IN SHUTE ======
770 IF y=10 THEN 820
780 LOCATE x,y:PRINT " ";
790 y=y-1:IF y=10 THEN x=x-1
800 LOCATE x,y:PRINT "(";
810 RETURN
820 dx=-1:dy=CINT(RND)
830 PEN 1:LOCATE x,y:PRINT "!";
840 PEN 2:x=x-1:y=y+dy
850 LOCATE x,y:PRINT "(";
860 RETURN
```

```
870 REM ====== BALL MOVEMENT ======
880 ox=-dx:oy=-dy:GOSUB 1420
890 ON PEEK(24995) GOTO 1010,900,900,910
    ,930,960
900 dx=-dx:GOTO 1010
910 dy=1:dx=0:GOTO 1010
920 GOTO 1010
930 LOCATE x+dx,y:PRINT " ";
940 SOUND 1,200,0,0,1:in=20:GOSUB 1340
950 dx=-dx:GOTO 1010
960 SOUND 2,250,0,0,1:in=50:GOSUB 1340
970 dx=-dx:IF dy=0 THEN dy=SGN(INT(RND*7
    -3)):GOTO 990
980 dy=CINT(RND)*dy
990 GOSUB 1430:IF PEEK(24997)=1 THEN 101
    0
1000 dy=-dy:GOTO 1300
1010 ON PEEK(24996) GOTO 1210,1020,1030,
     1300,1040,1070,1150,1170
1020 dy=-dy:GOTO 1300
1030 dx=1:GOTO 1300
1040 LOCATE x,y+dy:PRINT " ";
1050 SOUND 1,200,0,0,1:in=20:GOSUB 1340
1060 dy=-dy:GOTO 1300
1070 SOUND 2,250,0,0,1:in=50:GOSUB 1340
1080 dy=-dy:IF dx=0 THEN dx=SGN(INT(RND*
     7-3)):GOTO 1100
1090 dx=CINT(RND)*dx
1100 IF dx=0 AND dy=0 THEN dx=ox:dy=oy:G
     OTO 1300
1130 GOSUB 1430:IF PEEK(24997)=1 THEN 13
     00
1140 dx=-dx:GOTO 1300
1150 SOUND 4,170,0,0,1:in=100:GOSUB 1340
1160 dy=-dy:GOTO 1300
1170 IF po<pn AND dx<1 THEN dx=dx+1
1180 IF po>pn AND dx>-1 THEN dx=dx-1
1190 IF x=26 AND dx=1 THEN dx=-1
1200 dy=-dy:SOUND 1,338,0,0,1:GOTO 1300
1210 IF PEEK(24996)*PEEK(24995)<>1 THEN
     1300
1220 ON PEEK(24997) GOTO 1300,1230,1230,
     1300,1240,1260,1300,1290
1230 dy=-dy:dx=-dx:GOTO 1300
1240 LOCATE x+dx,y+dy:PRINT" ";
1250 dx=-dx:GOTO 1050
1260 SOUND 2,250,0,0,1:in=50:GOSUB 1340
1270 IF RND>0.5 THEN dx=-dx:dy=0:GOTO 13
     00
1280 dx=0:dy=-dy:GOTO 1300
1290 dy=-1:dx=0:SOUND 1,338,0,0,1
1300 LOCATE x,y:PRINT " ";
1310 x=x+dx:y=y+dy:LOCATE x,y
1320 PRINT"(";:RETURN
```

```
1330 REM ====== SCORE ROUTINE ======
1340 IF sc<10000 AND sc+in>9999 THEN GOS
     UB 1380
1350 sc=sc+in:LOCATE 34,7
1360 PRINT USING"######";sc;
1370 RETURN
1380 bal=bal+1:LOCATE 30+bal,24
1390 PEN 1:PRINT "(";
1400 PEN 2:RETURN
1410 REM ==== MACHINE CODE CALL ====
1420 POKE 24990,y:POKE 24991,x
1430 POKE 24992,(256+dx) MOD 256
1440 POKE 24993,(256+dy) MOD 256
1450 CALL 25000
1460 RETURN
1470 REM ====== TABLE PRINTOUT ======
1480 INK 0,0:INK 1,6:INK 2,26:INK 3,18
1490 MODE 1:BORDER 1:PEN 1:PAPER 0
1500 PRINT STRING$(31,"!")
```

```
1510 PRINT"!
     !!"
1520 PRINT"!
     !!"
1530 PRINT"!
     !!"
1540 PRINT"!
     !!"
1550 PRINT"!
     !!"
1560 PRINT"!
     !!"
1570 PRINT"!
     !"
1580 PRINT"!
     !!!"
1590 PRINT"!
     !"
1600 PRINT"!
     ! !"
1610 PRINT"!
     ! !"
```

```
1620 PRINT"!  !
     ! !"
1630 PRINT"!  !                    !
     ! !"
1640 PRINT"!  !                    !
     ! !"
1650 PRINT"!  !                   #!
     ! !"
1660 PRINT"!  !                    #
     ! !"
1670 PRINT"!  !          !        $
     ! !"
1680 FOR j=1 TO 4
1690 PRINT"!  !                    !
     ! !"
1700 NEXT
1710 PRINT"!  !                    !
     ! !!!!!!"
1720 PRINT"!
     !     !"
1730 PRINT"!
     !)!!!!!!"
1740 LOCATE 5,20:PRINT "!";
1750 PEN 3:FOR j=1 TO 29:READ x,y
1760 LOCATE x,y:PRINT "&";:NEXT
1770 PEN 2:FOR j=1 TO 11:READ x,y
1780 LOCATE x,y:PRINT "!";:NEXT
1790 MOVE 0,399:DRAWR 320,0,1
1800 MOVE 0,0:DRAWR 478,0
1810 LOCATE 33,2:PEN 3
1820 PRINT"PINBALL":RETURN
1830 REM ====== GRAPHIC SET UP ======
```

```
1840 REM ====== AND TITLE PAGE ======
1850 SYMBOL 33,255,255,255,255,255,255,2
     55,255
1860 SYMBOL 35,255,127,63,31,15,7,3,1
1870 SYMBOL 36,128,192,224,240,248,252,2
     54,255
1880 SYMBOL 37,126,126,126,126,126,126,0
     ,0
1890 SYMBOL 38,60,66,153,189,189,153,66,
     60
1900 SYMBOL 39,0,126,24,60,102,102,255,2
     55
1910 SYMBOL 40,0,56,124,254,254,124,56,0
1920 SYMBOL 41,126,126,24,56,28,56,28,56
1930 SYMBOL 42,0,0,0,0,0,0,126,126,60
1940 SYMBOL 129,255,0,0,0,0,0,0,0,0
1950 SYMBOL 130,0,0,0,0,0,0,0,0,255
1960 ENV 1,6,-2,3:ENT 1,100,5,2
1970 FOR j=1 TO 5:h(j)=1000:NEXT
1980 CALL &BC02:INK 2,18
1990 MODE 1:LOCATE 17,4
2000 PEN 1:PRINT"PINBALL"
2010 MOVE 256,332:DRAWR 110,0,3
2020 LOCATE 13,7
2030 PRINT"by D. Cromwell"
2040 PEN 2:WINDOW 3,37,10,25
2050 PRINT" Guide the ball around the pi
     nball"
2060 PRINT"table using the bat."
2070 PEN 1:PRINT
2080 PRINT"    Controls :- <O> moves bat
     left"
2090 PRINT"                <P> moves bat
     right"
2100 PRINT"       <SPACE> releases the bal
     ls"
2110 PEN 3:PRINT
2120 PRINT"SCORES : ' - 100 pts   & - 50
     pts"
2130 PRINT:PRINT TAB(10)"A brick -  20 p
     ts"
2140 PEN 2:PRINT
2150 PRINT"A bonus ball is given at 1000
     0 pts"
2160 PRINT:PRINT"          Press any key to
     start"
2170 WHILE INKEY$<>"":WEND
2180 CALL &BB18:RETURN
2190 REM ==== MACHINE CODE DATA ====
2200 REM == START ADDRESS : 25000 ==
2210 REM ==== LENGTH : 75 BYTES ====
2220 REM == ENTRY POINT    : 25000 ==
2230 REM = + Screen positions data =
2240 DATA 42,158,97,58,160,97,132,103
2250 DATA 245,205,117,187,205,96,187
2260 DATA 221,33,163,97,205,218,97,42
2270 DATA 158,97,58,161,97,133,111,205
2280 DATA 117,187,205,96,187,221,35
2290 DATA 205,218,97
2300 DATA 241,205,111,187,205,96,187
2310 DATA 221,35,6,8,33,235,97,190,40,5
2320 DATA 35,16,250,6,1,221,112,0,201
2330 DATA 129,39,38,37,35,36,33,32
2340 DATA 21,2,27,2,19,3,29,3,18,4,30,4
2350 DATA 21,5,27,5,24,6,20,7,28,7,31,8
2360 DATA 24,9,6,10,15,11,19,11,15,12
2370 DATA 19,12,29,13,10,14,24,14,28,15
2380 DATA 5,16,5,17,17,17,5,18,16,18
2390 DATA 18,18,5,19
2400 DATA 3,1,6,1,9,1,12,1,15,1,23,2
2410 DATA 24,2,25,2,16,12,17,12,18,12
```

ACU

IT'S HERE

THE ULTIMATE BACKUP DEVICE FOR THE 464/664/6128



Now you can stop the action of your game and make a complete backup to TAPE or DISK.



POST FREE

ONLY £34.99

VERY SIMPLE TO USE!!

THERE'S NO NEED TO PAY MORE!

- ☐ It does not matter how your program was loaded – at normal or turbo speed – from tape or disk.
- ☐ Through bus connector for other add-ons.
- ☐ Programs are saved under normal DOS – unlike some products which need specially formatted disks.
- ☐ Simply load your game as normal then press the button to 'freeze' the action.
- ☐ The whole program is then saved to tape or disk.
- ☐ Program will reload and run from the point where it was frozen.
- ☐ When the program save is complete that's it – no need to "repair" the program on reload like our competitors' products.

100% SUCCESS? In our recent tests we could not find any memory resident game that we could not backup.

A FULL DIGITAL SOUND SAMPLING SYSTEM

FOR 464/664 or 6128

ONLY £44.99



Complete hardware/software package including free microphone.

STATE OF THE ART ELECTRONICS

- ☐ The sampler allows you to record any sound into memory digitally and then replay it at variable pitch, forwards, backwards, ascending, descending, with echo, reverb, etc., etc.
- ☐ Professional full 8 bit A to D and D to A conversion.
- ☐ MIC input and line output.
- ☐ On screen frequency plotting.
- ☐ Live effects menu.
- ☐ Through port.
- ☐ Real time sequencer to produce musical pieces from a single sound.
- ☐ Load and save sound features.
- ☐ Available now – please state tape or disk software.

NOW ROBOTICS + MODEL CONTROL



Made Easy

FOR 464/664 or 6128

ONLY POST FREE **£29.99**

- ☐ Connect your computer to models, lights, sensors, etc., etc.
- ☐ 4 onboard relays.
- ☐ 8 fully buffered inputs.
- ☐ Using very simple basic commands, outputs can be controlled by inputs to form "artificial intelligence".
- ☐ Complete with ribbon connector and cable to allow coupling to models etc.
- ☐ Through bus for expansion/disk interface etc.
- ☐ No more to buy.
- ☐ Available now!

DATEL ELECTRONICS

USUALLY SAME DAY DESPATCH ON ALL ORDERS
SEND CHEQUES P.O.s TO
UNITS 8/9
FENTON INDUSTRIAL ESTATE,
DEWSBURY ROAD, fenton,
STOKE-ON-TRENT TEL: 0782 273815
FAX: (0782) 264510

24 HR CREDIT CARD LINE

FOREIGN ORDERS ADD £2 POSTAGE

TWO WAYS TO ENSURE YOU GET

AMSTRAD COMPUTER USER

EVERY MONTH

1. Complete and mail subscription form on Page 119
2. Hand this form to your newsagent.

Please reserve me a copy of Amstrad Computer User magazine every month until further notice.

☐ I will collect

☐ I would like it delivered to my home.

Name _____

Address _____

_____

_____

Note to newsagent: Amstrad Computer User should be obtainable from your local wholesaler, or contact Tony Walsh, Circulation Manager on 0424 430422

*** THE NEW PC 1512 ***

TOTAL SUPPORT FOR THE AMSTRAD COMPUTER RANGE

*** THE NEW PC 1512 ***

ALL THE BIG NAMES AT PRICES YOU CAN AFFORD

BUSINESS
Home Budget 19.95T * Home Accounts 14.95T, 18.95D * Prospell 24.95D * Stock Control 17.95T * Payroll 14.95D * Stock Control, Inv., Pur. etc. 149.95D * Stock Control 49.00D * Cash Trader & Anal. 149.95D * Cardbox 99.99D

EDUCATIONAL
Transition Geometry 14.95D * Respiratory 14.95D * Fractions 14.95D * Numbers 14.95D * Maths Mania 14.95D, 9.95T * Music Theory 14.95D, 9.95T * Better Spelling 14.95D, 9.95T * German Master 8.95T * Genplot graf-plot 24.95D, 14.95T * Spanish 8.95T

GAMES
Voodoo Range 1.99T * Cassette 50 9.95T * Trivial Pursuit 14.95D * Samantha Fox 8.95T * Spin Dizzy 9.95T * Heavy on the Magic 8.95T, 12.95D * Knight Rider 8.95T, 14.95D * Bruce Lee 9.95T * Ye Kung Fu 8.95T, 12.95D * Ghosts Goblins 8.95T, 13.99D * Green Beret 9.95T, 12.95D

LANGUAGES
Pascal /MT+ 49.95D * Cobol 49.95 * C.Basic Compiler 49.95D

UTILITIES
Brainstorm 49.99D * Maxam 19.95D * Chafont DMP1 26.95D * Amshelp 6.99 * Systems X Basic 13.95D * Tomcat Copier 10.95D

HARDWARE/INTERFACES/UPGRADES
AMX Mouse 79.95 * L/Pen 44.95 * 64k Expansion 49.95 * 256k Expansion 99.95 * 256 RAM (8256) 59.95 * Speech (6128) 39.95 * J/Stick Controller Game (8256) 39.95 * 5 Sideways ROM 26.00 * CPC Serial Port 40.00 * RS232 & Cent PCW 53.00 * Kepston Pro 16.95 * Quickshot II 9.95 * 125 8.95. PHONE FOR QUOTE ON ALL AMSTRAD COMPUTERS

ACCESSORIES
Amstrad Cover CPC 4.95 * Computer Cleaning Kit 5.95 * Amstrad Plot Cable 9.00 * Thingi (Document Holder) 6.99 * 2nd Disc Drive Lead 8.95 * Dust Cover for 8256 9.95

FURNITURE
Shinecrest Desk 600 69.95 * Selmore Desk 56.00

CF2 Discs x 10 £34.00. The new Wall Computer ONLY £9.95
JOIN THE TMC CLUB FREE FOR BIG DISCOUNTS
Prices include p&p in UK delivery subject to availability
IF IT'S NOT HERE PLEASE ASK

EXPORT WORLDWIDE-SPECIAL SCHEME FOR DETAILS ABROAD PHONE/TELEX FOR DETAILS

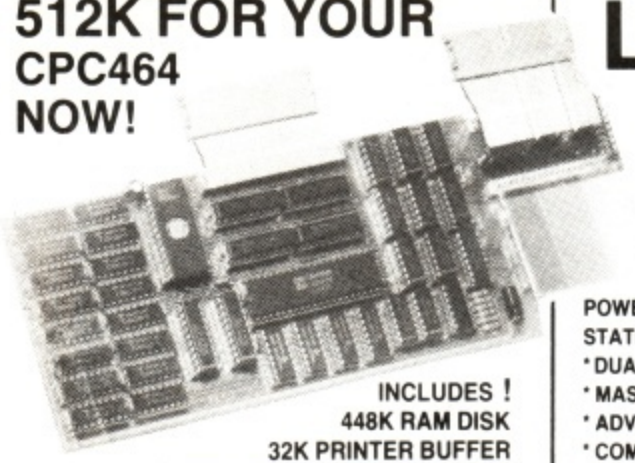
TMC
AL-TUKHAIM
Rodney House, Castle Gate, Nottingham NG1 7EW. Tel: 0602 585737

Good Programs are always wanted
Best Royalties Paid
DIAL YOUR ORDER
Rapid Ordering Service
BY TELEPHONE ON ACCESS OR VISA

STOP PRESS
ARABIC VERSION
AMSTRAD CPC
RANGE
AVAILABLE SOON.
PHONE FOR DETAILS

· SCREENS · SCREENS · SCREENS · SCREENS · SCREENS · SCREENS ·

512K FOR YOUR CPC464 NOW!



INCLUDES !
448K RAM DISK
32K PRINTER BUFFER
Z80 MACHINE CODE MONITOR
EXPANDED BASIC AND GRAPHIC SUBSET
ALLOWS MINIMUM 60K TPA FOR CPM USAGE

EASY INTERNAL "PLUG IN" INSTALLATION. NO SOLDERING REQUIRED. INTELLIGENT ROM SOFTWARE ENSURES MAXIMUM PERFORMANCE. UP TO 288K PROGRAM SPACE AND 256K DATA SPACE. FULLY COMPATIBLE WITH 3" DISK DRIVES.

SCREENS UNBEATABLE VALUE **£89·95!**

LOOK!
1·4 MB DISK STATION FOR CPC464!



POWERFUL 'STAND ALONE' DUAL DISK STATION FEATURING:
* DUAL BASF 6138 5·25" SLIMLINE DRIVES
* MASSIVE 1400K FORMATED CAPACITY
* ADVANCED V-DOS OPERATING SYSTEM
* COMPATIBLE WITH 2" DISK DRIVES
* CPM 2.2 OPERATING SYSTEM WITH MANY USEFUL UTILITIES INCLUDED
* COMPREHENSIVE ENGLISH MANUAL

OUR PRICE IS EQUAL TO ONLY £130 PER 720K DISK DRIVE AMAZING VALUE

£260!

* CPM IS A REGISTERED TRADEMARK OF DIGITAL RESEARCH INC

** V-DOS IS A REGISTERED TRADEMARK OF VORTEX COMPUTER SYSTEMS

SCREENEX
256K RAM UPGRADE FOR PCW8256

OUR RAM UPGRADE KIT WILL GIVE YOUR PCW 8256 DOUBLE RAM CAPACITY. EASY PLUG IN INSTALLATION NO SOLDERING REQUIRED.
FULL FITTING INSTRUCTIONS SUPPLIED.

UNCHALLENGED PRICE BREAKTHROUGH **£26·05!**

A COLOUR TV FOR £69.95!!



FACT NOT FICTION. NOW THANKS TO SCREENS ENGINEERS **AMSTRAD COLOUR MONITOR** OWNERS CAN HAVE A TOP QUALITY COLOUR TV FACILITY THROUGH SCREENS AMAZING

SCREENVISION

SIMPLY PLUG IN YOUR MONITOR, NO MODIFICATIONS, ALTERATIONS OR SPECIAL CABLES NEEDED AND YOUR MONITOR HAS **DUAL PURPOSE** AS A DEDICATED COMPUTER MONITOR AND **FULL COLOUR TELEVISION** !

★ SUPER SLIM MODIFIED TV-VIDEO TUNER OF MOST MODERN SPECIFICATION AND DESIGN
★ BUILT IN AUDIO AND COMPOSITE VIDEO OUTPUT
★ PUSH BUTTON CHANNEL SELECTION ★ CRISP CLEAR PICTURES ON ALL CHANNELS (subject to reception area)
★ LED STATUS INDICATOR ★ ISOLATED 240V AC POWER FOR COMPLETE SAFETY
★ SEPARATE CONTROLS FOR BRIGHTNESS, COLOUR & VOLUME ★ ON-OFF SWITCH

SCREENS EXCLUSIVE SCREENVISION **£69.95!**

FULLY GUARANTEED

FMP PERSONAL ASSISTANT PACK

AN AMAZING COMPENDIUM OF BUSINESS SOFTWARE FOR CPC 128, PCW 8256 AND PCW 8512 COMPRISING:

WORD PROCESSOR, DATABASE, MAILING, INVOICING, APPOINTMENTS & BANK ACCOUNT RECONCILER

A POWERFUL SET OF BUSINESS PROGRAMMES ON ONE DISC TO SATISFY MOST NEEDS. **NORMAL PRICE £129.95 BUT OFFEREED AT OUR RIDICULOUS PACKAGE PRICE DUE TO BULK BUYING!**

SAVE AN AMAZING £84! **£45·95!**

8256 & 8512 CENTRONICS INTERFACE

SIMPLE "PLUG IN" INTERFACE ENABLING CONNECTION BETWEEN YOUR PCW AND CENTRONICS PARALLEL DOT MATRIX OR DAISYWHEEL PRINTERS. NO SOLDERING OR MODIFICATION NECESSARY TO INVALIDATE YOUR WARRANTY.
HIGH QUALITY COMPONENTS ENSURE TROUBLE FREE USE AND MAXIMUM USE FROM YOUR CENTRONICS PRINTER. TEST ONE TODAY AT SCREENS.

SCREENS AMAZING PRICE **£35·50 !**

3"
FLOPPY DISCS
NO SHORTAGE AT SCREENS

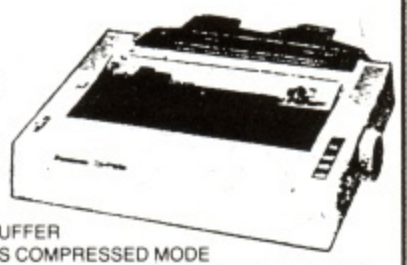
CF2=£30 IN 10's

CF2DD=£48 IN 10's

BULK ORDERS WELCOME

SCREENS SCOOP!

PANASONIC KX-P1080 NLQ IMPACT DOT MATRIX PRINTER



* NEAR LETTER QUALITY PRINTING IN ALL PITCHES
* OPERATOR-ACCESSIBLE PRINT MODE SELECTOR (STANDARD-PROGRAM-NLQ-COMPRESSED)
* TRACTOR & FRICTION FEED STANDARD
* PROPORTIONAL SPACE PRINTING * PRINTER BUFFER
* 100 CPS NORMAL MODE. 20 CPS NLQ MODE. 86CPS COMPRESSED MODE
* FULL 96 ASC11 CHARACTERS, ITALIC 32 PLUS INTERNATIONAL CHARACTERS 11 COUNTRIES

GIVE A-WAY PRICE SO HURRY **£173·85!** INCLUDING CABLE & FREE MAINLINE DELIVERY

HOW TO ORDER

PERSONAL CALLERS WELCOME MONDAY-SATURDAY 9AM-6PM
EARLY CLOSING WEDNESDAYS. OPPOSITE MOOR PARK UNDERGROUND STATION. COFFEE ALWAYS HOT !
TELEPHONE QUOTING CREDIT CARD NUMBER FOR FAST DISPATCH
WRITTEN ORDERS WITH PAYMENT PLEASE ALLOW 14 DAYS DELIVERY
DELIVERY ORDERS BELOW £200 ADD £4.00 OVER £200 ADD £6

PLEASE ADD 15% VALUE ADDED TAX TO QUOTED PRICES
ALL OFFERS SUBJECT TO AVAILABILITY

DON'T BUY UNTIL YOU CHECK OUR DISCOUNT PRICES ON ALL AMSTRAD HARD & SOFTWARE

SCREENS MICROCOMPUTERS & ELECTRONICS

MAIN AVENUE, MOOR PARK, NORTHWOOD, MIDDLESEX, ENGLAND
TELEPHONE: 09274 20527 TELEX: 923574 ALACOL G
FACSIMILE: 0923 40402 PRESTEL: 927420664

CORPORATE, EDUCATIONAL, TRADE AND EXPORT INQUIRIES WELCOME.

· SCREENS · SCREENS · SCREENS · SCREENS · SCREENS · SCREENS ·

More New Products from GARWOOD

Our Free Autumn Catalogue now includes software for IBM PC and compatible machines.

Save time (and money) when you order by -

☎ Chelmsford (0245) 460788 (3 lines) Telex: 99468 GARWD G

Freepost: Garwood (Wholesale) Ltd, Freepost, BRENTWOOD, Essex, CM15 OBR

Orders placed before 4pm. despatched same day (subject to stock availability)

CP/M Software on 3" Disc (Amstrad PCW8256/8512 & CPC6128)

FINANCIAL MODELLING:

POCKET CALCSTAR	£39.95
SUPERCALC 2	£49.95
CRACKER 2 (with graphics)	£49.00
MULTIPLAN	£69.99
SCRATCHPAD	£59.99

WORD PROCESSING:

NEW WORD 2	£69.00
POCKET WORDSTAR (with Mailmerge)	£49.95
POCKET WORDSTAR DELUXE (MailMerge & Spelling Checker)	£69.00

SPECIAL:

MICROFILE/MICROWORD (+ Mailmerge)	£49.95
MICROFILE TEMPLATES	£29.95
FLEXILABEL	£29.95
BRAINSTORM	£49.99

ACCOUNTS/PAYROLL:

AMSOFT ABCS (from £33)	Details on application
CAMSOFT (from £49.95)	
M.A.P. (from £49.00)	
SAGE (from £69.99)	
CASH TRADER	£99.95
CASH TRADER with ANALYSER	£149.95

DATABASE MANAGEMENT SYSTEMS:

CAMBASE (CPC6128 only)	£39.00
CAMBASE 2	£49.95
CARDBOX	£59.99
CONDOR 1	£99.99
DBASE II	£119.00
DELTA	£99.95
POCKET INFOSTAR	£69.95
POCKET SUPERSORT	£49.95
SAGE RETRIEVE OR MAGIC FILER	£69.99

PROGRAMMING LANGUAGES:

DR PASCAL/MT+	£49.95
DR CBASIC COMPILER	£49.95

GRAPHICS:

DR DRAW	£49.95
DR GRAPH	£49.95

COMMUNICATIONS:

SAGE CHIT-CHAT RANGE (from £69.99)	Details on application

TRAINING:

TOUCH 'N' GO	£24.99
IANKEY Crash Course or Two Fingers	£24.95
AUDIO TUTORIALS (inc. Locoscript, Newword 2, Supercalc 2, Multiplan, and CBasic)	£ 9.95

GAMES:

3D CLOCK CHESS	£15.95
BRIDGE PLAYER	£19.95

SPECIAL OFFERS

FREE ACCO LIBRARY FILE (worth £3.33) and £3.00 DISC VOUCHER with every Software Order (£6.00 voucher over £100.00)
Voucher can be exchanged with your next order for 3" CF2 or CF2-DD discs

GREAT NEW PRODUCTS FOR PCW OWNERS

DAISY DISC - £19.95. Allows LocoScript documents to be printed on a Daisy Wheel Printer (see catalogue for details)
STEP BY STEP GUIDE TO LOCOSCRIPT - £4.95. Incredible value paperback from Amstrad
IBM PC SOFTWARE. A wide range of low cost programs are fully detailed in our catalogue
Also in stock - Amstrad Modem £99.95 - CPS8256 interface £67.85 - PCW8256 2nd Disc Drive £182.85 (fitted)

Superb Quality PCW8256/8512 or PC1512 Dust Cover Set £11.45

Branded 3" Compact Discs

Single Sided (reversible), Double Density CF2 - Box of 10 **£36.95** Double Sided, Quad Density CF2-DD - Box of 10 **£59.50**

DISC STORAGE AND OTHER ACCO PRODUCTS

ACCO disc storage box 3" discs (up to 50) or $5^1/_4$" (up to 60) **£19.95** **ACCO** Library file (holds 7 3" discs) **£3.33**
UNIQUE **ACCO** EASYSTRIP (for clean separation of perforations) **£11.38** or **FREE** with Printer Stand
ACCO Screen Filter **£37.67** **ACCO** Printer Stand **£42.15**

RIBBONS

DMP1 (per 2 ribbons) **£9.90** DMP2000 **£5.50** PCW 8256 **£5.50**

COMPUTER LABELS

FULL RANGE OF SIZES IN STOCK e.g. - 1,000 $3^1/_2$" x $1^7/_{16}$" LABEL TRACK IN FLIP TOP DISPENSER - **£5.75**
- 2000 $3^1/_2$" x $1^7/_{16}$" LABEL TRACK (2 ACROSS) IN PLASTIC TRAY - **£11.00**

LISTING PAPER

WE STOCK A FULL RANGE OF LISTING PAPER AT HIGHLY COMPETITIVE PRICES
e.g. 2000 sheets of 11" x $9^1/_2$" 1pt. 60g. Plain with micro perforations **£14.95**
1000 sheets of A4 1pt. 90g. plain with micro perforations **£14.18**

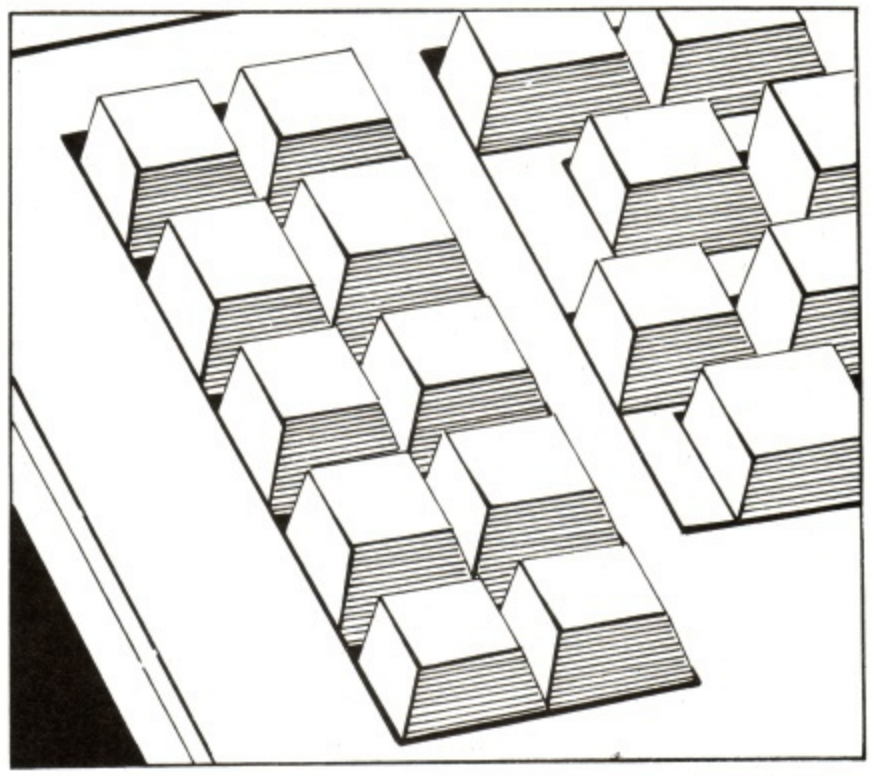
ALL PRICES INCLUDE VAT & POSTAGE
Special Offers Close 6th December

VISA Access

Garwood Software

Registered Office and Corespondence: Thornfleet, Mount Avenue, Hutton, Brentwood, Essex CM13 2NY
Shop: THE PRINT WIZARD - 149A HIGH STREET, BRENTWOOD, ESSEX CM14 4SA

Defining MS-Dos function keys



Robert Shifreen describes a way to make programming the PC1512 much easier

Like many micros, the PC1512 has a set of function keys. These are on the left of the keyboard, labelled F1 to F10. Although they are used to good effect by most commercial programs, there is no MS-Dos command that allows you to define them yourself.

You may be surprised, therefore, to learn that there is a very simple way to define the function keys. Using this method you can assign either a single character or a whole string to a function key, which can be used at the MS-Dos prompt level to make entering long commands easier.

There are 40 different function keys that can be programmed. This is because, as well as the normal 10 keys labelled F1 to F10, each can also be pressed in combination with either Ctrl, Alt or Shift.

This article will explain how to define the function keys in such a way that the definitions are available whenever you start up the computer using MS-Dos. As an example, it explains how to set up the function key F10 so that it produces a DIR command followed automatically by a carriage return. Once this is done, you simply have to press F10 at the MS-Dos prompt to get a directory listing.

The key to having definable function keys is a program called ANSI.SYS, which is on the MS-Dos 3.2 system disc. Don't confuse this program with ANSI.COM, which is not the same.

ANSI.SYS is a special type of program known as a device driver. When the program is loaded it remains in the computer's memory all the time, examining every key that you type. If the key is recognised as being a special one, the ANSI program performs a function associated with that key or combination of keys.

For example, if you type an ESCAPE character followed by a left square bracket, followed by a number 2, followed by a J followed by a carriage return, the screen will be cleared and the cursor returned to the top left hand corner. The ANSI program monitors the keyboard and, when it detects that special combination of keys, it clears the screen.

Once you have ANSI loaded into memory a number of these special key combinations are available. By far the most useful is to be able to redefine any key on the keyboard so that it acts like any other. You could, for example, make the Return key act like a backspace, though you'd have great problems if you did that!

So to assign one or more characters to the function keys you just have to use the appropriate ANSI commands. You simply type out the special combinations of characters, and ANSI will do the rest. To type out the ANSI commands, we put the commands into a file and then TYPE the file.

The first step then is to load the ANSI device driver program. If the program is not loaded the special commands will not work.

Because the program is a device driver, you can't just load it by typing ANSI. Instead, you have to have a file on your MS-DOS disk called CONFIG.SYS, which in turn must contain a line that says:

DEVICE = ANSI.SYS

The MS-Dos disc supplied with the PC1512 already has a CONFIG.SYS file on it, which is used by MS-Dos to set up the machine in a certain way every time you turn it on. Use the TYPE command to see if the DEVICE = ANSI.SYS command is in the file. Normally, it won't be, but your dealer may have put it there so it's worth checking.

If the line is not there, use the RPED program to edit CONFIG.SYS and add the line. It doesn't matter where about in the file it goes.

If you use MS-Dos from a hard disc, and ANSI.SYS is not in the top level, or root directory, you can include the full path name in CONFIG.SYS. So if you normally keep all the MS-Dos files in a directory called DOS, your line in CONFIG.SYS may look something like:

DEVICE = /DOS/CONFIG.SYS

If you do not have a CONFIG.SYS file at all, use RPED to create one.

Now you must make sure that the disc you use to start MS-Dos 3.20 has this CONFIG.SYS file on it, and also a copy of ANSI.SYS. Once this is done reboot the computer by pressing Ctrl-Alt-Del so that ANSI.SYS is loaded.

Incidentally, there is absolutely no harm in leaving ANSI.SYS loaded all the time. Although it will now always be in memory, it uses only around 1.5k, so it's not worth worrying about. It won't interfere with any other programs, but it will mean that you always have the ability to define the function keys.

If you want to know what other commands you can put in CONFIG.SYS see page 507 of Book 1. For a complete list of all the ANSI commands, see page 488.

Now that you have ANSI.SYS loaded, you can start defining the function keys. The way that this is done is as follows:

- Create a file on disc that contains the correct ANSI commands to redefine one or more function keys.
- TYPE the file, thus activating the commands.

If you want to make one file that defines a lot of function keys, the file will get pretty complicated. You may wish to write a Basic program to produce it for

"NEW RIBBONS FOR OLD"
from

ALADDINK

ALADDINK WILL RE-INK YOUR OLD FABRIC RIBBONS
AT GREAT SAVINGS AGAINST NEW PRICES!!

PCW: Base price; £1.90. 2nd & subsequent; £1.60 each
DMP: Base price: £2.00. 2nd & subsequent: £1.70 each

Post your old cassette together with remittance to:

ALADDINK (Dept AU)
4 Hurkur Crescent, Eyemouth, Berwickshire TD14 5AP

Most makes of ribbon catered for. Telephone 08907 50965 for a quotation

LARGEST COMPUTER CENTRE
IN

MANCHESTER

MAIN AMSTRAD STOCKIST
AMSTRAD PCs IN STOCK
+
ALL LEADING COMPUTERS

Extensive range of AMSTRAD software, books and addons.
Personal export scheme. Export dealer enquiries welcome
24 hour. U.K. mail order facility.

MIGHTY MICRO

SHERWOOD CENTER 268 WILMSLOW ROAD
FALLOWFIELD, MANCHESTER TEL: 061-224 8117

WANTED

AMSTRAD PRODUCTS FOR AUSTRALIAN DISTRIBUTION

* Business Software
* Utilities
* Serious Computing Applications

Please supply product details to:

ELITE MANAGEMENT
P.O. Box 1023, Orange N.S.W. 2800 Australia

The UPGRADE

GUARANTEE EXPIRED? Now is the time to Upgrade your PCW 8256 to 8512 specification

The specialist PCW magazine, "8000 Plus" selected our Upgrades as
"BEST VALUE D-I-Y MEMORY UPGRADE" and
"BEST VALUE 3 INCH SECOND DRIVE"
"Silicon City instructions are clear and concise . . . you could find it easier than you think".
Our simple, comprehensive instructions require skills similar to replacing a fuse. We supply **tested, TOP QUALITY, fast** (150nS) chips which are jig preformed for ease of insertion – NO BENDING REQUIRED – plus a spare practice chip to give you confidence.

256K internal Memory Upgrade £24.95 **Internal DS/DD 2nd Disc Drive £139**
Memory Upgrade plus Second Disc Drive £159
Prices include VAT and P&P. Delivery is normally **by return.**
Send Cheques/PO/LA orders to:

SILICON CITY
Dept. A, Mithian, St. Agnes, Cornwall TR5 0QE
Access/Visa orders: Telephone 087 255 2112

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	**£429.95/£552.00**
NEW AMSTRAD IBM compatible PC1512 mono/single floppy	
PC1512 HD 20MB Hard disk & colour screen	
PC1512 HD 10MB Hard disk & colour screen	Ring for details

All prices include VAT, Postage + Packing
Also free Life Membership when you purchase any AMSTRAD computer
Visitors by arrangement only
TEL: 01-651 6244
Send for full Price List & membership form to:
67 Selsdon Park Road, South Croydon, Surrey CR2 8JF

FOR AMSTRAD 8256 ROTATE ROTATE

Now you can print your Locoscript text and spreadsheets sideways

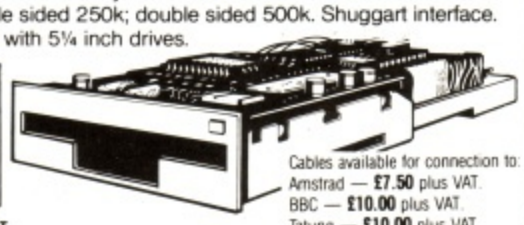
ROTATE enables anything you can save in an ASCII format to be rotated through 90°.
So you can now print sideways spreadsheets like SuperCalc and Multiplan-no more need to 'cut & paste'.
ROTATE also allows you to print in a variety of fonts.
ROTATE only costs £21.70 plus p & p and VAT.
For your copy send £25.95 to:
Trinity Business Systems, 52 Queens Road, Hethersett, Norwich NR9 3DB. Tel: 0603 812195.
Telephone Access Card orders accepted.
Or write or ring for more details.

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; double sided 500k. Shuggart interface. Plug compatible with 5¼ inch drives.

PRICE:
£29.95 + VAT
Single sided
£39.95 + VAT
Double sided

Carriage £2 + VAT



Cables available for connection to:
Amstrad — **£7.50** plus VAT.
BBC — **£10.00** plus VAT.
Tatung — **£10.00** plus 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

Or **Computer Appreciation,** 111 Northgate, CANTERBURY, Kent. CT1 1BH.

PCW 8256 MEMORY UPGRADE ONLY £23.95 all inclusive

Why you should consider a MEAC Designs Ram Upgrade!
Being the most competitively priced Ram Upgrade currently available it's a very good buy.

You won't find one cheaper!

Copies & backups only need two disc changes, not four.
Large programs can be run using Drive M (now 368K) as your second disc drive leaving Drive A free for your data disc.
It's like having a second drive for a fraction of the cost.
This upgrade comes complete with easy to follow instructions complemented with photographs. The 8 upgrade integrated circuits are preformed for easy insertion.
To get your Ram Upgrade Kit.
Send your
Cheque of Postal Orders made payable to MEAC Designs
to
MEAC Designs, Dept. AC
3 Little Croft, Yateley, Camberley, Surrey, GU17 7BU
SAE with any enquiries please.

you. The method I am going to use creates one small file for each function key. That way each function key can be defined separately or not at all.

As an example, let's set up key F10 to produce the command DIR. We'll also add a carriage return after the letters DIR, so that once the key is defined pressing F10 will automatically produce a directory. Once you know how to set up this key you should be able to set up any other function key that you want.

The format of the ANSI command to redefine a function key is:

ESC [k;dp

The k stands for the code of the key being defined, while the d stands for the code of the definition. To find out the value for k, look in this table:

Key	Normal	Shift	Alt	Ctrl
F1	0;59	0;84	0;104	0; 94
F2	0;60	0;85	0;105	0; 95
F3	0;61	0;86	0;106	0; 96
F4	0;62	0;87	0;107	0; 97
F5	0;63	0;88	0;108	0; 98
F6	0;64	0;89	0;109	0; 99
F7	0;65	0;90	0;110	0;100
F8	0;66	0;91	0;111	0;101
F9	0;67	0;92	0;112	0;102
F10	0;68	0;93	0;113	0;103

As you can see, the values consist of a zero followed by a semi colon and then a number. The value for F8, for example, is 0;66. The value for Ctrl–F5 is 0;98.

We want to define F10, so the code we need is 0;68.

The string we want to assign to F10 is DIR, followed by a carriage return. This is represented as:

"DIR";13

The characters DIR have been enclosed in quotes, as you can see. The carriage return on the end is represented by 13, which is the Ascii code for carriage return. The full list of Ascii codes is on page 484 of Book 1, if you want more details.

The "DIR" and the number 13 are separated by a semi colon. Now that we have the information we need, we can write down the complete ANSI command to redefine function key F10 as:

ESC [0;68;"DIR";13p

The ESC and the [signal the start of an ANSI command. Then comes the code for key F10 (0;68) followed by the characters we want to assign to that key. Finally, the small p ends the "define a function key" command.

Now that we have the correct command all that remains is to put it into a file and TYPE it. However there is one small problem yet to overcome. That is, how to get the ESC character (ESCAPE), into the file. Although there is an Escape key on the keyboard, it has a



special function under MS-Dos.

If you don't believe me, try typing a line of text and then, before pressing Return, press Escape instead. What happens? The cursor moves down to the next line. Pressing Escape tells MS-Dos to abandon the command that is being typed and start again. This is all very useful, but it means that we will have to find another way of typing the Escape character (which has an Ascii code of 27, by the way).

The way round the problem is to use the DEBUG program. This MS-Dos utility program lets you edit any file, and to change any character. Because using DEBUG isn't much fun, we'll use a simpler method to enter the rest of the characters, and leave a space where the Escape character needs to be. Then we'll use DEBUG to insert the Escape character. If all this sounds rather complex, don't worry. Everything is quite straightforward and, after a few minutes practice, will seem very easy.

At the MS-DOS prompt, type:

COPY CON F10.PFK

This tells MS-Dos to copy a file from the keyboard into a file on disc called F10.PFK. Whenever you create these function key files use an extension of PFK to remind you that the file is for a programmable function key.

Now type:

Z[0;68;"DIR";13p

and press Return. You have now entered the ANSI command into the file. Type Ctrl–Z to finish, after which the MS-Dos prompt will return.

As you may have noticed, I used a Z instead of the Escape character. Now, we have to use DEBUG to replace that Z with a real Escape character.

Make sure that there is a copy of DEBUG.EXE on your current disc, and type:

DEBUG F10.PFK

You will be greeted by a hyphen prompt:

Type E100 and press Return (that's a letter E followed by 100). You will see something like:

3200:0100 5A.

though the number 3200 may be different. The 5A means that the first character in the file is currently a Z, which is what you typed.

Type:

1B

and press Return, to change the Z to a real Escape character.

The E100 means that you want to enter a character at address 100, which is the first position in the file. The 1B is the code (in hexadecimal) for Escape, which will overwrite the Z that was there before. Now type W and press Return. This will save the new version of the file to disc, in place of the old one.

Type Q and press Return, to leave DEBUG and return to the MS-Dos prompt.

That's it! All finished. To test your creation, type:

TYPE F10.PFK

to type out the file F10.PFK. You should not see anything typed on the screen. The screen will simply scroll up a line, and the MS-Dos prompt will return. The characters have been intercepted by the ANSI program and used to redefine the F10 key. To make sure, press F10 and watch as a directory listing appears on your screen.

If it doesn't work, make sure that you have ANSI.SYS loaded. If, when you TYPE F10.PFK, the characters from the F10.PFK file are displayed on the screen, it probably means that ANSI isn't loaded. If so, set up the CONFIG.SYS file as described above and in Book 1, and try TYPEing the file again. If it still doesn't work, use the DEL command to delete the F10.PFK file, and create it again from scratch.

Once everything is working you can put a TYPE F10.PFK command in an AUTOEXEC.BAT file, which will make sure that your function key definitions are available every time you start the computer with the MS-Dos system disc.

To finish, one piece of advice. The function keys F1 and F3 already have a useful purpose in MS-Dos. F3 automatically repeats the last command you typed, while F1 brings back just one character of that command each time you press it. If you use ANSI to redefine F1 or F3 you will lose these functions.

Although quite a few steps are involved, being able to define MS-Dos function keys is extremely useful. After you have done it a few times you will be able to create a definition very quickly. If you use Basic you could even write a program that asked you what key you wanted to define, and then created the PFK file for you.

ACU

Advantage

Our compilation discs run on all PCW and CPC computers and contain comprehensive documentation files. Some software is Public Domain and is supplied free of charge. Upgrade earlier versions by returning original disc plus £1.95. All prices include postage and VAT at 15%. To order send cheque, postal order or International Money Order. OVERSEAS ORDERS PLEASE ADD £1 PER DISC.
Advantage (Dept U13) 33 Malyns Close, Chinnor, Oxfordshire OX9 4EW UK

ARNOLD VISITS JOYCE

ADVENTURING WITH THE PCW

We are pleased to be able to offer a collection of four classic adventure games from NEMESIS on one disc, specially adapted for the PCW computer.

THE TRIAL OF ARNOLD BLACKWOOD
"A surprisingly addictive game" (Adventure Club). May confound many an experienced adventurer.

ARNOLD GOES TO SOMEWHERE ELSE
"Originality and some fiendishly difficult problems" (PCN). You will need logic and a lot of stamina.

THE WISE AND FOOL OF ARNOLD BLACKWOOD
"Buffs will enjoy the paranoia that pervades the adventure" (PCW). The definitive tour of Rochdale.

BRAWN FREE
"An amusing introduction to adventure playing – maximum rating" (HCW). Poking affectionate fun at the Legends and Codes of the West.

The disc also includes Hints and Tips and, if you need it, "Cheat Sheets" on each game.

£15.95 (Members £13.95) – available exclusively from Advantage, ex-stock.

ADVENTURING WITH THE CPC

The four-games disc described above can also be supplied for CPC Computers:
£13.95 (Members £11.95)
Each adventure can be obtained on tape:
£5.95 each (Members £4.95)

ADVANTAGE – C

A professional product for PCW and expanded CPC computers, exclusively available from Advantage, at an affordable price.
Features:
- Full Kernighan-Ritchie implementation
- Supports floats, doubles, bit fields, structures and unions.
- Unix C compatible
- 150 library functions
- Optimisation tools
- Suitable for experienced programmers
- Suitable for beginners; step-by-step tutorial is included.
- The compiler, programs and manual are written by MIX Software, Texas, USA.

The package includes a 450 page, A4 size book describing the operation of the compiler, C programming and tutorial.

The compiler runs under CP/M Plus and is supplied on three inch disc – a second disc drive or RAM disc is recommended for CPC users. Please ask about the MSDOS version.

£39.50 (Members £37.50) Overseas £44.50
Available ex-stock – no waiting.

As a measure of our confidence in this product we offer a no-quibble money back guarantee if it is returned to us as-new, within 14 days of purchase.

A companion disc to the C Compiler comprises a full screen program editor, example programs written in C with their source code and several utilities.
PCW & CPC £11.95 (Members £9.95)

COMPLEAT UTILITIES SUITE

PCW & CPC £11.95 (Members £9.95)
A comprehensive package of programs including Full Screen Text Editor – 20 Function File Manager (one key erase, rename, copy, hide, squeeze, unsqueeze, print, tag etc) – Disc Sector Editor – Catalogue & Unerase erased files (V2.2) – Z80 Assembler, Reverse Assembler, Linker, Library & Debugger – File Scanner, Editor, Chopper, Compare – String Finder – Bad Sector Eliminator – Typewriter Emulator – plus improved versions of PIP, DDT, LOAD, SUBMIT, DIR, DUMP and TYPE.

APPLICATIONS PROGRAMS

PCW & CPC £11.95 (Members £9.95)
Contains Inventory Manager/Database – Full Screen Text Editor – Word Count – Spelling Checker with easy to edit Starter dictionary – Alphabetical Sort – Library Utility for organising and cataloguing your collection (four programs) – Keyboard Definer (V2.2) – Password – Scrambler – Synonym – Unspooler – Squeeze/Unsqueeze for saving up to 40% disc space – Help Organiser – Sorted Directory.

MSDOS SOFTWARE

PC 1512 DISCS £6.95 EACH (Members £4.95)
Disc 1 Utilities Suite.
Disc 2 Games Compendium.
Disc 3 Applications Suite.
Disc 4 Wordprocessor.
Disc 5 Databases.
Disc 6 Spreadsheets.

GAMES COMPENDIUM

PCW & CPC £9.95 (Members £7.95)
Features the famous Colossal Cave Adventure with game save feature – Chess Challenge – Othello – Mastermind – Rubik's Cube – Polish Pong – Pressup – Awari – Golf Simulator – Life – Noughts & Crosses – Word Search Puzzle Maker – Biorhythm Calculator – Calendar Generator – Maze Designer – Gothic and Banner poster printers.

AMUSEMENTS & DIVERSIONS

PCW & CPC £9.95 (Members £7.95)
Features the classic Star Trek – Space Trader – Lunar Lander – Baseball – Civil War – Bee Attack – Baccarat – Craps – Horse Races – Hunt – Chase – Boggle – Square – Quest (a text adventure) – Calculator – Loan Estimator – Weather Forecaster – Home Budget – Horoscope – Investment Evaluator – Poster & Label Printers.

NATIONAL & INTERNATIONAL USER GROUP

Join the leading independent user group supporting the Amstrad range of computers and receive monthly Newsletters, user support and the opportunity to share views, programs and ideas.
Members also benefit from substantial discounts on our continually increasing range of software – more than can be detailed in this advertisement.
The annual membership fee is £8.95 (UK) ro £13.95 (Overseas).

CP/M, Unix, MSDOS and Amstrad are all registered trade marks.

Real Correspondence Quality Printer

PRICE BREAKTHROUGH

QUENDATA DWP 1120 DAISYWHEEL PRINTER

A HOST OF USEFUL FEATURES INCLUDE:

- Standard parallel/centronics interface
- 20 c.p.s. (approx 200 words/minute)
- Easily obtained Qume ribbons
- Uses Qume daisywheels (many typefaces available)
- 10, 12 and 15 pitch options
- Maximum paper width 13 inches
- 4 levels of hammer impression
- Comes complete with power lead, plug, ribbon, courier 10 wheel, manual and cover
- Tractor and cut sheet feeder available

TRADE PRICE £178.25 INC. VAT. REC. RETAIL PRICE £299.00

OUR PRICE £199. NOW £149.00

AMSTRAD PRINTER LEAD IF ORDERED WITH PRINTER JUST **£9.95.**
IDEAL FOR 464, 664, 6128, WORD PROCESSING.

TELEPHONE **01-446 7170** or **01-952 0451.** ACCESS OR BARCLAY CARD WELCOME
DELIVERY **£12.50,** (mainland UK) or collect from our two stores

Allow 48 hours delivery

Adams World

779 High Road, North Finchley, London N12 8JY. (By Tally Ho)
Or 190c Station Road, Edgware, Middlesex (By Edgware Tube)



SEEK AND YE SHALL FIND...

Into adventures with Bill Brock

Office bound

At long last The Fourth Protocol: The Game has been released for Amstrad computers. Icon driven, it needs only the occasional name or number to be typed in full.

The storyline, loosely based on Frederick Forsyth's bestseller of the same name, involves a Russian plot to undermine the West by exploding a nuclear bomb and blaming the Americans. The subsequent political upheaval, forcing the election of a hard left government, will lead to our withdrawal from NATO and the establishment of a totalitarian state in the UK.

The game is divided into three parts, each an independent program which has to be solved before the next may be attempted. You play John Preston, an MI5 investigator, who on June 1 has been made head of Section CI(A).

The first game is The NATO Documents. Some secret documents turn up among the haul from a robbery somewhere in England. Security services are notified and you have to find out who is leaking secrets, to whom and why. The answers you get will lead to the uncovering of the Russian plot.

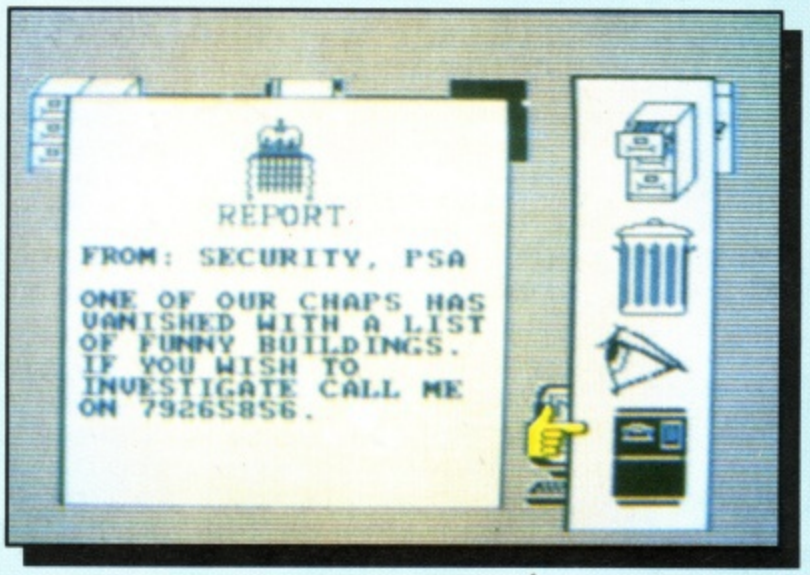
For this investigation, you need not leave your office. You have access to the unit's central computer (Cencom) and will receive reports from various sources. These you must evaluate and act upon. Apart from computer files to which you have access, your principle means of getting information is your network of agents.

You have fifty operatives who may be targeted on people you consider may lead you towards a solution to the many problems that surround you.

The screen display consists of a number of pictures (icons) and a moveable cursor (a pointing hand). Position the cursor with the left and right arrow keys and press Enter to activate any particular action. This in turn produces a sub-menu to choose further options from.

The main menu options are as follows:

- Surveillance: Assigns watchers to and from suspects.
- Cencom Filing System: Holds files created by the player, together with some of its own – you must find out what these are.
- Telephone: Rings for an incoming call, calls out may be made but you have to know what number to dial.
- Information: Three computer terminals display Memos, Reports and Situation Reports from your agents.



A message for John Preston in The Fourth Protocol

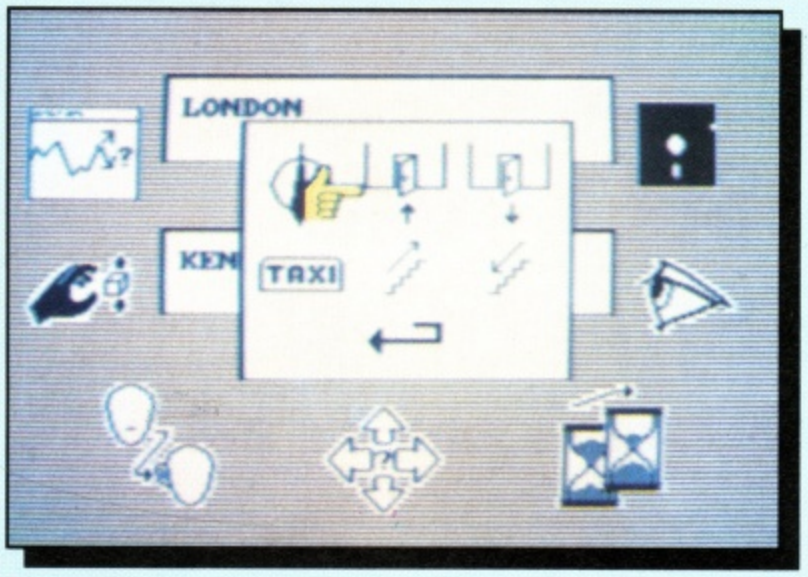
- Calendar: Updates throughout the game, 75 seconds roughly equals one day. You may advance the date if required.
- Assessment: Indicates your progress and prestige within MI5. If this drops too low, you will lose agents.
- Utilities: Allow you to save, load or freeze your game position.

When you are given any data you must decide what action to take, whether to assign watchers or perhaps delve into the Cencom for more information. Not everything reported or that you do is relevant to the main problem, but some action must be taken or your assessment will drop too low for you to be effective.

You should not expect to solve any game worth its salt at the first sitting, or even the second or third. What you should expect is a growing awareness of the right approach. This is particularly true here, with over a dozen sub-plots that – although not directly leading you to knowledge of the bomb – do create a desperate feeling of tension.

Memos or reports will mention places and people and you will need to remember these names in order to assign agents. Help is at hand in the form of Cencom. Not only can you read its existing files but you can also save any incoming reports or memos with your own file names.

Among other things you will be asked to check the security of Building 17. You will be given a map of the building and must decide where security locks are to be



The choice is yours in The Fourth Protocol

fitted. Do not ignore the requests or you will be plagued by memo after memo! Correct action here is unlikely to help you with the major task but failure will affect your prestige.

Once you have read the telephone numbers in Cencom you also have access to the main security computer at Blenheim. Of course, you have to find out the names of people or places before you can call up the files to hunt for possible clues to follow up.

The pressure mounts. You have until July 11 and the frustrating feeling that red-tape is bogging down vital investigation overcomes you. You may be sitting behind a desk but what an exciting desk.

Having made your deductions and double checked your files, you report your suspisions to your superiors. Get it right and you get the password to the next section. Wrong, and you may as well start again.

The second section, The Bomb, also uses icons and more closely resembles the classic format for adventure games. LOOK, MOVE, EXAMINE, PICK UP, DROP and INVENTORY are all there but with the simplified icon system you do not have to think of how to use an object. Simply activate the icon for USE and the program presumes the correct one, assuming of course that its use is significant at that location.

MOVE icons cover not only the usual four cardinal points but also stairs and doors and even enable you to hail a taxi. Telephones may be used and you should also TALK to anyone present.

You know that a nuclear device has been smuggled into the country. For this part of the game, you have to find where it is hidden – fast. There are well over 100 locations for you to visit and no agents to help you this time.

Learning how to travel around can take some time. Taxis are plentiful – just hail one again if not successful the first time. Drivers will ask for your destination but do not always seem to understand what you say, perhaps the strain is getting to you. Beware of using up your money too soon though – the London Underground is cheaper than taxis.

The first section will give you an idea of where to visit and more clues will appear as you proceed. Start by examining everything and pick up items that you may need. Not all of these are in the building you start in, so you must visit other Ministry buildings in the vicinity. Consult your notes from the first part for starters. Having found the bomb you will be given a password to allow access to the next part.

The third episode is The SAS Assault. You have found the building where the bomb is hidden and the SAS have been called in. Your job is to find and disarm the bomb using the information you have gleaned in the first two parts.

Again icons and menus provide you with the means to explore. This time there are only three options: MOVE, USE and LOOK. The rest of the screen is taken up with a plan of the building which you must explore to find the bomb. Needless to say there are many traps between you and it.

The arsenal of weapons you will find when you call up INVENTORY is impressive to say the least – and necessary. There are KGB men at almost every step and all of them are very hostile. This section is more a game of attrition. There are relatively few locations so it is a question of finding the right weapon or move for the right situation. Once you get this far you will win through in the end. It is just a case of how long it takes you.

This is not a cheap game but with three separate programs it is not bad value. It may take time to get used to moving that pointing finger to where you want it but a little patience in the early stages will pay dividends later.

The concept of The Fourth Protocol is quite exciting, especially the deskbound first episode. The icon system is clear and unambiguous – try it, you may like it.

Near the knuckle

Leather Goddesses of Phobus, Infocom's latest (now distributed by Activision) calls itself "a racy space-age spoof" and uses sex as both an advertising gimmick and a come-on to play the game further. You have the option of playing in three different modes: Tame, Suggestive or Lewd, but none of these detract from the normal high standards of adventure game that have become Infocom's trademark.

And, I hasten to add, none of these modes are likely to offend many players.It does become almost explicit on one or two occasions but more in the mind of the player than on the screen.

The basic plot is that you have been kidnapped by the abominable Leather Goddesses of Phobus (we would spell it Phoebus but we must make allowances for our American cousins). They hope to carry out some pretty nasty experiments on your person, hoping to learn something to human disadvantage before invading Earth and changing it into some sort of weird pleasure park.

You find your cell unlocked and escape with another inmate, who has the slightly insane delusion that you can defeat the Goddesses with a Heath Robinson invention made out of cotton balls, a white mouse, a Ford headlight and various other unlikely bits amd pieces.

From then on, your quest is to find all the items on this bizarre shopping list. A means of escape from the Goddesses' hospital (?) is provided by a teleportation system linked by a series of black circles. These are painted (using a special paint) at several critical locations. Standing on them will transport you and your

252 Scalford Road
Melton Mowbray
Leicestershire LE13 1LA

Squirrel's Byte

Tel: (0664) 63617

COMPUTERS – CARRIAGE FREE!

PCW8256	439.00	PCW8512	569.50
PC1512	Ring for Details!		

PRINTERS – CARRIAGE £7.00

Amstrad DMP2000	154.00	Juki 6100	345.00
Star NL10	259.00	Citizen 120D	199.95

CABLES

1 metre	9.95	2 metre	10.95
Printer extension cable set for PCW8256/8512			11.25

RIBBONS – CARRIAGE FREE!

Amstrad PCW	5.50	Amstrad DMP2000	5.50
Shinwa CP80	3.99	Kaga KP810	3.99
Epson FX/RX/MX80	3.45	Epson LX80	3.45
Seikosha GP80/100/250	3.45	Canon PW1080A	3.99
Star NL10	5.75	Centronics GLP	3.65

Other ribbons available – please ring.

PAPER & LABELS – CARRIAGE FREE!

2000 sheets per box		Price per 1000 labels	
Approx. A4 70 gsm	19.75	3.5 x 1.5" 1/2 across	6.95
11 x 9.5" 60 gsm	14.95	2.75 x 1.5" 1/2 across	6.25
12 x 9.25" 60 gsm	17.45	2.75 x 1.5" 3 across	6.25

MODEMS – CARRIAGE £5.00

PACE Nightingale package inc. I/Face, software & cable

CPC 464/664/6128	161.00	PCW 8256/8512	249.00

Please specify machine when ordering

DISK DRIVES – CARRIAGE £6.00

Pace 5.25" 40/80 track drive – max. 800K storage capacity

CPC 664/6128	182.50	PCW 8256	227.50
Cumana CS001 3" CPC drive	87.00	FD2 3" – PCW8256	150.00

3" DISKETTES – POST FREE!

10 Amsoft CF2 disks	34.95	5 Amsoft CF2 disks	18.50

3" STORAGE BOXES

Library box – holds 10	5.99	Lockable – holds 60	13.75

5.25" DISKS FOR PC1512 – POST FREE!

VERBATIM DATALIFE

DS/DD 48tpi	19.95	DS/QD 96tpi	24.95

OWN BRAND 100% GUARANTEE – IN PLASTIC LIBRARY CASE!

DS/DD 48tpi	13.75	DS/QD 96tpi	19.50

5.25" STORAGE BOXES

Library Case – holds 10	2.40	Lockable – holds 50	12.25
Lockable – holds 70	12.50		

PERIPHERALS – POST FREE!

AMX Mouse (CPC)	64.50	Speech Synth. 6128	38.50
RS232 Interface CPC	49.00	RS232 I/Face PCW	59.95

SOFTWARE – POST FREE!

SAGE Popular Accounts	95.50	**CAMSOFT** (for PCW8256/8512)	
A/Cs + Payroll	139.95	Cambase	47.50
Database	59.50	Stock Control	47.50
Payroll	58.95	Sales/Purch/Nominal	94.95
Invoicing + Stock	59.50	Sales ledger	47.50
Chit Chat + Combo	92.50	Invoicing	47.50
		PSIL system	144.95
DIGITAL DRGraph	46.95	**AMSOFT** Supercalc 2	44.95

Full software ranges from CAXTON, ARNOR, AMSOFT and M.A.P. available at discount prices – ring for details.
PC1512 SOFTWARE – RING FOR DETAILS!

THIS MONTH'S SPECIAL OFFER
10 3" CF2 diskettes together with
Micro Interface disk storage case £39.99

All prices include VAT.

3" DISKETTES
PHR Ms 1 HHOLCH
£32·50 for 10 incl
+ FREE STORAGE BOX

3" DISK STORAGE
£5·95 incl NEW DIAL-A-DISK
DESIGNED EXCLUSIVELY FOR 3" DISKS (CAP. 10)

SCOOP PURCHASE
ONE-DIAL-A-DISK STORAGE BOX
FREE
WITH EACH ORDER FOR 10 DISKS
LIMITED OFFER — WHILE STOCKS LAST

PAPER PRODUCTS
WHY PAY MORE FOR LESS

LISTING PAPER	LABELS 8000
11" × 9½" 1 pt 60gsm Plain/Ruled, 2000 Sheets	1 Up Labels 3½" × 1 7/16"
£14.89 incl.	£31.56 incl.

OTHER SIZES AVAILABLE PLEASE CALL

COPY HOLDER
MANUSCRIPT HOLDER £6·99 incl

VDU FILTERS
FREE Anti-glare screen filter with every VDU ordered
£29·99 incl
ANTI-GLARE SCREEN FILTER
Fits all models.
Please enclose details of Machine No. and whether mono or colour monitor.

PCW 8512/8526 RIBBONS £4.95 EACH INCL.
ALL PRICES INCLUDE VAT — PLUS — FREE NATIONWIDE DELIVERY

PLEASE SEND ME	DESCRIPTION	QTY.	VALUE
	TOTAL ORDER VALUE		

LARGE STOCKS AVAILABLE ACCESS AND VISA CARDS ACCEPTED

I ENCLOSE A CHEQUE PAYABLE TO SBS DATA SERVICES LTD
NAME
ADDRESS
TEL

FOR IMMEDIATE DESPATCH ☎ OUR 24 HOUR HOT LINE (0273) 726331 (10 LINES)
UNIT 3 - CLARKS INDUSTRIAL ESTATE - NEW TOWN ROAD
HOVE - SUSSEX - BN3 7BA - TEL (0273) 726331 TELEX 878226
SBS Data Services Ltd

CREATE YOUR OWN DESIGNS IN THREE DIMENSIONS WITH

INCLUDING FREE "GATECRASHER" STRATEGY GAME

Arnor LTD

AMSTRAD CPC 464/664, 6128

MODEL UNIVERSE

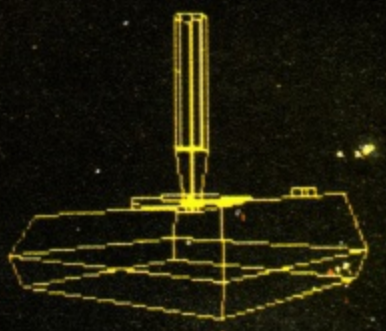
THE THREE DIMENSIONAL DRAWING SYSTEM

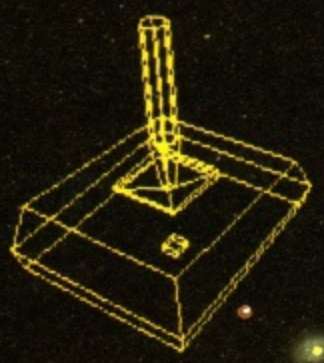
ROTATE DESIGN IN ANY AXIS, FULL 360

FULL PERSPECTIVE DISPLAYS

ZOOM IN AND OUT, OUTPUT TO PRINTER, DISC, TAPE







For the first time on the Amstrad computers you can now create your own designs in three dimensions. Model Universe allows you to draw in x, y, and z co-ordinates with the simplicity of standard two dimensional drawing systems. Create three dimensional illustrations and display them in true perspective from any angle. Twist, turn, rotate the images through a full 360°. Zoom in closer and view the object from the inside. Quite revealing!

Model Universe can be operated by keyboard, joystick or "mouse" control with full "zoom" in and out facilities. All created images can be output to disc (or cassette), printer or plotter. Built in software to dump screens to any Epson compatible printers, including the Amstrad DMP2000/3000.

With the full use of all 27 colours the applications are endless. From games writer to graphic designer, from teacher to technical illustrator, or just for fun!

From the technology of "mainframe" computers, Model Universe can simulate three dimensional images in a manner that has yet to be seen on home computers.

"MOUSE," JOYSTICK OR KEYBOARD COMPATIBLE

VISA

Access

ARNOR LTD (RBT)
118 WHITEHORSE ROAD
CROYDON
CR0 2JF

TEL 24hr: 01-684-8009



companion to several points in the solar system.

Whatever some may say about the innuendo underlying the game it certainly comes up to scratch as far as adventures go. There are a number of puzzles that seem obvious on the surface but just when you think that you've got the answer – you are in for a surprise.

You find a frog with a small golden crown. To change it into its former beautiful self you just have to kiss it. That's the answer, but kissing is not all that easy as the frog's appearance is vile, it smells terrible, it croaks at the wrong time and its lips are all slimy and horrible.

Unlikely situations abound. There is an "escape out of the window puzzle" that calls for that sheet on the bed to be used as a rope – no hope, think again. And imagine a mad scientist exchanging your mind with a gorilla's just to prove that the sex urge is in the mind and not the body. How do you escape from its cage – and with the rubber hose that you need?

On Mars you can travel along the canals by barge, once you have learned which button to push when. Once again the zanyhumour bubbles out of this game. How about the Donald Dock or the Whatts Upp Dock or the My Kind Of Dock? The last leads you to a palace where the Ruler sets you a riddle. Not solving it brings instant death, solve it and you just may get the choice of the palace harem.

And so it goes on. Infocom has given a rating as STANDARD, so look out for many hours of fun and games – and there's always the hope that all that innuendo may come true! Certainly the transformation of the royal frog raises the blood pressure – for a moment or two anyway.

You may have noticed that so far I have not referred to any explicit sex. There, you see, its all in the mind! I meant of the player, the Companion, the Frog and the Ruler of the harem.

The initial scene is a sleazy bar in downtown Sandusky, Ohio. You have drunk too much and need the toilet rather urgently. Your choice of Ladies or Gents determines your sex and that of all the other major characters. Guess who went through the wrong door on his first game? *(I did too – Ed.)*

Leather Goddesses of Phobus runs under CP/M and is only available on disc. It is like all Infocom games – not cheap. For all that it is good fun and well worth a place on any adventurer's shelf. As with other games from the same source, it accesses the disc at every avaiable opportunity which means that it occasionally seems infernally slow to play.

The trick here is to link together as many commands as possible and also to learn the shortest input that will be understood – PRESS ORANGE THEN PRESS PURPLE THEN OUT THEN, N, E and so on. Bear with it, it is worth the wait.

Born again classic

You have often been told that *the* classic adventure is Colossal Caves from the seventies, written by Messrs Crowther and Woods. There are a number of variations, some better than others. Now we have yet another version, this time from the fertile minds of St Brides and distributed by CRL.

The Very Big Cave Adventure is definitely, decidedly, deviously different!

Your guide and mentor in and around the caves is that debased, delicious schoolgirl Trixie Trinian, beautifully attired as always in boater, blue gymslip and black stockings. And judging by the mud around, her wellies too! For anyone who has played one of the serious versions – forget it and get this one.

It is written using The Quill from Gilsoft and shows just what sort of professional product this adventure writing utility can create. The graphics are good, appear quickly and the descriptions are full and highly amusing. It is quite recognizable as a Colossal Caves derivation but the game is full of minor alterations that make it a joy to play.

For those that have enjoyed these caves before there are many surprises in store. Trixie and her friends have been there before you and have altered many of the



On your knees in The Very Big Cave Adventure



puzzles – rotten devils. There are some of the original treasures but you will also find such gems as a Chippendale table, a nail file and the odd bomb.

For those new to the Caves, just lean back and enjoy a zany treasure hunt with an amusing guide. The game is well conceived and has the latest add-ons from Gilsoft, most useful being RAM SAVE. This is very rapid and will save using up too much of your lamp's fuel while you are trying to sort out how to catch that dratted bird.

Because of its size the game is played in two parts, but you must SAVE your position to either tape or disc before leaving the first part. This ensures that you have all the treasure and any vital objects you need to carry through to the second part. You should end up with over £130,000. The second part has strong overtones of Alice in Wonderland, complete with tardy, chattering rabbit . . .

Throughout, look out for words that have a double meaning. Where a word may be understood in more than one way, expect the least likely interpretation. Vocabulary is not extensive and the program does not understand complex input commands. For all that, there is a feeling of depth to the game, with plenty of items to examine and a good range of responses.

One of the magic words from the original cave adventures was PLUGH, transporting you from one location to another. Type this here and you will get a plug for St Brides next game. I can hardly wait!

Help league

Many of you have responded to my call for people willing to help others. Thank you all. Hopefully some time we will have space to name a few of you. We can now offer a help line that covers many different games.

If you are in real difficulties – write to Bill Brock, care of *ACU* and the League will do its best. If you have solved several games and are prepared to help others, write in and join the Adventure Help League – a dedicated band of adventure addicts.

ACU

POOLSWINNER

THE ULTIMATE POOLS PREDICTION PROGRAM



Boxed, with detailed instruction booklet

- **MASSIVE DATABASE** Poolswinner is a sophisticated Pools prediction aid. It comes complete with the largest database available – 22000 matches over 10 years. The database updates automatically as results come in.
- **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).
- **DISC/MICRODRIVE COMPATIBLE** Tapes supplied with conversion instructions.
- **PRINTER SUPPORT** Full hard copy printout of data if you have a printer.

PRICE £15.00 (all inclusive)

NOW AVAILABLE

FIXGEN 86/7 AT LAST: No more struggling for hours to get the fixture list into the computer. FIXGEN has been programmed with all English and Scottish fixtures for 1986/7. 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

NOT JUST A TIPSTER PROGRAM, Coursewinner V3 can be used by experts 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, tricasts etc. The database includes vital course statistics for all British courses. You can update the database – never goes out of date.

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

ALL PROGRAMS AVAILABLE FOR: AMSTRAD CPCs, AMSTRAD PCWs (ADD £3.00), All BBCs, All SPECTRUMS, COMMODORE 64/128, ATARI (48K+), SINCLAIR QL
Supplied on tape (simple conversion to disc) – except PCW (on 3" disc) and QL (on microdrive)

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

VISA phone 24 hrs

selec SOFTWARE

Access phone 24 hrs

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

(Send for full list of our software)

SHEKHANA COMPUTER SERVICES

	OUR PRICE		OUR PRICE		OUR PRICE
Exploding Fist II-D2	7.50	Cyberun	7.50	Nexor--D2	6.75
Druid	5.95	Galvan	6.95	Impossible Mission-D2	7.50
Dragons Lair-D1	7.50	Lazer Genius--D4	12.95	Doomsday Revenge-D2	7.50
City Slicker-D2	6.95	Get Dexter--D2	7.50	Aliens--D2	7.50
Questor--D1	6.75	Icon Jon--D2	6.75	Star Raider II--D2	7.95
Trivial Pursuit--D4	12.95	Camelot Warriors--D2	7.50	Dracula--D2	7.95
Dan Dare--D2	7.50	Konamis Golf	6.95	Double Take	6.75
Nemesis--D2	6.75	Batman--D2	6.75	Sold a Million 3-D2	7.50
4th Protocal	12.95	Footballer of Year-D2	7.50	Mag Max	6.75
Infiltrator--D2	7.50	1942--D2	6.75	Terra Cresta	6.75
*Paper Boy	6.95	Spitfire 40--D2	7.50	Galvan	6.75
Elite-D4	12.95	Lightforce	6.95	Uchi-Mata--D2	7.50
Winter Games-D2	7.50	Desert Fox--D2	7.50	Deactivators-D2	6.75
Jack the Nipper-D2	6.95	Leader Board-D2	7.50	Firelord--D2	6.75
Nexus--D2	7.95	Commando 86--D2	6.75	Arntic Accolade	7.50
Future Knight--D2	7.50	Fighter Pilot--D1	6.75	Master Universe-D2	7.50
Mini Office I	4.99	Ikari Warrior--D2	6.75	*Acrojet-D2	7.50
Scrabble--D2	7.50	Elite Hits Pack	7.95	Breakk Thru-D2	7.50
Mini Office II--D4	12.95	Nosferatu	7.50	*Americas Cup-D2	7.50
Lazer Basic--D4	12.95	Colour of Magick	7.50	Super Cycle-D2	7.95
Starstrike II--D2	7.50	Napoleon at War	7.50	Crystal Castle--D2	7.95
Hi Jack--D2	7.50	Gallipoli	7.50	Xevious--D2	7.50
Trailblazer-D2	7.50	Johnny Reb II--D2	7.50	Tobruk-D2	7.50
Shockway Rider	6.75	Power Play--D2	7.50	Tempest--D2	7.95
Shao Lins Road--D2	6.95	The Music System--D4	13.95	Glider Rider	6.95
Bobby Bearing--D2	7.50	Advance Music System	26.95	Now Games 3	7.95
Azimuth (Head Align)	7.50	Tarzan--D2	6.95	Paltron	6.95
Miami Vice	6.95	War--D2	6.95	*Labarynth	7.95
Theatre Europe--D2	7.50	Avenger--D2	7.50	Frost Byte--D1	6.75
Highlander	6.75	The Art Studio	17.50	Jail Break--D2	6.75
Space Harrier--D2	6.75	Masterfile II	34.95	Top Gun	6.75
Scooby Doo--D2	6.75	Goonies--D2	7.50	Cobra	6.75
Revolution-D2	7.50	Inheritance-D2	7.50	Gauntlet--D2	7.95
The Great Escape	6.95	Prodigy--D2	7.50	Stole a Million-D2	6.95
Mercenary	7.95	*** ACCESSORIES ***		World Games--D2	7.95
Tujad--D2	6.95	ESP Light Pen	17.50	*** PCW SOFTWARE ***	
Popeye	6.75	Miracle Imager	47.95	Lord of Rings	22.95
Pacific--D2	7.50	Discovery Plus	12.95	Wishbringer	24.95
Monopoly--D2	7.50	Master Disc	11.99	Jewels of Darkness	17.95
Strike Force Cobra	7.50	Multiface II	45.00	Tomahawk	17.50
Fairlight--D2	7.50	Amdrum	33.95	Goddess of Phobos	24.95
Tomahawk--D2	7.50	Disc Wizard	37.95	Hitchhikers Guide	24.95
Rogue Trooper	7.50	Comp Pro 5000	14.95	Fairlight	12.95
The Trap Door	5.95	Cheetah Mach I	14.95	Batman	12.95
PSI-5 Trading--D2	7.50	Konix Joystick	12.99	Infocom Hint Books	9.95
Silent Service--D2	7.50	Quick Shot 2 Turbo	13.95	PC SOFTWARE AVAILABLE	

D=Disk Version Available, D1=at £11.95, D2=at £12.95, D3=at £14.95, D4=at £17.50
Special Offer while stocks last 3" disks box of 10 only £38.00 inc P&P
For Mail Order: Chq/PO payable to:
SCS (AMUS) P.O. BOX 394 LONDON N15 6JL
P&P INCLUDED IN UK. EUROPE ADD £1 PER TAPE.
ESLEWHERE AT COST. Tel 01-800 3156 S.A.E. FOR FULL LIST
If you would like to pick up your discount software produce your copy of this advert to us at S.C.S. Unit 5, 221 Tottenham Court Road, London W1R 9AF (near Goodge St. Tube Station).
Open 6 days a week from 10.00–18.00pm
Access and Visa Card Hot Line please ring: 01-809 4843/01-631 4627
Credit Card orders despatched same day – subject to availability
*New release subject to release from software house, please ring to confirm availability of new releases

SUPERPOWER UTILITY SOFTWARE NOW ALSO ON DISC

ADM DEVELOPMENT PACKAGE

DISC (6128 only) ...**£19.95**
ROM (2 x 16K) **£19.95**

NEW LOW PRICE

MACHINE CODE PROGRAMMERS

Slash your program development time by up to 50%!! Our Assembler runs at approx. 24000 lines per minute — as many as 8 times faster than similar products. Over 30 commands in the Editor/Assembler including Block Move, Block Delete, Block Copy. Disc version uses Bank switching to maintain file sizes. Disassembled files can be edited and re-assembled. Monitor has over 30 commands including Single Step, Conditional Breakpoints, Set CPU Registers etc.

TOOLBOX & BASIC EXTENSIONS

DISC .....**£19.95** Please state
ROM.....**£19.95** 464, 664 or 6128

"Basic Programmers — SAVE PRECIOUS MEMORY SPACE!!" The disc versions of this product include INSTALLATION, allowing you to create your own files of routines selected from TOOLBOX for use with particular programs. This ensures maximum availability of user memory. Rom versions, of course, have 100% saving anyway! ALL versions now provide a simple ASSEMBLER from within BASIC.

DIRECT COMMANDS — CHARACTER, COMPACT, EDITOR, FIND <& REPLACE>, KILL, MEDIT, PICTURE, SOUNDLAB, TIDYLIST, XREF.

PRINTER COMMANDS — CDUMP, DUMP, ECHO ON/OFF. LRON, LTROFF.

GRAPHICS COMMANDS — CIRCLE, TURTLE, FILL, FRAME, GCOL, GRAPHICS PAPER, GRAPHICS PEN, MASK.

SCREEN COMMANDS — Double height or underline, PAGE ON/OFF, SCREEN, VDU.

FILE COMMANDS — BAUD, INFO, UNPROTECT.

OTHER COMMANDS — ASSEMBLE, KEYBOARD, ROMS, TUNE.

NEW SUPERPOWER ROM CARD £34.95 ONLY

(Eight sockets, addressable 0 to 7, 8 to 15, 16 to 23 etc. Cased unit, plugged neatly to expansion port. Through connector.)

ORIGINAL ROM CARD £25 (CPC 464) ONLY

OTHER SUPERPOWER PRODUCTS

Disc User's Utilities
Mailing List/Club Membership program.
Disc (6128 only) and Rom versions priced at £19.95 each. Send for full details.

SUPERPOWER Products for the Amstrad CPC series are available from dealers nationwide AND:—

Micro Power Ltd.,
Northwood House,
North Street,
Leeds LS7 2AA.
Tel. 0532 458800/
434006

SUPER POWER
SERIOUS SOFTWARE FROM THE MICROPOWER ORGANISATION

ROMANTIC ROBOT present



multiface two

Nº1 AMSTRAD MULTIPURPOSE INTERFACE with

1) FULLY AUTOMATIC, UNIVERSAL and PROFESSIONAL back-up facility to tape and disc for Amstrad CPC 464, 664 and 6128.
2) MULTI TOOLKIT to study/modify/develop software/hardware
3) 8K RAM EXTENSION
4) RESET BUTTON for "warm" reset

All at an AMAZING PRICE of £46.95!

MULTIFACE TWO is UNIQUE both in unbeatable value and features:

- **It is the only truly automatic back-up device – the programs are RELOADED exactly as they were STOPPED and SAVED, incl. the colours and sound – no other peripheral can RESTORE COLOURS AUTOMATICALLY and some programs will not RELOAD & RUN properly then – BEWARE! and use MULTIFACE TWO only.**
- Does not occupy any part of the Amstrad RAM and requires
- No additional software – has internal 8K ROM and 8K RAM.
- *STOPS ANY program ANYTIME. You can just PAUSE or SAVE or use MULTI TOOLKIT, etc. Programs will CONTINUE from the same point when you RETURN or RELOAD next time – everything is FULLY and AUTOMATICALLY RESTORED.*
- MENU-DRIVEN, fully ERROR-TRAPPED with prompts and one-touch commands turning complex tasks into a trivial procedure – all you need to do is to push the button and select from the menu:
  SAVE – to name & SAVE a program to disc, tape or hypertape.
  RETURN – to CONTINUE a program after any operation.
  JUMP – not to return but to JUMP to another address, say to your own routines in the 8K RAM extension.
  TOOL – to access MULTI TOOLKIT routines.
- *MULTIFACE 2 is EXTREMELY FAST in both SAVING & RELOADING – its INTELLIGENT COMPRESSING and TURBO saving to disc/tape makes a standard 64K program reload typically in up to 20 SECONDS from disk – other products take 4-5 times longer! – or just over 5 minutes from tape. The most EFFICIENT COMPRESSING also results in minimal space used on disc or tape.*
- **MULTI TOOLKIT is the only existing combination of hardware and software capable of displaying & modifying EVERYTHING you may wish to know about a program and current state of computer. You can PEEK/POKE the entire AMSTRAD contents incl. extra 8K RAM, Z80 registers, colours, etc. You can open a WINDOW and scroll through 56 byte blocks in decimal, hex and even ASCII representation (ie. everything seen as text to reveal messages, etc) with full on-screen editing. You get INFO on screen mode/start address, interrupt mode, no. of characters per line, horizontal sync. position, lower and upper ROM and RAM bank status, ROM type, etc. And ALL can be changed . . .**
- COMPATIBLE with expansion ROMS, RAMS and any other devices.
- PLUGS DIRECTLY into CPC 464, 664, 6128 – no need for extras.
- Save PROGRAM or a full 25-line SCREEN ONLY.
- THROUGH extension BUS for connecting other peripherals.

multiface two THE ESSENTIAL AMSTRAD CPC COMPANION

Please send me a MULTIFACE TWO at £46.95 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 77 Dyne Road London NW6 7DR 24 hrs 01·625 9463 ACU

Evesham Micros

THE UTILITY SPECIALISTS

DOUBLER

HAVING PROBLEMS BACKING UP THE LATEST LOADING TECHNIQUES?

DOUBLER+ Will solve ALL your problems

After **enormous success** on the CBM 64 and Spectrum we now have "Doubler" available for the CPC464. Designed by DRAYSOFT, inventors of the **infamous** "Interface II", this superb unit will operate with **100% success guaranteed**. It requires the use of an auxiliary cassette deck.

Simply plug in the "Doubler" on the expansion port, connect a tape player to it with the lead supplied, LOAD the software supplied in the normal way and you are **ready to start**.

Using digital techniques "Doubler" will create a brand new machine back up of **ALL** software **100% success GUARANTEED**.

As a bonus **"Speedcop" is included** in the package. This is a superb conventional back up copier that will handle **all normal AMSTRAD loaders**. It has all the usual options like choice of save speed deprotect basic etc.

Solve all your back up problems in one move, remember we guarantee success.

ONLY £16.95

3" DISCS Usually Available @ £39.00 for 10 inc. P. & P.

DISCMASTER V1.0

At last a **POWERFUL disc backup and utility** package for the 464/664/6128 series. Incorporates the following:

"DUPLICATOR" . . . A new standard of protected disc backup for the Amstrad. A **very powerful** program that will operate with one **or two** drives. We aren't saying that it will copy every disc available but our extensive tests have been **unable to find one that it won't**. We are sure that the DUPLICATOR is the **best disc backup program available**. Make no mistake many similar utilities are very limited. Future updates will be available as and when necessary at nominal cost.

"MENU MAKER" . . . A tremendously useful utility that allows you to make a menu on all your own discs **completely automatically**. You select which files are to be included on the finished menu and all the rest is done for you.

"RECOVER" . . . This program allows you to recover any files that may accidentally be erased from a disc. Very useful in case of accident.

"EXTENDED CATALOGUE" . . . Gives an extended CAT that includes the start address and length in bytes of both BASIC and machine code files.

ONLY £19.95

WARNING: Do not be misled by other adverts. There is only one "DUPLICATOR", it is the most powerful program of its type.



TAPE TO DISC MADE SIMPLE

At last, a hardware "device" that will allow you to transfer those tediously slow loading cassettes to disc. "Disc Wizard" operates on the working memory of the computer, hence it is unaffected by the loading method used. It is brought into operation by the **simple press of a button.** A working version of the program in memory is then saved to disc and the program will restart. The saved version, when reloaded, will start from **exactly the point that the button was pressed [very useful].** In most cases the process is then complete. With some programs it will be necessary to make one or two adjustments to the saved programs using a Simple routine supplied. However, this will also allow you to make certain custom alterations to the programs, e.g. screen size, windows, etc.

"Disc Wizard" is a hardware interface that fits the expansion or floppy disc port of the **464/664/6128.** It is equipped with a through port and is supplied complete with simple instructions. **At the time of going to press we have been unable to find even one, memory resident, program that the "Wizard" has been unable to handle.**

ONLY £39.95

Please Note: This product is intended for archival purposes only. Programs transferred require the unit to be present for reloading. Software to enable saved versions to stand alone will be available in the future.

SUBJECT TO AVAILABILITY. ALL ORDERS DESPATCHED THE WORKING DAY AFTER RECEIPT

All prices include P&P and VAT. Send cheque, Postal Order or Credit Card No. Credit Card orders accepted by phone. Callers welcome. Wide range of goods stocked. Trade enquiries welcome. European orders send price as advertised. Outside Europe £2.00 for airmail. Mail order to Evesham please.

EVESHAM MICROS
BRIDGE STREET, EVESHAM, WORCS. WR11 4RY.
Tel: 0386 41989

MICRO CENTRE
1756 PERSHORE ROAD, COTTERIDGE, BIRMINGHAM.
Tel: 021-458 4564

In Australia contact: **MICRO ACCESSORIES of S.A.,** 39b Anderson Walk, Smithfield, South Australia 5114. Tel: (08) 254 6284

FULL FEATURE PROFESSIONAL APPROVED MODEM AT BUDGET PRICES

The Enterprise range of BABT approved modems offers you V21(300 BAUD), V23(1200/75) and for Enterprise 2, **V22** (that's right **1200 BAUD FULL DUPLEX**).

We can offer them complete with an extensive range of top class software to support the auto dial/auto answer functions, viewdata etc. all at incredibly low prices.
In the words of Micronet 800 **"As far as value for money is concerned, Enterprise 1 and 2 from Kirk Automation are it".**

PRICES
Enterprise 1 – £99.95 + VAT (£114.95)
Enterprise 2 – £249.95 + VAT (£287.45)

KIRK'S ENTERPRISE The Space Age Alternative

Comms Packs (including Enterprise 1, Viewdata/Terminal Software, Interface, Leads, Instructions etc).
Just plug in and GO!

- PCW8256/8512 **£199.95** (+ VAT and postage)
- PC 1512 (all versions) **£199.95** (+ VAT and postage)
- CPC 464/664/6128 **£129.95** (+ VAT and postage)

All cheques etc. payable to **Kirk Automation Limited**
Bridge Works, St. Whites Road, Cinderford, Glos. GL14 3HB
Telephone: 0594 22084 **Access, Visa and Amex**

KIRK

From Page 41

Christmas list suppliers

1
Firebird Software, 64-76 New Oxford St, London WC2. 01-631 5206.

2 and 3
Mastertronic, 8-10 Paul Street, London, EC2A 4JH. 01-377 6880.

4
SJB Discs, City House, Maid Marion Way, Nottingham, NG1 6BH. 0602 413258.

5 and 16
Amstrad Computer User, Freepost, 36 St Petersgate, Stockport SK1 1HL. 061 429 7931.

6, 17, 20 and 31, 35, 36
Amsoft, Victoria House, PO BOX 10, Sunderland, Tyne and Wear, SR1 3PY. 0783 673395.

7
Superior Software , Regent House, Skinner Lane, Leeds 7. 0532 459453.

8, 10
SBS Data Services , Unit 3, Clarks Industrial Estate, Newtown Road, Hove, Sussex, BN3 7BA. 0273 726331.

9
Virgin Games, 2-4 Vernon Yard, Portobello Rd, London W11 2DX. 01-221 7535.

11
Nabitchi Computing, 131 Mount Pleasant, Liverpool, L3 5TF. 051 708 8775.

12
Glentop Publishers, Bath Place, High Street, Barnet, Herts, EN5 5XE. 01-441 4130.

13
Konix Computer Products, Unit 13, Sirhowy Hill Industrial Estate, Tredegar, Gwent, NP2 4QZ. 049525 5913.

14 and 15
Rainbird Software, 64-76 New Oxford St, London WC2. 01-240 8838.

18
Domark Ltd, 204 Worple Road, London, SW20 8PN.

19
Cheetah Marketing, 1 Willowbrook Science Park, Crickhowell Road, St. Mellons, Cardiff. 0222 777337.

21
MicroPower Ltd, Northwood House, North Street, Leeds LS7 2AA.

22
The Electric Studio, Unit 13, The Business Centre, Avenue One, Letchworth, Herts, SG6 2HB.

23
Omni-Reader Sales, Metroheath Ltd, 287/289 Whitechapel Road, London E1. 01-953 8444.

24 and 25
Arnor Ltd, 118 Whitehorse Road, Croydon, Surrey, CR0 2JF. 01-684 8009.

26
Romatic Robot, 77 Dyne Road, London, NW6 7DR. 01-625 9463.

27
Mirage Microcomputers , 24 Bank Street, Braintree, Essex, CM7 7UL. 0376 48321.

28 and 30
DK Tronics, Englands Lane, Gorleston-on-Sea, Great Yarmouth, Norfolk, NR31 6BE29. Advanced Memory Systems, 166/170 Wilderspool Causeway, Warrington, WA6 6QA. 0925 413501.

32
Rombo Productions, 62 Meadowbank, Ladywell, Livingston, West Lothian, EH54 6EL. 0506 39046.

33
Volex Electronics, Unit 1, Stowell Tech. Park, West Aston St, Eccles New Road, Salford, Manchester, M5 2XK. 061 736 5822.

33
Pace Micro Technology , Juniper View, Allerton Road, Bradford, BD15 7AG. 0274 488211.

38
Your local Dixons or computer shop.

39
Pragmon Ltd, Pragmon House, Radlett Road, Colney St, St Albans, Herts. 09276 3411.

40
Rolls Royce Motors, Crewe, Cheshire, CW1 3PL. 0270 255155.

ACU

Now's the time to link your Amstrad to the big wide world!



Join the communications revolution and use your Amstrad (plus the telephone) to roam the world . . . logging on to MicroLink, Telecom Gold, Prestel, Micronet and the ever-growing number of bulletin boards, both in the UK and USA. Help yourself to hundreds of free telesoftware programs – and much, much more!



You'll be able to read all about it in Britain's No. 1 communications magazine ***TeleLink.*** *The latest (Sept/Oct) issue has a free supplement on US databases Plus a guide to all the modems and comms software now available for the Amstrad range.*

● ***Here's a special offer for readers of*** **Computing with the Amstrad.**

For every subscription ordered using the form below, we will give you free registration to **MicroLink,** ***worth £5.***

If you would like to take advantage of this offer, don't forget to tick the box!

ORDER FORM

Valid to December 31, 1986

	UK & Eire	Europe	O'seas Airmail	(✓)	£ p
One copy of the Sept/Oct issue of TeleLink	£1.50	£2	£2.50	☐ 5014	
Subscription to the next 12 issues of TeleLink	£15	£23	£38	☐ 5001	
Tick this box if you would like free registration to MicroLink *(Only available if you subscribe to TeleLink)*				☐ 5019	**FREE**
Binder	£3.95	£6.95	£10.95	☐ 5017	

Payment please indicate method (✓)

☐ Access/Mastercharge/Eurocard/Barclaycard/Visa

Expiry date /

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

☐ Cheque/PO/Eurocheque made payable to Database Publications Ltd.

Name _____ Signed _____

Address _____

Post to: TeleLink, Database Publications, 68 Chester Road, Hazel Grove, Stockport SK7 5NY.

Order at any time of the day or night

Telephone Orders:	*Orders by Prestel:*	*MicroLink/Telecom Gold*
061-429 7931	**Key *89, then 614568383**	**72:MAG001**

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

ACU12

Small Business Accounts & V.A.T. made Simple.

Accounts and V.A.T. **made simple** is the answer for your business

- **Professional business software on 6128, 8256 or 8512 single or dual drives, and for IBM compatible PC1512.**
- **Over 2500 Users on many other computers.**
- **Cash Book accounting made simple based on the Simplex 'D' system.**
- **Control of Unpaid Bills.**
- **Single entry — no knowledge of book-keeping required.**
- **Produces VAT Return for Special Schemes 'A' to 'J' and Pharmacy Scheme 'B'.**
- **Trading and Profit and Loss Account at any time.**
- **Very simple to operate weekly accounts.**
- **Fully accepted by Customs & Excise.**
- **User Club and 'HOTLINE' support team.**
- **Ideal for all Retailers and other cash businesses.**
- **£99.95 inc. VAT or Demo versions at £19.95 inc. VAT.**
- **20 Minute Video available in VHS or Betamax.**

FREE VIDEO NOW AVAILABLE

YES – Clip the Coupon now or telephone 0625 615375 and we will rush you a free copy of the video.

MICRO SIMPLEX

Micro Simplex is a Division of Sandhurst Marketing p.l.c.

Please send me my free video NOW
Micro Simplex, Cheshire House, Castle Street, Macclesfield SK11 6AF

Name .....

Company Address .....

.....

Telephone .....

Type of Business ..... *VHS/Betamax
*Delete not applicable

WANTED!

Answers to Ariolasoft's recently launched game They Stole a Million competition



REWARD

These GOODIES – records, software and T-shirts featuring the game's crooked criminal characters – the adventurer, hacker, zapper and strategist – are being offered by Ariolasoft to the person quickest on the draw at answering the BADDIE questions below.

The 25 slower off the mark will each receive a T-shirt.

Rip off here

Questions

There have been some infamous robber partnerships in fiction and reality. All you have to do to win is:

1. Match the partners in crime listed below.

a) Bonnie	The Sundance Kid
b) Black Bess	Robin Hood
c) The Band of Merry Men	Clyde
d) Jones	Dick Turpin
e) Butch Cassidy	Smith

2. Which actors/actresses played the title roles in film a) and e)?

Rules:

1. Sender of the first correct entry drawn on December 22, 1986 will receive a Goody Bag. The 25 runners up will each receive a T-shirt.
2. You may photocopy the form but only one entry is allowed per reader.
3. The judge's decision is final. No employees of *ACU* may enter.

"THEY STOLE A MILLION" ENTRY FORM

Answers

1. a) .....

b) .....

c) .....

d) .....

e) .....

2. .....

Tick T-shirt size small__ medium__ large__ Xlarge__

Name .....

Address .....

.....

.....

Send your entry to:
They Stole a Million Competition, Amstrad Computer User, 169 Kings Road, Brentwood, Essex CM14 4EF.

You're never too young to play a Magical Adventure on the Amstrad CPC464 . . .



Based on the style of the classic computer adventures – but written so that even small children can learn to find their way around, encouraged by colourful graphics and exciting sound effects.

The pack contains a 48-page full colour storybook

PLUS

a full length multi-location adventure on cassette for only

Tape £8.95
Disc £10.95 post free

Read the book – then play the game!



Makes an ideal present

The computer Adventure of Princess Poppy and the Frog Prince

A Database publication

Magic Sword Order Form

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

CPC ✓ / PCW ✗	Magic Sword Tape £8.95*	6034	
	Disc £10.95*	6035	

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

Order at any time of the day or night

Orders by Prestel:	*MicroLink/Telecom Gold*
Key *89, then 614568383	**72:MAG001**

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

Payment: please indicate method (✓)

Expiry date /

☐ 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

ACU12

PRODIGY



Imagine (sorry) an isometric version of Jack the Nipper, set in a world far, far away where machines spend their t-states trying to create organic life. This is the background to Electric Dream's new release – Prodigy. The story runs thus:

The Machine Sorcerer Wardlock has been experimenting in his Mechlabs, and created organic life. Until now Mechworld has been the sole province of things that go clunk, and things that squish have been unknown. Wardlock's changed all that. His first experiments just produced Globewels and Bloberites, strange shaped creatures that he allows to wander the Mechlabs at random. Then came Solo the Syntleman, sentinent and humanoid. He's a synthetic man, and up 'til now has spent his time wondering how to escape the nightmarish laboratories.

The arrival of Nejo, a human baby (presumably from under a goosedroid bush) spurs him into action. Nejo needs almost constant attention, nappies to change, and feeding. The Bloberites and Globewels take an altogether unhealthy interest in the brat, and he needs protection. This is obviously no place to bring up a young spacer, so Solo tries to go over the wall.

Mechlabs are divided into four zones: Ice, Fire, Tech and Vegie. The inhabitants of the latter are called Vegie burghers, I suppose. Travel between zones is by teleport, which works only slightly better than BR on an off day (Mondays through Sundays). Ice Zone contains oxygen bubbles, from which Solo can replenish his air supply. He can tell when he needs to do this from his suit display, which also tells him how much milk Nejo's got and when he (Nejo, not Solo) needs a shower.

Milk can be had from Chef MechDonald (another burgher) by threatening him/her/it with the Bubblegun which Solo has. This is also his only defence against the failed experiments mentioned above. To be an experiment is one thing, but a failed experiment . . . No wonder they're angry.

The plan of action seems simple enough. Lying around the labs are four Power Keys, one per zone, which have to be fitted into the Lockfire. The security computers can also be befuddled by fiddling with the terminals which can be found here and there. Helpful hints are suggested by the teletype in Solo's suit, which also dispenses timely warnings about imminent catastrophes.

And so Solo the Syntleman sets forth to bravely zap what no syntleman has zapped before. The assorted monsters both hinder him, sap his strength and send him back to his starting point. Najo trys to follow him, but can't travel as fast as Solo and is more vunerable. Solo can either slow down his search and allow the baby to accompany him, or dump the infant somewhere safe and make haste. But he must always leave enough time to get Najo to a shower or milk when the need arises.

The graphics are the traditional 3D maze set inside a border containing information about the game in progress. Green screeners will be pleased to see a feature for their phosphor. There's some unusual intro music which is quite atmospheric in a tuneless sort of way. In all, quite intriguing.

Author: Electric Dreams
Price: £9.99 tape, £14.99 disc

Nigel

All this man looking after a baby seems a bit pretentious to me. Prodigy is simply a roam around a maze game. It is very difficult, but with practice grows on you. To get the most out of Prodigy you need a fair bit of patience and persistence.

As a feat of programming the game is impressive, it has a huge map and a massive array of monsters. A lot of work has gone into the Mode 1 graphics but the game is not one of Electric Dreams best.

14/20

Liz

A large decorative border is described as a feature of the game. What it really hides is a programming short cut. Scrolling 16k of screen with animated figures and keeping track of off-screen aliens (not to mention looking after a baby) is just too much for Mr Z80 to cope with.

It works well and the proggy succeeds in keeping a lot of balls in the air at one time. Not a particularly special game but something to while away the hours.

15/20

Colin

What's this? Androids running away from mad inventions, with a baby in tow? Sounds quite original. So it's a shame that it's nearly just another 2.5D hunt-the-key maze game. The twist is this nicely animated baby that crawls after you and generally gets underfoot. Makes things more difficult, true, but disproportionately more frustrating, especially with the turgid joystick response.

Graphics multicoloured and nice, playing area small, action awkward. I might have enjoyed it if I could have played it . . .

10/20

TEMPEST

The Tempest is one of Bill Shakespeare's naffer plays. It's also one of Atari's better arcade games from the golden days of Defender.

Possibly a classic, definitely a cult, it kept the author for one bereft of 10 pence pieces and away from the bar. Of course, at home you don't waste 10ps and there's no bar (shame), but does it still have the Right Stuff?

Let's describe the game first. It's a bit like Space Invaders played down the insides of a crumpled cardboard box. Instead of the evil aliens (perhaps they're just lonely) marching down the screen to meet you, they advance up the sides of a long tube made from a set of lines receding into the far distance.

This tube, by the way, is a Hyperspacial Wireway, through which the good folks of the galaxy normally traverse. At the top you have your laser base or Zapper, which you guide around the circumference to pick off the oncoming nasties, the better to make the Wireways. According to the script, this Zapper is a remotely controlled pulsed plasma device mounted on two mechletric legs.

According to the screen, it's two green lines. But use your imagination.

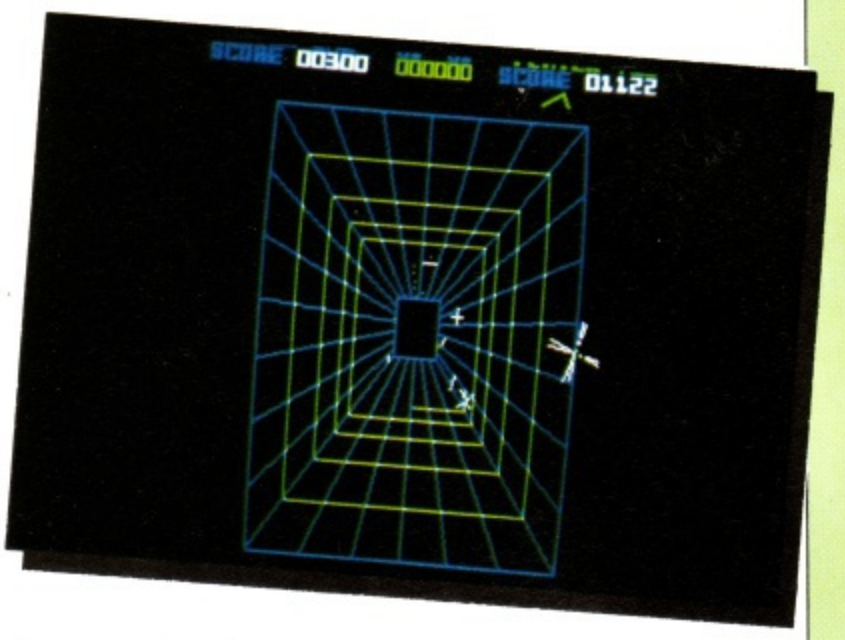
And these nasties are numerous. There are Flippers (which look nothing like dolphins) which laconically head-over-heel in a spiral up the tube. Fuseballs whoosh at speed straight up to your end of the tunnel. Pulsars are hyperspacial vandals – you can't cross a line with a Pulsar hanging on it.

If hit Tankers split into two Flippers, or a spiralling Fuseball. And then there's Spike, who whistles up the side looking for all the world (take you pick which one) like a single line.

In case this xenobiological hoard proves a little too much for you, you have up your spaceman's sleeve a Super-Zapper, which kills 99 percent of all known knasties. You've only got one of those every screen, so save them for when you really need them.

You really need them if something gets to the top of the tube. You can't shoot it then, you can't pass it and if it's moving, you're in trouble. The ol' Super-Zapper is just the answer.

The vital weapon in the conflict is you. Success depends



completely on how fast you can spot the advancing hoards, how quickly you can flit from side to side, how well you can judge the order in which to mash the monsters to prevent them reaching home base. It's quite a task.

Once a tube is de-infested you are warped (especially if you read this) at unimagineable speeds to the next wireway in need of clearance. And so it continues, only faster, fiddlier and frantic-er.

This interstellar Rentakil is depicted in wireframe graphics. The original arcade version was vector scanned (like Asteroids), and the Amstrad version does it's best to look identical, even down to the rotating letters and flexing messages. It sounds identical too, even with the torpid Handel churning away on attract mode.

If you've ever played Tempest, then be assured that this is purty close to the real thing. If you haven't, but appreciate some above-average zapping, then check this out. Even William might have enjoyed it.

Author: Electric Dreams
Price: £9.95

Nigel

Tempest is a good game but as Liz kept reminding us it is not the same good game. There is no menu or starting sheet at the beginning. You don't fly down the tubes at the end of a sheet and worst of all you can't fire sideways. I kept on letting off my super zapper too early. Still I found it a good blast.

The more I played Tempest the more I liked it. Perhaps I expected too much before I started.

8/20

Liz

This conjures up memories of my evening class, learning Pascal. The course was enough to put you off structured languages for life – the best thing about it was the Tempest in the bar at the Poly.

It's surprising how good you can get on an eleven week course (at Tempest, not Pascal). It also shows how often micro versions of arcade games are a pale imitation of the real thing.

Arcade Tempest was fast and furious, this is fudged and fiddly. Nothing like the same game.

12/20

Colin

Wrists in good nick? Joystick wrought from solid vanadium? Don't need to sleep in the next week or so? Good. Then get hold of Tempest. This is about as close to the arcade megagame as you'll get on any computer. It's not Electric Dreams' fault, but a joystick isn't as good as a trakball and it's too easy to release the Super-Zapper by mistake by pulling down on the stick. Nevertheless, it's a goodie, if you like that sort of thing.

17/20

NEW! NEW!

PRINTER DRIVERS

QUALITAS gives superb NLQ in a choice of five business fonts, even on ordinary printers! Professional features include justification with equal spaces between words, proportional character widths, and double-width, emphasized and underlined characters. A font editor is included so you can modify fonts or even create your own! Works with all printers with quadruple-density graphics which are compatible with the Epson RX-80, including the Amstrad DMP2000, Brother M-1009, Canon PW1080A, Citizen 120D, Epson FX/RX/LX, Kaga-Taxan KP810, Panasonic KXP1091, Smith-Corona D200 and Star Gemini 10X. An 8-bit printer port is required for two of the fonts supplied. For Amsword/Tasword 464, 464-D and other word processors which allow approx 6k memory to be reserved, eg Protext (disc version). Qualitas 464 **£9.95** (tape), **£12.95** (disc), available mid-November. Tasword 6128 version in preparation.

TASPRO justifies lines with **equal** spaces between words, giving your documents a superior appearance. Daisywheel printers supported in both fixed-pitch and proportional modes include the Brother HR-15, DaisyStep 2000, Juki 6100, Quen-Data DWP1120 and Uchida DWX-30S. Most Epson-compatible dot-matrix prtiners are supported in fixed-pitch modes (and some in proportional but we recommend Qualitas for this). For Amsword/Tasword 464, 464-D and 6128, and other word processors which allow 1.5k of memory to be reserved, eg Protext (disc version). (HIMEM upon power-up must be above 41708 if Tasword 6128 is being used.) Taspro 464 **£7.95** (tape), **£10.95 (disc)**.

Please specify your set-up (including printer) when ordering. Fast mail-order (UK post free, Europe add £1, elsewhere add £2 airmail) with 14-day "full refund if not entirely satisfied" guarantee (statutory rights unaffected). Trade enquiries welcome.

SEVEN STARS **Seven Stars Publishing, Dept A, 34 Squirrel Rise, Marlow, Bucks SL7 3PN. Tel: 06284 3445.**

SCHOOL SOFTWARE LTD.

Use Access here

Give your kids that extra edge. Don't settle for less when you can have the best.
NOW ONLY £12.95 discs & £9.95 cassettes.
£2 P&P (includes airmail worldwide)

VISA

Playschool (3-8)
Teaches the use of number, simple arithmetic, letters, shape recognition, keyboard skills and art. Learn with Superkid.

Music Invaders (7-adult)
Music composer and piano player. Excellent graphic presentation, compose up to 1000 notes. Simple to use. "Incredible value for money".

Magic Maths (4-8)
Here at last is a maths program which really does merit the term 'educational game'. Dealing with addition and subtraction, it brings new standards to educational software.

Maths Mania (8-12)
The first addictive maths game for this age group. Concentrating on multiplication and division, it gives hours of fun. Don't settle for less.

Music Tutor (7-adult)
A comprehensive music course linked to grade one theory.

Basic Geometry (9+)
Excellent use of the computer in introducing this difficult subject. A tutor at your own keyboard.

Better Spelling (9-12)
The market leader in spelling programs giving you 16 menu options to choose from.

Better Maths 1 (12-16)
Using excellent graphics this course will really benefit the learner. If you want a maths course don't settle for less and be disappointed.

Physics
The most highly rated program for the 12 to 16 year old. Using superb graphics it has courses on nine sections of Physics.

Chemistry
The ideal program to give a kid an edge in this subject. Has courses on 8 important sections of Chemistry for 12 to 16 year olds.

Biology
Learn key definitions and pit your wits against the computer on topics such as cells, mammals photosynthesis, respiration, reproduction and so on. Written by professional author like all our programs.

Geography
A specialist study of weather and climate and related topics. Exceptionally detailed.

ALSO FOR PCW 8256
VISA HOTLINE ring 010/353/61/27994 (UK)
Mail order only. Send cheque/p.o./Visa no. for immediate delivery
Meadowvale Estate, Raheen, Limerick, Ireland.
Telephone: (061) 27994, (U.K.) 010-353-61-27994

CYCA LTD.

287 CALEDONIAN ROAD, LONDON N1 1EG
TELEPHONE: 01-700 4004

AMSTRAD

CPC 464 Green	£173 + VAT
CPC 464 Colour	£260 + VAT
CPC 6128 Green	£260 + VAT
CPC 6128 Colour	£350 + VAT
DMP 2000 Printer	£139 + VAT
PCW 8256	£399 + VAT
PCW 8512	£499 + VAT
Amstrad V21/23 Modem	£86.00 + VAT
CF2 Floppy Disc	£2.90 + VAT
CF2DD Floppy Disc	£5.00 + VAT
Sony 3½" S/S DD	£1.90 + VAT
Sony 3½" D/S DD	£2.90 + VAT
Printer Ribbon DMP 2000	£5.00 + VAT
Printer Ribbon 8256/8512	£5.00 + VAT
JY2 Joystick	£13.00 + VAT
RS232 Serial Interface	£43.00 + VAT
CPS8256 RS232 (use with PCW 8256)	£59.00 + VAT

PRICES INCLUDE POSTAGE & PACKING

CYCA LTD
287 Calendonian Road, London N1 1EG
CREDIT CARDS HOT LINE
01-700 4004

VISA AMERICAN EXPRESS

Reach the top with . . . LCL

Educational Software

Amstrad (CPC + PCW) *(Disc/tapes)*
Electron, BBC *(tape/disc)*
Spectrum Commodore 64
(Apple, VIC, ZX81, NEC PC8201A)

AS SEEN ON TV
★ **WORLD LEADERS** ★

★ **At all Major Shows** ★ ★ **Hons. Graduate Authors** ★



COMPLETE SELF-TUITION GCSE/GCE COURSES

NEW AVAILABLE NOW

(Each contains 24 programs)
£5 off total for 2,
£10 of total for 3.

MICRO MATHS (CPC+PCW)
Course taking beginners (from age 8 yrs) to O-Level. 24 programs on 59 topics on 2 tapes/disc + 2 books **£24**

IMMEDIATE DESPATCH

MICRO ENGLISH (CPC)
Course taking beginners to English Language O-Level. 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**

VISA

Send coupon or phone orders or requests for free colour catalogue to:
LCL, (Dept. AU), Melody House, Greys Road, Henley-on-Thames, Oxfordshire

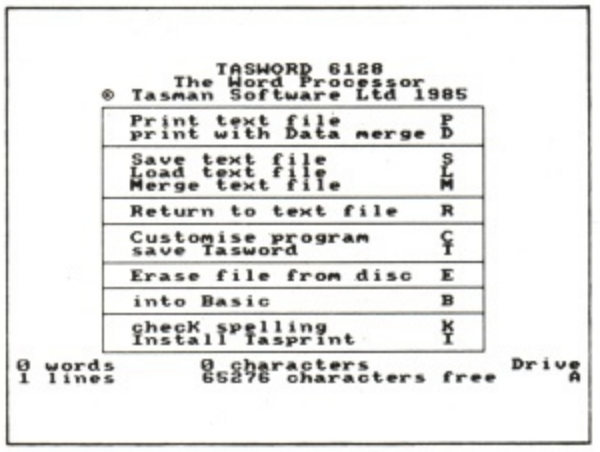
Tel: 0491 579345 (10am-10pm)

Name _____
Address _____
_____
Title _____
Computer _____ Disc/tape _____

TASWORD 6128

THE WORD PROCESSOR FOR THE AMSTRAD CPC 6128







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 TASPRINT. 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 Amsword 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

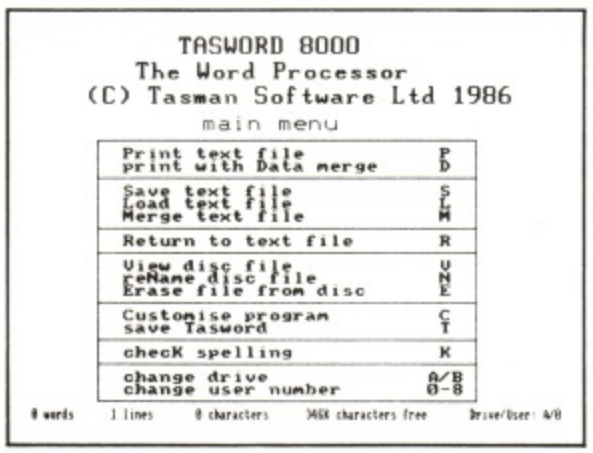
A suite of fast machine code screen copy software for the CPC 464, 664 and 6128. Print high-resolution screen copies in black and white and also large 'shaded' copies with different dot densities for the various screen colours. TASCOPY 464 also produces 'poster size' screen copies printed onto two or four sheets which can be cut and joined to make the poster.

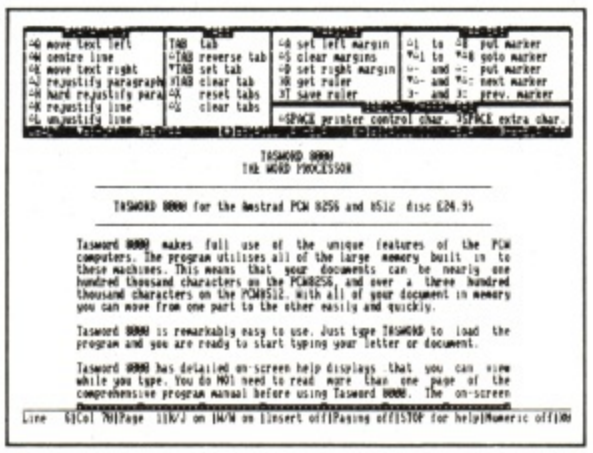
TASPRINT 464 and TASCOPY 464 drive the following dot-matrix printers:

AMSTRAD DMP1	MANNESMANN	STAR DMP501/5/515	SHINWA CP-80
EPSON FX-80	TALLY MT-80	BROTHER HR5	COSMOS-80
EPSON RX-80	BROTHER M1009	DATAC PANTHER	AMSTRAD DMP 2000
EPSON MX-80 TYPE III	NEC PC-8023B-N	DATAC PANTHER II	

TASWORD 8000

THE WORD PROCESSOR FOR THE AMSTRAD PCW 8256 AND 8512





TASWORD 8000

THE WORD PROCESSOR

TASWORD 8000 for the Amstrad PCW 8256 and 8512 disc £24.95

TASWORD 8000 offers a fast and flexible approach to word processing on the PCW 8256 and 8512.

TASWORD 8000 has been especially developed to make use of the unique features of the PCW computers, utilising ALL of the large memory built into these machines. Your document can be nearly one hundred thousand characters long on the PCW8256 and over 300,000 characters long on the PCW 8512. That's enough room for over 100 pages!

TASWORD 8000 is fast! With all of your document held in memory at any one time, there is no need for the program to access the disc as you move through your text. Cursor commands allow the user to move through the text both easily and quickly, even with very long documents. TASWORD 8000 allows you to move rapidly to the start or end of your text and to ANY line or page number.

TASWORD 8000 is remarkably easy to use. You can view detailed help displays AT THE SAME TIME as you are typing. The detailed manual and the interactive TASWORD 8000 TUTOR supplied with the program mean you can be producing quality documents immediately – you only need to read one page of the comprehensive program manual before using TASWORD 8000!

TASWORD 8000 includes a sophisticated set of print options which allow you to print any part of your document, automatically number pages and print headers and footers. Printing multiple copies of a document is easy – just enter the number of copies required. TASWORD 8000 can be used to take full advantage of ANY printer connected to the PCW via the Amstrad parallel/serial interface.

DATA MERGE. TASWORD 8000 includes the powerful Tasword mail merge facility. You can store a list of names and addresses on disc and Tasword will print your letter, each individually addressed, to each of your intended recipients. The TASWORD mail merge is open-ended and flexible – storing names and addresses is just one application. Printing can be made conditional: just send a letter to addresses in London, for example.

TASWORD 8000 includes two of the unique TASPRINT 8000 fonts (Lectura Light and Median). This gives you two new unique typestyles on the PCW printer. The TASPRINT fonts give your printed documents a very special appearance and have great impact when used for headings within your text.

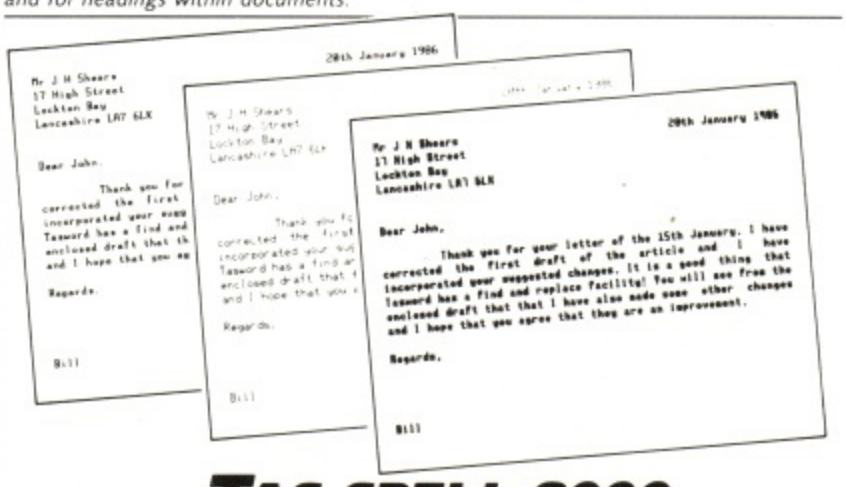
With these, and a host of other useful features such as a permanent word count, TASWORD 8000 is a fast and flexible approach to word processing on the Amstrad PCW 8256 and 8512.

TASPRINT 8000

THE STYLE WRITER

TASPRINT 8000 for the Amstrad PCW 8256 and 8512 disc £14.90

TASPRINT 8000 consists of a further six fonts that can be used with TASWORD 8000 to extend and enhance the variety and appearance of your printed documents. In addition, with TASPRINT 8000 you can print files from disc onto the PCW printer in one of the eight TASPRINT 8000 fonts. TASPRINT 8000 utilises the graphics printing capability of the PCW printer and the printed text is double the height of normal text – ideal for notices, posters, and for headings within documents.



TAS-SPELL 8000

THE SPELLING CHECKER

TAS-SPELL 8000 for the Amstrad PCW 8256 and 8512 disc £16.50

The spelling checker for TASWORD 8000, TAS-SPELL 8000 checks the spelling of your TASWORD 8000 text and any other text in standard ASCII format.

COMPACTA – bold and heavy, good for emphasis
DATA ALIEN – A FUTURISTIC SCRIPT
LECTURA LIGHT – clean and pleasing to read
MEDIAN – a serious business-like script
PALACE SCRIPT – a distinctive flowing font

Available from good stockists and direct from:

Tasman SOFTWARE

Springfield House, Hyde Terrace, Leeds LS2 9LN. Tel: (0532) 438301

If you do not want to cut 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: .....

	ITEM	PRICE
NAME _____	_____	£ _____
ADDRESS _____	_____	£ _____
_____	_____	£ _____
_____	Outside Europe add £1.50 per item airmail.	£ _____
		TOTAL £ _____

Telephone Access/Visa orders: Leeds (0532) 438301

Please send me a FREE Tasman brochure describing your products for: the Amstrad CPC 464, 664 and 6128 ☐; the Amstrad PCW 8256 and 8512 ☐.

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 Kelly data, Postboks 43, Refstad, Oslo. NETHERLANDS Filosoft, PO Box 1353, 9701 BJ Groningen. GERMANY Profisoft, Sutthauser Str 50/52, D 4500 Osnabruck. BELGIUM Easy Computing, Avenue Guillaume Lefever 30, 1160 Brussels. PORTUGAL Informova, Campo Grande 28 4 A, 1700 Lisbon. AUSTRALIA Dolphin Computers, Unit 2, 7 Waltham Street, Artarmon, New South Wales 2064. NEW ZEALAND Software Supplies, PO Box 865, Christchurch. U.S.A. Ramex International, 17620 26 Mile Road, Washington MI 48094.

All TASMAN 464 software is fully compatible with the 664 and 6128

All prices include VAT, postage and packaging.

AMSTRAD USERS



Now you can get your training direct from Amstrad

When it comes to making the most of your Amstrad 8256 and 8512, who else would you turn to for guidance than Amstrad themselves? Clearly we're the undisputed experts on our products – and on passing on their benefits to you.

NEW TRAINING COURSES

Our new one day training sessions have been designed to give you the most comprehensive knowledge of your computer and how to get the most out of it. Unlike many other courses, we insist on no more than six per training group. And every participant is given his or her own Amstrad Computer to work from.

REAL VALUE FOR MONEY

A full one-day training course at our convenient Newcastle-under-Lyme Training Centre costs just £79 (including VAT). And the price includes a delicious lunch and refreshments.

BOOK NOW

The new courses start in November, and are just one more example of our outstanding aftersales service (an Advanced Amstrad User course is also following shortly).

We'd like to advise you that space is limited. So why not avoid the risk of disappointment and phone Miss Katherine Edge right now on 0782 61001l (ext. 208) to book your places (or for further details).

AMSTRAD

Amstrad Distribution Ltd
PO Box 299, Newcastle, Staffs, ST5 7QS.

Parrotry



CPC 664 & 6128 Compatible

The Animated Drawing and Design Program from Treasure Island Software.

- **Quick and easy to use**
- **Not 1 but 12 demonstrations**
- **Repeats brush strokes as many times as you like to bring your artwork to life**
- **Use to supply co-ordinates for your own programs**
- **Comprehensive instruction booklet and pattern design acetates supplied**

Available on disc only and by mail order only. Send cheque/P.O.'s for £12.95 (£13.95 outside UK) made payable to Treasure Island Software to:
Dept. No. PU
Treasure Island Software
14 Arthur Street,
Ampthill, Beds.
MK45 2QQ

£1,000 COMPETITION

ENTRY FORM WITH EVERY ORDER

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 demonstation 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.

CPC 464 (disc)/664/6128
PCW 8256/8512
Price: £29.95 (inc. p&p)

VISA

MERIDIAN
software

38 Balcaskie Road,
London, SE9 1HQ.
Tel: 01-850 7057

BONZO MEDDLER [for ANY CPC]

THE dedicated TAPE TO DISC utility

*** "A VERY GOOD & USEFUL set of utilities at an AMAZINGLY LOW PRICE". AMTIX, AUG. 1986 ***

- TRANSFERS all standard BASIC, BINARY & ASCII files.
- COPES with some HEADERLESS and some FLASHLOADERS!!
- TRANSFERS MOST "SPEEDLOCKED" PROGRAMS.
- AUTO-RELOCATOR • EXTENDED CATALOGUE • RE-NAMES for AMSDOS
- FULL STATUS DISPLAY • AUTOMATIC • CUTEDISC INCLUDED!

Does MORE for LESS! Just £5.00 inclusive

BONZO MEDDLER will satisfy the most demanding user, but for devoted "meddlers" we now offer:

NEW!

BONZO SUPER MEDDLER

- ALL the features of the acclaimed BONZO MEDDLER Plus

BONZO's RAM DAM

- A set of files to further enhance the powerful BONZO,
- If you can press a key – YOU can use RAM DAM.
- Put even more TURBO'S and "FUNNY LOADERS" to DISC!!
- No re-naming or "juggling" needed.

Whilst another claimed "THE only one to cope with TURBO" BONZO users could deal with HEADERLESS also! Now another advance – we don't claim ALL can be transferred – but a VERY high percentage will! BONZO SUPER MEDDLER rivals all others, DOES MORE for LESS!

Just £7.50 inclusive (transfers itself)

NEW!

BONZO CLONE ARRANGER

- RELEASE VALUABLE DISCS for CURRENT USE !!SAVE POUNDS!! THE DISC MISER, **FULL DISC TO TAPE AUTOMATICALLY**
- A C60 SECURELY STORES TWO COMPLETE DISCS – EASY RECOVERY
- INCLUDES A SUPERB DISC TO DISC COPIER, COPES WITH THOSE "FUNNY FORMATS"! *RAPID FORMATTER, (inc. IBM)* EASY TO USE

Just £6 inclusive or £5 with any other program

UPGRADES

The RAM DAM files are available separately to upgrade a BONZO MEDDLER to SUPER. **£3**

- IDLE MEDDLER to BONZO MEDDLER **£3 – SUPER £5.50**
- ANY other TAPE TO DISC (originals) exchange for BONZO MEDDLER **£4 – SUPER £6**

All programs with FULL instructions. NEMESIS give FULL after sales support AND a NEWSLETTER. Issue 5 now ready.

ORDERS with cheque/postal order All by return post, on tape – simple transfer to disc

NEMESIS [ACU 12/86]
10 Carlow Road, Ringstead, Kettering, Northants NN14 4DW

CERBERUS



Hello there. Mind if I join you? What're you having, Syrian Panther Sweat? A wise choice. One of the few bars on this godforsaken planet that serves a decent drink. What? Oh, I'm just off the Cerberus. Ah, you've heard of it. Quite a history. Quite a ship. No, I wasn't on it in those days. All that crew are rotting away on Dracona or, if they were very lucky, they're so much glowing plasma.

You know the story, I suppose. I heard it from a grizzled space rat on Bongaigner V who claimed to have been in one of the attacking Starfleet police ships. He could well have been telling the truth – it's a big galaxy and he was an old hand. Only had an old hand as it happened. The other was a cyber – police issue. That's why I almost believed him.

Don't mind if I do. Ahhh . . . I can feel it doing me harm. So you want the facts about the old Cerberus. The story goes that it was doing the Arcturus – Auriae run when the pirate band got hold of it. Seems she blew a tube and dropped into n-space when Roland's Rascals were happening by. She wasn't armed then, and couldn't fight. Couldn't run, either.

The pirates had that big drydock in those days, some hulk they converted to a repair yard. Two years later, they had made Cerberus one of the fiercest fighting ships in this quadrant. Flagship she was.

What Roland didn't know was that she had been made a trap. Some of Cerberus' crew had joined the pirates, they were StarPol agents.

All those weapons – they were rigged. Time came when Rol came across a crippled, defenceless freighter. He ran towards it, lasers almost melting. The rest of his fleet did some melting too. They drifted out of range, and joined the StarPol grouping. Think of it – three hundred ships for one man. They wanted him, and badly.

Rol realised something was wrong when the crippled freighter warped out from under his nose, and those blips came up on the gradar. Of course, he called his fleet – it wasn't there. He was on his own, with the Cerberus and two lasers. The smart bombs were all but useless.

Into the attack came the StarPol 'stellars. They swooped down towards the Cerberus thinking it would be an easy kill. They reckoned without Rol. Time after time they came into the attack. Time after time he repulsed them, wiping them out with just the two lasers. Then the 'pols sent in the meteorites. Rol, he just stood his ground, and blasted them out. No, I didn't think it was possible either, but he did it.

In the hold, his crew was trying to fix the smart bombs. Rol held out long enough, shot enough ships, for them to fix a few more. The battle continued for days, that old rat said. As fast as StarPol poured in the ships, Rol blew them away.

They caught the ship at last of course. No, Rol wasn't on it – he'd ejected Seldon knows where. Rumour has it he's somewhere out on the Rim, teaching some backwater about comptech. And the Cerberus, well they auctioned it off. And now it's back on the trade routes. I must be, too. Oh, okay. Just one more. Now have you heard about Ruh-dehls? Makes this panther sweat taste like . . . Let me tell you . . .

Author: Player
Price: £1.99

Nigel

This can only be an Amstrad game. The great graphics, mega-impressive on an Arnold, wouldn't raise an eyebrow on the Commodore 64 where the weak spriteish movements and the minimal plot would be laughed to scorn.

On a Spectrum the graphics couldn't be done anyway and the action would be derided by anyone who'd ever played Hungry Horace.

So an Amstrad natural. I could forgive a lot for those pretty little pixels, but not this much. Not quite.

14/20

Liz

When this month's games plopped through the letterbox at *ACU* Towers I thought that Cerebus was the good game from Players and the others would be naff.

Although this is reasonable it's not a patch on Guzzler.

And if I told you that holding down the keys K.E.V.I.N would make you indestructible it would ruin the game.

So I won't.

12/20

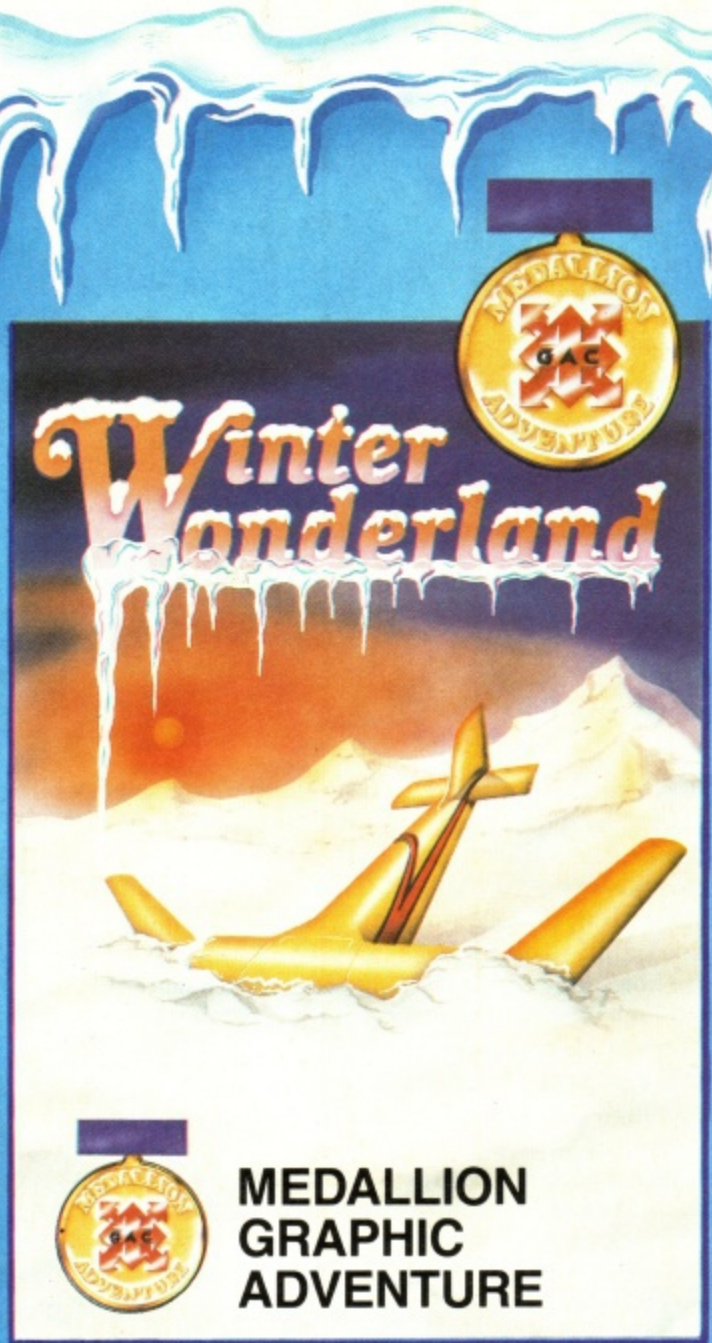
Colin

Players has obviously gone overboard on the graphics. Loverly they are too – subtle shades of colour, explosions that exhilarate and a mother ship that's as detailed as a real arcade game. They must have spent weeks on these graphics. They've spent as much as five minutes – tops – on the gamesplay.

It's worse than Space Invaders, where you at least get more than four enemy vessels on the screen at once. Time and time again you get four (beautiful) ships wandering about the screen. Shoot them before they shoot you.

C'mon guys, it's just like using the Mona Lisa as kleenex.

15/20



MEDALLION GRAPHIC ADVENTURE

Breaking through the dense cloud cover you were relieved to see a dazzling white snowfield spread below you. Desperately preparing for a crash landing, you were distracted by a glint of sunlight on glass – a building! Could THIS be the lost civilisation?

Your attention however was drawn back to the ground hurtling towards you . . .

From the producers of THE GRAPHIC ADVENTURE CREATOR

AVAILABLE FROM ALL LEADING RETAILERS
or direct from:
INCENTIVE SOFTWARE LTD.,
2 Minerva House, Calleva Park,
Aldermaston, Berkshire RG7 4QW.
Telephone: (07356) 77288.

BARCLAYCARD VISA PRIORITY ORDER FORM ACCESS

Please rush me for my: Commodore 64 ☐
Spectrum ☐ BBC B ☐ Amstrad CPC ☐

WINTER WONDERLAND £7.95 ☐
Apache Gold (except BBC) £7.95 ☐
Graphic Adventure Creator { Tape £22.95 ☐ / Disc £27.95 ☐

I enclose cheque/PO or please accept my credit card No. _____

Name _____

Address _____

IT'S A KNOCKOUT

Perhaps you can remember It's a Knockout. IaK, or Jeux sans Frontieres, was a medium popular TV programme in the mid-70s, where various teams from various European countries took part in farcical competitions. A bit like the Eurovision Song Contest, but intentionally funny.

There were all manner of ribtickling races. In general everyone competed at once on each, but the marathon was just one team at a time. GB used to have a private competition with the Belgians as to who would come last most times – we even lost that one.

If it was on t' telly today it would be a natural for a computer game, Ocean must have thought. Ah well, if they can have WWII simulators then we can have IaK. And here it jolly well is, in the style of Dirty Tonsils Supertaste and other fine Oceanic offerings.

Take your joysticks for the first merry jape. The Flying Flans is born from the best slapstick tradition. Two guys on the other side of a wall take turns in throwing flans at you using a mallet and a seesaw.

You're carrying a tray on which to catch the catapulted custard and once the quiche is quaught you have to dump it to one side. If you miss any – and you will – the floor underfoot becomes awash with albumen. Ever tried running on flans?

Once you've wiped down your messy metatarsals after that little delight, have a go at Harlem Hoppers. Spherical objects are rolled down a camel's back towards you, and they have to be caught.

Just in case that's too simple, you're attached at the waist to a large elastic band which pulls you backwards. And once again, the floor is slippery. Something to do with the camel perhaps.

And then, appropriately for Ocean, there's the Titanic Drop (take it as you will, guys . . .). This exciting compo involves sliding down a rope from the ill-starred liner into one of four lifebelts. They're colour-coded as to their pointworthyness.

Feeling chicken yet? Good. Now try the Diet of Worms. No longer the funniest date in history, you guide a fowl around a field. On this lie a number of worms and you have to get as many as possible into a tray at the bottom of the screen.

Nigel

It's a Cop Out is an attempt to take a bunch of very naff games which would get laughed out of the worst budget range and compile them with a famous name. Once you've got a name the buyers in the big stores look no further. Boy are they fickle.

Liz

Hehehe, haw, haw, haw, This heeeeeeeeeee, game fro... hohoho from oooh, Ocean is as irksome as the commentary in the real thing. It thinks it is funny and is similarly wrong.

If you think that a girl from Huddersfield dressed up

Colin

Here's a blast from the past. Continental cavortings, yet. I played it through once, and I don't think I'll do it again.

But it could be one of that rare breed, the computer party game. The animations are OK (how many times have I said that...), and the humour excites a few titters, but the novelty soon wears off. Most of the games go on



Penultimately (Penoceanicly?) there's the Obstacle Race. A firm favourite with IaK of old, you race down a track attempting to miss various obstacles. You mean you guessed from the title? The computer races an opponent against you – keep up with him to keep in the points.

The Marathon is the Bronte Bash. This scales the wuthering heights of freaky funambulation. Armed with a crane, your mission is to drop a heavy weight on to the bonce of various dinosaurs that pop out of holes in front of you. No wonder they became extinct – there wasn't any paracetemol in those days.

Up to six players can battle it out at once – any unfilled places are taken by the computer, which merely announces the scores. After each race, the contestants are awarded from one to six points according to where they came in the grander scheme of things.

Does Britain still come last? Is it still a tossup between the deft Dutch and the grim Germans for first place. Only you can tell . . .

Author: Ocean
Price: £8.95

The Mode 0 graphics are the worst I've seen in quite a while with no attempt at shading. The animation is average and the games all boring. I've seen it all before and didn't enjoy it then.

6/20

as a rubber penguin with six foot flippers is amusing then you might also think that waggling a joystick a million times while trying to avoid chunky beachball sprites is a seventh heaven. I don't.

7/20

far too long, and in the obstacle race I put the joystick down in ennui well before the denouement.

Perhaps it needs more players, but the computer printing up the scores at the end of each bout is done with all the panache of a fishmonger filleting his fiftieth flounder on a Friday. Now what it needs is a digitised Eddie Waring going over the top.

13/20

THE LEGEND OF
APACHE GOLD
by
Peter Torrance

Lonesome Cowboy 'LUKE WARME', not a Dime to your name and only dreaming of riches. But there is a LEGEND. A legend of great riches in an Indian Burial ground.
The legend of . . . APACHE GOLD!



From the producers of THE GRAPHIC ADVENTURE CREATOR

Available from all leading retailers.
Or direct from:
INCENTIVE SOFTWARE LIMITED
2 Minerva House, Calleva Park,
Aldermaston, Berkshire RG7 4QW.
Telephone: (07356) 77288.

PRIORITY ORDER FORM
Please rush me for my Spectrum ☐
Commodore 64 ☐ Amstrad CPC ☐
Apache Gold £7.95 ☐ Winter Wonderland £7.95 ☐
Graphic Adventure Creator { Tape £22.95 ☐ / Disc £27.95 ☐
I enclose cheque/PO or please debit my credit card
No _____
Name _____
Address _____

QUESTOR

Cascade is perhaps most famous for its 50 Games cassette, which has been around now since ZX81 days. Now seems a funny time to branch out, but here's the first game I know of from the company that's destined to stand or fall on its own two feet. Or shag pile, as the hero of the piece rides about on an airborne Axminster.

The intrepid turk is on a mission of mercy to rescue the daughter of the Nawab from deep within the Catacombs of Garr wherein she lies imprisoned . . . And guess what he needs to effect the escape. My goodness, how did you get it. A key. And not just any key (because they are multitudinous) but the Giant Key. Freud, eat your superid out.

These keys, it is almost redundant to say, lie hidden within the mazey Catacombs of Garr where lesser mortals have long feared to tread.

So what makes you so special? You alone, chuck, have The Power which enables entry, ensures expertise and generally helps you in the quest. It runs out though, especially if you come into contact with . . . You're ahead of me again. Yes, monsters, nasties, bats, ghouls, snakes, skeletons and Things That Defy Description. So there's no point in describing them.

But there are friendlier things distributed around the place with gay abandon to aid you. Lucky old you. The trick in is to transport the right tool to the right place to remove yet another barrier between you and the Nawab's daughter.

There's also the occasional clue in case your Power doesn't crank your cranium into intellectual overdrive. Clues flash. So if, for example, that evil, leering basilisk has a flashing goblet just the other side of him/her/it you might be able to tie in that rather natty golden grail you passed just a cavern or two back. That's it, the grail blasts the basilisk. Not going too fast for you, am I? Good.

Your threadbare transport can carry a mere three objects at a time so try to remember where this, that or indeed the other was. Always remember – you are all that stands between Garr and the total domination for which he craves. It's a good idea to start out with the Magic Pearls – they're especially good at removing those stubborn, ground-in evil minions.



And when you finally battle through the catacombs there's the Guard and Garr himself to ultimately (them again) dispose of. So be sure that your loins are girded for the battle.

On screen you see the portion of the maze you're in at the moment (making a map might be a good idea), yourself, your carpet's contents and the bouncing bogies currently in your airspace. All in Mode 0 Gnomechrome.

The maze itself is satsifyingly sized. There's the chance to get a quick zap in now and again (with the magic dust). So for those without a maze game to their name, cast a carpet over Questor.

Author: Cascade
Price: £8.95 (tape), £13.95 (disc)

Nigel

"Yawn bore, seen it before. Still I'd better play it for a bit. Now what happens if I get that cross over here? Ah and that opens this now if I can avoid that spidery thing. Ahhg it got me."

Questor is oddly addictive. It may be just another Sorcery clone but then look how good the original was. Besides there's nothing wrong with a good clone – ask Alan Sugar. Yup, a jolly prog worth a quick go.

15/20

Liz

Flying carpets, rescuing princesses – this is the stuff tales should be made of. Flicker free sprites and lots of palette switching. Cascade may not be offering a free watch with this one (as it does with the 50 games compilation) but it still represents pretty decent VFM.

16/20

Colin

There comes a time in every reviewer's life when it all gets too much. I've got no doubt that this is a very competent explore-the-maze game, but I've seen an awful lot of competent maze games. There's been a lot of water under the bridge since Jet Set Willy, but to look at this you wouldn't know it.

Still, don't let me put you off. If this is your first maze game, you'll love it. If it's your second, it'll be OK. Otherwise, spend your shekels on a packet of Polos. They'll last longer.

8/20

DISCOUNT SOFTWARE

CHECK OUT THESE PRICES

GAMES		BUSINESS & TUTORIAL		DISC BASED	
Amdrum – New	32.95	Guide to Basic 1 or 2	16.95	Kung Fu Master	9.95
Latin Kit for Amdrum	3.50	Masterfile 464	19.95	Monopoly	11.50
Electro Kit	4.50	Mastercalc 464	19.95	Scrabble	11.50
Batman	6.95	Printer Pac II	6.50	Tomahawk	11.50
Elite	11.75	Hisoft Turbo Basic	13.75	Dan DAre	11.95
Jack the Nipper	6.95	Hisoft 'C' Compiler	29.95	Starstrike II	11.95
Jewels of Darkness	11.50	Lazer Basic	12.50	Trivial Pursuit	16.95
Dan Dare	7.50	Protext	17.50	Speech	11.50
Ghosts & Goblins	6.95	Office Mate	13.50	Elite	15.95
Monopoly	7.50	Office Master	20.95	Adv Music System	25.95
Music System	12.75	Maxam	17.50	Transmat	9.95
Powerplay	7.50	Tasword 464	15.95	Oddjob	10.95
Scrabble	7.50	Tasprint (cass)	8.50	Masterfile II	33.95
Speech	7.50	Tascopy	8.50	Mastercalc 128	29.95
Spitfire 40	7.75	Transmat	6.50	Hisoft Turbo Basic	18.95
Turbo Esprit	6.95	Supersprites	6.50	Prospell	20.95
Winter Games	7.50	Mini Office II	11.95	Promerge	20.95
Trivial Pursuit	12.75	Pitman Typing Tutor	7.75	Protext	21.95
				Supersprites	9.95
HARDWARE		CP/M		Maxam	21.95
Amstrad V21/23 Modem	96.95	New Word	61.95	Tasword 6128	18.95
RS 232 Iface	45.95	Supercalc 2	43.95	Taspell	12.95
Gunshot Joystick	6.95	Hisoft 'C++' Compiler	34.95	Tascopy	10.95
DMP 2000 Ribbons	5.50	Pascal 80	34.95	Tasprint	10.95
PCW 8256 Ribbons	5.75	Caxton Cardbox	52.95	Office Mate	15.50
Single 3" Disc	3.95	Supercalc 2	42.95	Office Master	21.95
Box 10 CF2 Discs	35.95	Hisoft Devpac 80	34.95	Mini Office II	15.95
Spare Disc Cases (M4)	0.25	Cracker 2	43.95	Pitman Typing Tutor	10.95
SSA Speech Synth 464	26.95	Dr Draw	43.95		
DK Tronics Light Pen	25.95	Dr Graph	43.95	BOOKS & MANUALS	
64K Expansion 464	45.95	Isnsyst Crash Course	21.95	Concise Basic Spec	16.95
464 Monitor Ext Leads	6.50	Isnsyst Two Fingers	21.95	Concise Firmware Spec	17.50
6128 Monitor Ext Leads	7.50	Touch & Go	20.95	The Amstrad CP/M Plus	12.95
				As Above – Loose Leaf	18.95

EPROMS		EPROMS	
Maxam (machine code ass/diss)	34.95	Transmat – Pride	17.95
Protext (word processor)	34.95	Oddjob – Pride	17.95
Utopia (utility rom)	25.95	Discpower (utility rom)	17.50
Prospell (spelling checker)	29.95		
Promerge+ (mail merge)	29.95	Rombo Rom Board (holds 8 roms)	33.95

LABELS: Fanfolded – 1 across x 1,000 OUR PRICE £6.25
2 across x 2,000 OUR PRICE £10.95

ALL PRICES INCLUDE POSTAGE, PACKING & VAT IN THE UK
OVERSEAS ORDERS WELCOME – PLEASE WRITE FOR EXPORT PRICES
WRITE FOR A FREE FULL PRICE LIST – LATEST ON PRESTEL *25888
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

RSD CONNECTIONS LTD

MONITOR LEADS

Fidelity (Scart) to: BBC/QL/Commodore/Sony/ Spectrum 128/Amstrad	£4.95
Microvitec to: BBC/QL/ Spectrum 128/Amstrad	£2.50
Ferguson to: BBC/ Comm. 64/MSX/QL/ Spectrum 128/Amstrad	£2.50
Hitachi to: BBC/Comm. 64/QL/ Spectrum 128/Amstrad	£2.50
Sony/Kaga to: BBC	£5.95
Green screen to: Comm. 64/BBC	£2.95
Green screen to: QL	£1.50
Green screen to: Comm. 128	£4.95
Phono to Phono	£1.25
Philips to: BBC/Comm. 64	£2.95

IDC AMPHENOL

36-way plug	£4.95
36-way socket	£5.95
36-way plug (solder type)	£4.95

BBC DISK DRIVE LEADS

Dual disk drive power lead	£4.50
Dual disk drive lead 1m	£10.25
Single disk drive power lead	£2.75
Single disk drive extn. lead 1m	£7.25
Disk drive extn. lead 1m	£7.25
	£2.75

CASSETTE LEADS

BBC to cassette	£2.25
DRAGON to cassette	£2.20
SPECTRUM to cassette	£1.25
BBC to Acorn cassette	£2.25
	£2.50

PRINTER LEADS
ALL 1 METRE LENGTH

BBC	£9.95
BBC serial	£8.95
	£10.75
MEMOTECH	£12.75
EINSTEIN	£12.75
IBM PC	£12.75
SPECTRUM interface One to RS 232	£9.75
MSX	£13.95
APRICOT	£15.20
DRAGON	£9.95
QL	£10.75

ANY COMBINATION OF LEADS MADE TO ORDER

AMSTRAD EXPANSION PORT EXTENSION LEADS

NEW!	
6" Single F to m	£10.50
Double F to 2M's	£14.75
Suitable for 664 & 6128	
The easy way to connect your add-on's	

AMSTRAD MONITOR EXTENSION LEADS

To 464. 1m.	£6.50
To 664 & 6128	£7.50

AMSTRAD PRINTER LEADS

1 metre	£10.75.
2 metres	£12.50

AMSTRAD 2nd DRIVE LEAD

Suitable 664 & 6128. 1m	£6.95

AMSTRAD 8256

1m. Printer Extn. lead	£9.50

AMSTRAD CASSETTE LEAD

1m. 5-pin to 3-Jack	£2.20

MISCELLANEOUS

TV Aerial Leads	
1.2m	£1.25
2m	£1.50
3m	£1.75
4m	£2.00
'Y' piece Switched TV Splitter. TV & Aerial leads plugged in without loss of signal	£1.95
Spectrum Power Supply replacement lead	£2.50
TOP QUALITY C15 Computer Cassettes	35p each
Boxes of 10	£3.00

AMSTRAD RS232

PRINTER/MODEM CABLES 1m	
RS232 F to F	£10.95
RS232 M to F	£10.95
Amstrad to Nightingale	£8.95

PCW PRINTER LEAD

From Interface to Centronics Printer 1.5m	£15.20

IDC D CONNECTORS

	Male	Female
9-way	£2.70	£3.20
15-way	£3.20	£3.70
25-way	£3.80	£4.45
37-way	£5.90	£6.80

RIBBON CABLE (Price per ft)

	Grey	Rainbow
9-way	.13	.24
10-way	.15	.28
14-way	.18	.32
15-way	.20	.36
16-way	.22	.40
20-way	.30	.50
24-way	.36	.60
25-way	.40	.65
26-way	.45	.70
34-way	.60	.80
37-way	.65	.85
40-way	.70	.90
50-way	.95	£1.25
60-way	£1.10	£1.40
64-way	£1.15	£1.50

AMSTRAD JOYSTICK SPLITTER



NEW . . .
Play with a friend! Splitter enables 2 Joysticks to be used independently. **ONLY £6.95**

CONNECTORS IDC

	Card Edge	Trans PCB	2 Row Socket
10-way	£1.20	£0.85	£0.80
14-way	-	-	£0.90
16-way	£1.60	£1.20	£1.00
20-way	£1.90	£1.35	£1.20
26-way	£2.40	£1.60	£1.45
34-way	£3.10	£1.95	£1.60
40-way	£3.40	£2.00	£1.85
50-way	£3.85	£2.25	£2.00
60-way	£4.80	£2.60	£2.25

D CONNECTORS

Solder	Bucket	Male	Female
9-way		.75	£1.00
15-way		.95	£1.50
25-way		£1.50	£1.90
37-way		£2.40	£3.25

HOODS .95 .

TRADE ENQUIRIES WELCOME

75p P&P IN UK. Access & Visa accepted. Add 15% VAT to all orders
Cheques made payable to
RSD Connections Ltd, Dept ACU12, PO Box 1, Ware, Herts.
Tel: 0920 5285/66284

THE AWARD WINNING

GRAPHIC ADVENTURE CREATOR

A Crash Smash

Gold Medal Award

An Ace Tix Accolade

Will change the face of the adventure software market.
AMSTRAD ACTION

THE ANSWER TO YOUR PRAYERS!
C&VG

A very clever utility . . . very easy to use.
KEITH CAMPBELL, COMMODORE USER

Highly recommended.
ACORN USER

A very impressive and sophisticated adventure generator.
SINCLAIR USER

Now everyone can write professionally illustrated adventure games.
The Graphic Adventure Creator – THE adventure writing utility of the eighties.

⚹ Unleash the Power of your imagination ⚹



AVAILABLE AT ALL LEADING RETAILERS or direct from:
INCENTIVE SOFTWARE LTD.,
2 Minerva House,
Calleva Park,
Aldermaston,
Berkshire RG7 4QW.
Telephone: (07356) 77288.

PLEASE RUSH ME (1st Class Postage FREE)
THE GRAPHIC ADVENTURE CREATOR
Tape £22.95 ☐ **Disc £27.95** ☐

Winter Wonderland graphic adventure . . . . . £7.95 ☐
Apache Gold (Except BBC B) . . . . . £7.95 ☐
The GAC Adventure Designer Pad . . . . . £7.95 ☐
SPECTRUM ☐ COMMODORE 64 ☐ AMSTRAD CPC ☐
BBC B ☐ GAC extra information – free with any order ☐

I enclose Cheque/P.O. for £ _____
or please debit my credit card No. _____
Name _____
Address _____
_____

SOFT INSIGHT (DISCOUNT SOFTWARE)

ALL PRICES INCLUDE FREE FAST DELIVERY IN THE U.K. ONLY. PLEASE ADD 70P PER TAPE ON EUROPEAN ORDERS AND £1.00 PER TAPE ELSEWHERE.
New titles arriving every day, please ring for details
Access orders/enquiries tel: 01-305 0521.

AMSTRAD CASSETTES	RRP	Our PRICE		RRP	Our Price		RRP	Our Price
Price of Magik	9.95	7.95	Graham Gooch's Cricket	9.95	7.95	Theatre Europe	14.95	12.00
Fourth Protocol	14.95	12.00	Stainless Steel	9.95	7.95	Spy Vs Spy	14.95	12.00
Paperboy	9.95	7.95	Kung Fu Master	9.95	7.95	Fighter Pilot	14.95	12.00
Starstrike II	9.95	7.95	Desert Fox	9.95	7.95	Cyrus II Chess	14.95	12.00
Frost Byte	9.95	7.95	Night Games	9.95	7.95	3D Grand Prix	14.95	12..00
L'Affair Vera Cruz	9.95	7.95	Johnny Reb 2	9.95	7.95	Raid	13.95	12.00
After Shock	9.95	7.95	Sai Combat	7.95	6.20	Pyradev	29.95	22.95
Trivial Pursuit	14.95	12.00	Pro Tennis	8.95	7.00	6 Computer Hits Vol. 2	14.95	12.00
Powerplay	9.95	7.95	International Karate	6.50	5.70	Strike Force Harrier	14.95	12.00
Dan Dare	9.95	7.95	Cauldron 2	8.95	7.00	Green Beret	14.95	12.00
Rebel Planet	9.95	7.95	Nexor	8.95	7.00	V	14.95	12.00
Tobruk	9.95	7.95	Dynamite Dan 2	8.95	7.00	Strangeloop+	14.95	12.00
Batman	8.95	7.50	Lazer Genius	14.95	12.95	Tank Commander	14.95	12.00
Bomb Jack	8.95	7.50	**DISC BASED SOFTWARE**			Zoids	14.95	12.00
Tomahawk	9.95	7.95	Fourth Protocol	17.95	13.95	Heavy on the Magick	14.95	12.00
Green Beret	8.95	7.50	Vera Cruz	14.95	12.00	Equinox	14.95	12.00
Colossal Adventure	9.95	7.95	Trivial Pursuit	19.95	15.95	Single CF2DD 3" Disc		6.50
Adventure Quest	9.95	7.95	Johnny Reb II	14.95	12.00	Box of 10		60.00
Dungeon Adventure	9.95	7.95	Dan Dare	14.95	12.00	**PCW 8256 SOFTWARE**		
Snowball	9.95	7.95	Int. Karate	12.95	10.00	Tomahawk	19.95	15.95
Lord of Time	9.95	7.95	Desert Fox	14.95	12.00	French Mistress	19.95	16.95
Return to Eden	9.95	7.95	Tobruk	14.95	12.00	German Master	19.95	16.95
Emerald Isle	6.95	5.40	Monopoly	14.95	12.00	Spanish Tutor	19.95	16.95
Red Moon	6.95	5.40	Cluedo	14.95	12.00	Bridge Player	19.95	15.95
Fighter Pilot	9.95	7.95	Mini Office	19.95	15.95	Fairlight	19.95	15.95
Scrabble	9.95	7.95	Spin Dizzy	14.95	12.00	Superclac 2	49.95	44.95
Monopoly	9.95	7.95	Fairlight	14.95	12.00	DR Graph	49.95	44.95
3D Grand Prix	9.95	7.95	Ping Pong	14.95	12.00	DR Draw	49.95	44.95
Battle of Britain	9.95	7.95	Tau Ceti	14.95	12.00	Hitch Hikers Guide to the Galaxy	24.95	22.95
Elite	14.95	10.00	Get Dexter	14.95	12.00	3D Clock Chess	19.95	15.95
Worm in Paradise	9.95	7.95	Doomsday Blues	14.95	12.00	C Compiler	49.95	44.95
Theatre Europe	9.95	7.95	Way of the Tiger	14.95	12.00	Pascal MT/+	49.95	44.95
The Music System	14.95	12.00	Tomahawk	14.95	12.00	Card Box	99.99	90.00
Winter Games	9.95	7.95	Bounder	14.95	12.00	Touch-N-Go	24.95	21.95
Rescue from Fractulus	9.95	7.95	Batman	14.95	12.00	Batman	14.95	12.95
Spin Dizzy	9.95	7.95	Single CF2 3" disc		4.50	G. Gooch's Cricket	19.95	12.95
Turbo Esprit	8.95	6.71	Box of 10		40.00	Jewels of Darkness	19.95	12.95
Spitfire 40	9.95	7.95	Masterfile	29.95	24.95	Lord of the Rings	24.95	19.95
Tau Ceti	9.95	7.95	Mastercalc	29.95	24.95	Blackstar	14.95	12.00
Lazer Basic	14.95	11.95	Graphic Adv. C'tor	24.95	19.95	SAS Assault	14.95	12.00
Lazer Compiler	19.95	15.95	Sold A Million	14.95	12.00	Scrabble	19.95	15.95
Mini Office II	15.95	12.95	Computer Hits 6	14.95	12.00	Bounder	15.95	12.95
Way of the Tiger	9.95	7.95	Dun Darach	14.95	12.00	*DENOTES NEW TITLES THAT ARE AVAILABLE IN THE NEAR FUTURE. PLEASE RING FOR CONFIRMATION.		
Get Dexter	9.95	7.95	Marnsport	14.95	12.00			
Nick Faldo's Golf	9.95	7.95	Battle of Britain	14.95	12.00			
Jack the Nipper	9.95	7.95	Scrabble	14.95	12.00			

WHY NOT COME AND PICK UP YOUR SOFTWARE PERSONALLY FROM OUR DISCOUNT SHOP AT 3 STATION CRESCENT, WESTCOMBE PARK, BLACKHEATH, LONDON SE3 7ER. RIGHT OUTSIDE WESTCOMBE PARK RAILWAY STATION ON THE SOUTHERN REGION. OPEN ON SATURDAYS ONLY FROM 10.30 'TILL 6.00PM.

3 STATION CRESCENT WESTCOMBE PARK BLACKHEATH SE3 7ER.

MICROPOWER

AMSTRAD ATARI CORN

FOR YOUR COMPUTERS

YORKSHIRES LEADING AMSTRAD SPECIALIST

PCW8256/8512

- ★ Largest selection of business software
- ★ User training courses
- ★ Free starter pack (worth over £50) with every PCW8256 bought
- ★ Call and see us for help and advice

COMPUTERS

PCW 8256	399.00+VAT
PCW 8512	499.00+VAT
CPC 6128 Colour	347.78+VAT
CPC 6128 Green	260.83+VAT

PRINTERS
EPSON, CITIZEN, NEC, SAMLECO, JUKI etc.

ACCESSORIES
LIGHT PENS, RS232, PCW MEMORY UPGRADES, PRINTER RIBBONS.

SOFTWARE
SAGESOFT, NEWSTAR, MAP, AMSOFT, PLUS LARGE SELECTION OF GAMES.



Northwood House,
North Street, Leeds 7.
Tel. (0532) 458800

VISA

TYPESETTING AMSET

£199.98 + VAT

For the first time
a major suite of Typesetting software
is available to the Amstrad user.

PROFESSIONAL typesetting.
Package includes H & J, kerning, indents, multicolumn, depth count, character count, rules.

20 FOUNTS from 4½-72 point.
Digital setting on Linotron 202N.

QUALITY
Typeshare - The nation's biggest bureau service

TUTORIAL
comprehensive step by step tuition is included.

EXPANSION

- AMCOM Error free comms.
- AMCOUNT Counting Ad. Pack.
- AMAT Advanced Typography.

TRIAL OFFER
£40.00 +VAT for trial pack.

'Phone for brochure

Typeshare

Typeshare Ltd, Alan House, 55-59 Saffron Hill Hatton Garden, London EC1N 8QX. 01-405 7937.

CREATE PICTURES . . .



On CPC464/664/6128 using the superb Trojan CAD-master light pen and software with all the features plus reliability.
Full colour masterpiece or simple black and white line drawing, you are limited only by your imagination.
*Freehand write/draw *Circle , box, triangle, line, banding, rays *16 pens *27 colours *copy *zoom *mag. factor *text *fill *printer dump *save screen to tape/disc etc all this and more for only **£16.95** (inc p&p UK)

RECEIVE COLOUR TV PICTURES



on colour monitors for CPC 464/664/6128
Convert your colour monitor to a super full feature, 4 channel colour TV with the DK-TV Tuner. No modifications or extra cables. Simple to install just plug up, connect up and tune in. TV/Computer switch, no need to disconnect. Tuning, colour, volume, brightness controls, aerial socket, fits under monitor. Excellent crisp picture. Amazing value at only **£69.95** (plus £2 p&p). Get yours from
COMPUTER CUPBOARD

Freepost, LONDON W5 1BR

Please supply _____ @ £ _____

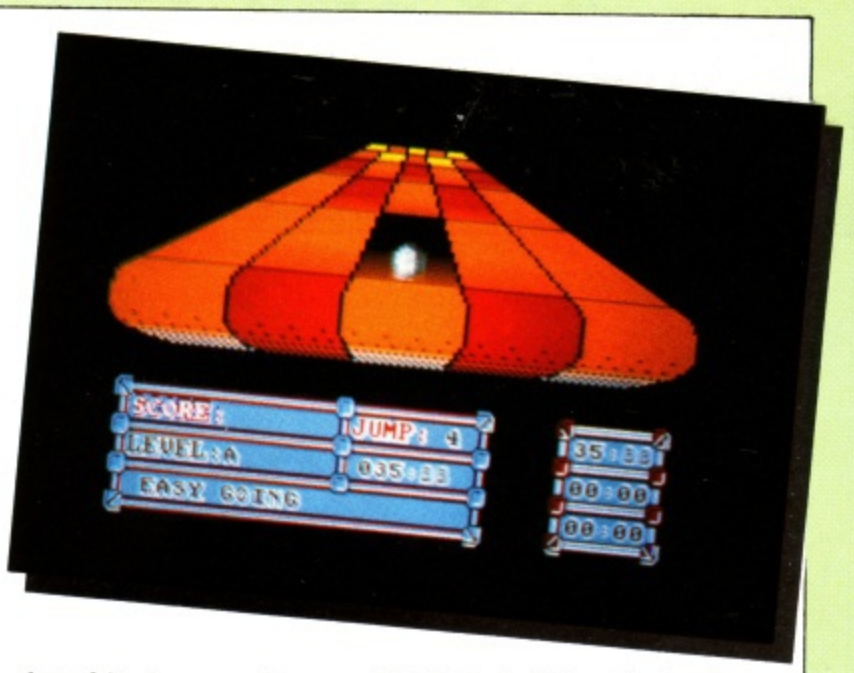
Name _____

Address _____

_____

_____ Postcode _____

TRAILBLAZER



Ever wanted to be a footballer for Astral Villa? Well, with Trailblazer your wildest surreality can come true. A simple concept really, and not entirely original. Take a bouncing football and a multi-surfaced grid stretching into the far distance, and avoid the holes. Having described the game in 44 of the allocated 500 words, I suppose I should fill in the details a bit.

To the accompaniement of a twee little tune which you only really notice when it's driven you completely bonkers, you have to guide the progress of this football down a grid. This is composed of squares and holes – hit a hole and plummet through the nether reaches of uncharted space. No "Can I have my ball back please mister?" here.

Even where the grid is solid the texture and surface substance varies. Some colours are sticky, some extra-bouncy, some various shades of speed.

As the idea is to whizz down this grid as fast as possible while maintaining the control needed to miss the voids you have to be able to predict the effect of those patches on your ball's ballistics. It's uncannily like driving a motorbike on an uneven road with oil patches . . .

Control is by joystick (recommended) or keyboard. Pushing the stick forwards accelerates progress and left and right move the ball in those selfsame directions. Fire imparts that extra bounce needed to hop over holes.

There are major discontinuities lying in wait. To cross these a seriously precise stab on the fire button or spacebar is needed. As the game progresses, the ratio of space to surface gets greater.

And then the islands of something floating in nothingness start to get staggered, so bouncing sideways is called for. Look, nobody said it would be easy. And of course there's always those sticky patches to look for.

There are 14 distinct stretches with names like Shriggle's Shriggle and Hacker's Evil Hole. To get past each one you have to learn their little niceties like the back of your hand. By the way, would anyone actually recognise the back of their hand in a manual identity parade? Just a thought . . .

Gremlin has a high regard for your sanity (gibber), so a practice mode is thoughtfully provided where you can try any three bits (or even the same bit thrice) without losing lives.

So it's possible to sample the delights of the utterly, completely, massively impossible bits without having to conquer the merely excruciating parts.

And that's without mentioning the really depraved depths those guys from north of Watford can sink to. Like switching joystick directions on the fly. Or plonking an incongruously easy bit in to lull the senses and hide the yawning chasm that lurks just over the horizon.

Presentation is of a singularly high standard. You can even detect the same hands at work that created Jack the Nipper at work, despite the completely different type of game.

And then there's the Worlds Longest Scrolling Message. I see no reason to disbelieve this claim. It manages to mention Boots, Frank Bruno, men in white coats and the reason why the Options menu starts at option 3. And it goes on, and on, and on . . .

Speed merchants and seekers after thrills should have a look at this one.

Author: Gremlin Graphics
Price: £9.95

Nigel

The Ed has banned this game from the *ACU* office: When it was running on the 464 no one got any work done. *(So – what's new? – Ed).* Now it is an after hours only job.

This has all the ingredients of a good game. Excellent design, fast action and 100 degree proof addiction. The programmers have packed a lot into this game. In addition to the long and winding road they have a massive message and a super little tune.

This deserves to do well.

18/20

Liz

If you want to compare this game to something (and some people love to do just that) then Trailblazer is a version of Bounder with a centre forward's view of the ball. There is more palette switching going on here than the mind can comfortably cope with.

The action is fast, furious and extremely addictive. I used not to rate Gremlin but it's produced such classics of late that they are shooting up my list of best software houses.

19/20

Colin

"You'll like this one", said the Ed as he pressed another disc into my cynical palm. And I do. It's great. Solid planes of colour, an absolutely maddening game idea, and totally moresome. There are some truly evil twists hidden away. Gremlin Graphics is a fitting moniker indeed. And now if you'll excuse me, I've got a Cul-de-Sac to negotiate.

18/20

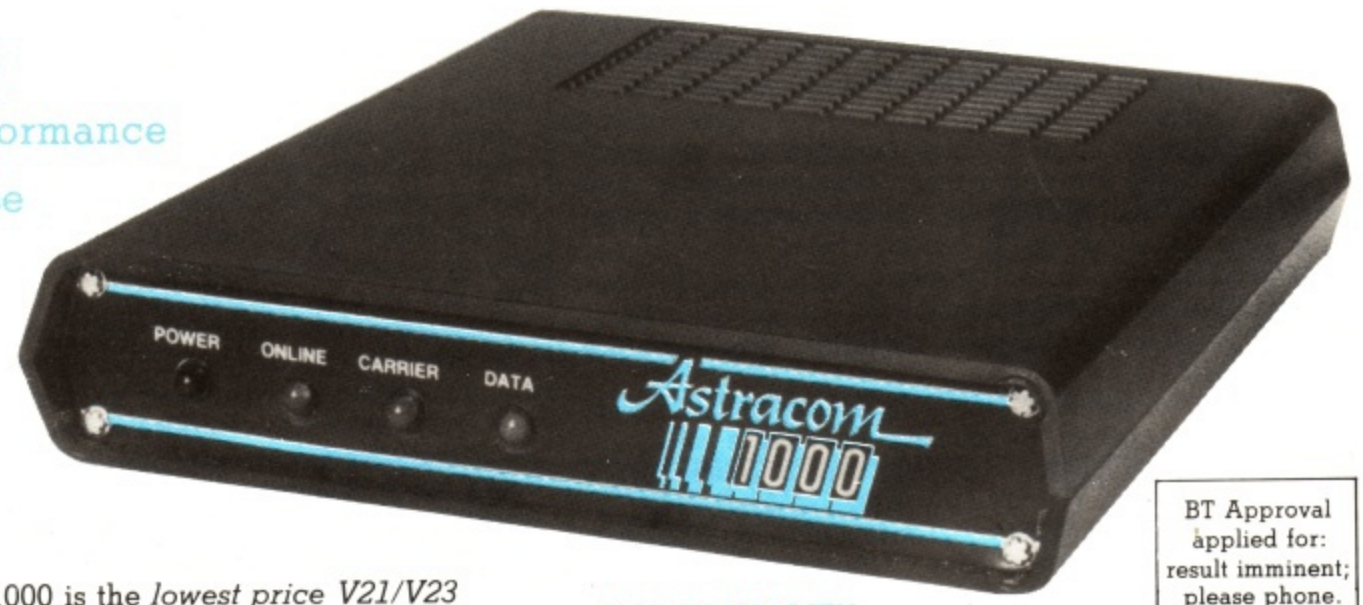
A COMPLETE COMMUNICATIONS SYSTEM FOR THE AMSTRAD PCW AND PC COMPUTERS

Astracom have developed a complete communications system (including comprehensive comms. software) for the Amstrad PCW and PC computers based upon the Astracom 1000 modem.

THE Astracom 1000

We could simply say that the Astracom 1000 is a multi-standard intelligent auto-dial auto-answer modem with centronics printer controller facilities. But we think that you would much rather know that it has just the three essential ingredients that you would want in your modem;

* Low Price
* High Performance
* Ease of use



BT Approval applied for: result imminent; please phone.

THE PRICE

The Astracom 1000 is the *lowest price V21/V23 intelligent modem available in the U.K.* today.

THE PERFORMANCE.

The Astracom 1000 provides the *complete answer* to your communications requirements.
It has all the major international FSK modem modes;
300/300 baud CCITT V21 Originate
300/300 baud CCITT V21 Answer
1200/75 baud CCITT V23 Main channel
75/1200 baud CCITT V23 Back channel
- *enabling communication with all the major online services* such as Prestel, Micronet, Easylink, BT Gold, Microlink, One-to-One, etc.
It has its own *high efficiency command protocol* in addition to the conventional Hayes protocol.
It has *auto-dial and auto-answer* facilities for convenience and efficiency.
It has an inbuilt centronics *printer port* which enables the direct printout of incoming modem data.
It will have a *low-cost upgrade* route to the PSK modem modes *V22 and V22bis* (1200 and 2400 full duplex!)

THE SIMPLICITY

The Astracom 1000s onboard microcomputer controls all modem and printer functions, under software commands from your computer. The Astracom 1000s *auto-scan* feature puts the modem into the correct mode to respond to the incoming carrier.
We also provide comms software packages that have been specifically tailored for use with the Astracom 1000. The use of this software, combined with the smart features of the Astracom 1000 (such as auto-scan) provides a complete and very easy to use 'plug-in-and-go' system.

Astracom 1000 = £145 + VAT
Serial cable = £8 + VAT
Amstrad PCW comms. software = £39 + VAT
Amstrad PC comms. software = various packs
Low-cost s/p interface for PCW = Price TBA
Astracom 1000 V22 upgrade = £100 + VAT

SPECIAL PACKAGE OFFER £183 + VAT.
PCW complete communications system;
Astracom 1000, cable & comms software.

Astracom Complete Communications Systems are also available for a wide range of modern computers e.g. Atari ST, BBC, QL etc.

Phone our 24hr hotline 0792 473697 anytime for a free datasheet or advice, or order now, cheques payable to Astracom, 13 Beechwood Road, Uplands, Swansea SA2 0HL for fast delivery.

GUZZLER



Just when computer users the country over were getting used to the idea of the mouse as a control device, Players employ a rodent as star in a maze game. At least I assume it's a rodent – Greedy Guzzler is never precisely identified.

Our mouse meanders through a maze in search of mouth-watering munchies, usually items of fruit, on which to gorge. It gets strategic too – he has to get keys to unlock the doors behind which the delectable dainties lie.

As any conscientious consumer of calories will confess, over indulgence has its drawbacks. One tends to expand, enlarge, broaden – in short, get fat. This fate befalls our hero too, as after a good guzzle he just cannot squeeze through some of the gaps his previously sylph-like body used to traverse with ease.

This wouldn't matter so much, except that the maze in which Guz tends to the inner mouse is swarming with flocks (herds? shoals?) of Frobblies. You might expect the poor mouse to get the frobblies after eating all that fruit but it's even worse than that.

These evil beings have him on the run, for just one touch and he's had his last supper.

Fortunately (exciting, isn't it?) he has some bombs about his person. A remarkable mouse indeed. Just one blast from Guz's grenades can knock all the Frobble from a Frobblie for at least 10 seconds, during which time the greedy one can make good his escape.

That still leaves the problem of the obesity, for with all that adipose tissue aboard he can't bend down to get a key to get more food. And he's only got three bombs to start with anyway.

This is where Deflator Dennis (honest!), the Dieters Delight (I made that bit up) comes in handy. This tenticular terror wanders round the perimeter of the maze. Should Guz come into contact with him while fat the extra ounces will just melt away, leaving the rodent slim once more and able to go about his digestive doings.

But if the encounter occurs when Guz is thin, then it's just another way for the mouse to meet his maker. See, I told you it got strategic. And that's about the gist of it. Whoops, nearly forgot the last alliterative animal – Bonus Barry.

BO Baz pops up from time to time, bearing a letter from the word Guzzler. The first time he appears, the letter is G, next time it's U, and so on . . . almost as exciting and imaginative as writing for *ACU*.

Should Guz meet Baz, the score (yes, there's even a score) leaps by 2000. If he fries a Frobblie with his bombs there's an extra 1000 in it for him. And guess what happens when a screen is eaten clean of comestibles . . . right. Another one, with a different maze, appears to keep whiskers atwitching.

And the whole thing's set to toetapping ragtime music. Quite delightful.

So, if you're a frustrated psychologist (most of them are) with a yen for behavioural studies who can't afford the kit for mice and mazes, watch 321. On the other paw, you could always give this game a trundle.

Author: Players
Price: £1.99

Nigel

The worst thing about Guzzler is the name, it puts you off before you start. Still the loading screen makes up for that. Roland Rat eat your heart out. This is a game of timing and memory. Maybe after a few weeks I'll tire of this one but most games don't even get the chance.

The music is excellent and the gameplay very well implemented. Nice one, Players.

18/20

Liz

Look this is getting ridiculous. Readers are going to think that I've got a vested interest in Players if I keep giving their programs such good reviews. Guzzler may not have 30 frames a second solid shapes rotating flicker free with millions of other things going on but it is playable. So the game looks for all the world like PacMan. So it is only a budget game. So the sprites are tiny.

So what? It is fun to play, you can learn patterns and have to time things so that you spend as much time thin as possible. Brilliant.

19/20

Colin

Golden Oldie time this month. Tempest, and now PacMouse. One look at those thin blue walls, bumbling sprites and edible blobs and the arcadist from way back when will feel right at home. Only the maze has been changed to protect the innocent (easier to spell than plagiarist). But to be honest, the game's strategy and details are a little different from PacPerson.

It's still a good bet that if you liked PacMan, you'll like this, and if not then you won't. Me, I quite liked that, and I quite like this. P.S. The music's good.

16/20

Free registration to MicroLink in association with TELECOM GOLD

RS232C Serial Interface



ONLY £59.95 inc VAT

COMMSTAR II

AMSTRAD



ONLY £99.95 inc VAT

V21/23 Modem

BY PACE

AVAILABLE FROM AMSOFT USER CLUB TEL: 0783 673395
AND GOOD AMSTRAD COMPUTER STOCKISTS

PRESTEL

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

S/S IND S/2982/3/G/500472

micronet 800

* Micronet 800 is the trading style of Telemap Ltd. and British Telecom. Prestel and the Prestel symbol are trade marks of British Telecommunications.

THE BBD DUST COVER COLLECTION

Tailored in nylon fabric that has been treated with an anti-static inhibitor. Attractively finished with contrasting piping. Can be washed and ironed.

PCW 8256/8512 £11.95
3 piece set in soft grey. Monitor and printer piped in green. AMSTRAD PCW hot foil printed on keyboard.

PC 1512 £8.50
2 piece set in ivory coloured nylon. Monitor piped in maroon. AMSTRAD PC hot foil printed on monitor and keyboard covers. Please state colour or mono screen.

CPC 6128/664/464 £7.50
2 piece set in dark grey nylon piped in red. AMSTRAD CPC hot foil printed on keyboard. Please state whether colour or green monitor.

PRINTER COVERS TO MATCH
A range of covers for over 200 printers to match any of the above covers eg. Amstrad 2000 and 3000, Brother, Canon, Epson, Mannesmann, Star, Ricoh, Smith-Corona. **Prices start from £4.50.**

Please make cheques payable to:

BBD DUST COVERS

The Standish Centre, Cross Street
Standish, Wigan WN6 0HQ
Telephone: 0257 422968

Available in the Southern Hemisphere from TECH-SOFT
324 Stirling Highway, Claremont 6010
West Australia. Tel: (09) 385 1885

CHRISTMAS SPECIAL OFFER

AMSTRAD	PRICES INCLUDE VAT, P&P	AMSTRAD
SPECTRUM 128+2 (Giftpack)		£149.00
SPECTRUM 128+2		£139.00
*CPC6128 (Colour)		£350.00
*PCW8512		£515.00
*PCW8256		£415.00
CPC6128 (Green)		£270.00
CPC464 (Colour)		£265.00
CPC464 (Green)		£165.00
DMP2000 (Printer)		£148.00
DDI-1 (Disc Drive)		£144.00
FDI-1 (Disc Drive)		£90.00
FD-2 (Disc Drive for 8256)		£135.00
3" Floppy Disc (Box of 10)		£38.00
3" Floppy Disc (Single)		£4.00
JY-2 (Joystick)		£9.00
RS232 Interface (464-664)		£44.00
RS232 Interface (8256)		£55.00
Mini Office II Disc (for 464, 664, 6128)		£15.50
Masterfile III Disc (for 464, 664, 6128)		£32.00

ALL AMSTRAD ACCESSORIES AVAILABLE
MORE THAN 500 SOFTWARE TITLES IN STOCK.

WE SPECIALISE IN AMSTRAD HARDWARE & SOFTWARE

PLEASE RING FOR DETAILS OR SEND AN S.A.E. FOR OUR CATALOGUE. OVERSEAS CUSTOMERS WELCOME.
MAIL ORDER CUSTOMERS PLEASE MAKE CHEQUES PAYABLE TO:

NEWCROWN COMPUTERS LTD
98-100 HIGHTOWN ROAD
LUTON, BEDS. LU2 0DQ (U.K.)
Tel: (0582) 455684
(* Please add £10 for Delivery)

The Cirkit Prestel Link



Enter the world of data communication with the Cirkit Prestel Link.
A complete package for your CPC computer for only £35.99
Full viewdata standard 16 colour, dynamic frames.
Access to BT Gold and Bulletin boards with terminal mode.
Use the RS232 compatible interface with your own programs -extensive documentation provided.
Reliable BT approved acoustically coupled modem. 1200/75 and 1200/1200 half duplex.

£35.99 Software on tape
£43.99 Software on disc

Download Telesoftware! Available now. Enhanced software that provides no only Telesoftware downloading but also ASCII and XMODEM file transfer, tex dump plus many other features.

£14.95 on tape **£19.95** on disc
All prices inc. VAT and P&P.

Cirkit Distribution
Park Lane, Broxbourne Herts EN10 7NQ Tel. (0992) 444111

LOAD &RUN

THE MAIL ORDER AMSTRAD SPECIALISTS
Send your Cheques/POs (Sterling only)
LOAD & RUN, DEPT ACU2 P.O. BOX 123
DARTFORD DA1 5AA

RING (0322) 73128 FOR ENQUIRIES + HOT LINE ORDERS

NOW IN

THE PROTO 3" DISC BOX
RRP £6.99
OUR FANTASTIC PRICE!! £5.75!!

3" AMSOFT DISCS NOW ONLY £35.95 for a box of 10

ALL PRICES INCLUDE P&P + VAT
E.&O.E.



VIDI ©

THE Video Digitiser/Frame Grabber
For CPC 464/664/6128

Grabs Complete Frames from Video or Camera

Grabs in Mode 1 or Mode 2
Updates Amstrad Screen in 0.3 seconds
Digitises 16 shades in Mode 0 in under 4 seconds
Full Software control of
16 Separate Levels of Contrast and Brightness

ALSO: ROMBO ©

THE 8 – Rom Box That fits ALL CPC Machines

£34.95 inc p&p from:

Rombo Productions, 62 Meadowbank,
Ladywell, Livingston, West Lothian, EH54 6EL
Tel: (0506) 39046

ALL PRODUCTS IN STOCK. FULL REFUND IF NOT DELIGHTED

Leigh Computer Systems

75 CROSS STREET
SALE
MANCHESTER
Telephone: 061-905 2144
0455 612139

MAIN AMSTRAD DEALER

Largest range of computers in Manchester area

Best prices around on all equipment eg. BBC's, Atari's, Cad/Cam systems, printers, plotters, modems, interfaces etc.

SPECIAL OFFER - **Auto Dial Modem – Only £89.00 + VAT**

The Amstrad Software Exchange

Write for FREE programs and details of our range of Public Domain Software running on your Amstrad. New volumes every 2 months. Send SAE 23x16cm

Special offers for the Amstrad CPC464/664/6128
Joystick 8 way and fire **only £2.50,** ROM card (un-cased) **£10,** RS232+Centronics+Sideways ROM card **£69.95,** Centronic Cable **£10,** Serial Cable **£8.50,** 464 Expansion cable **£15** Other cables & connectors, memory upgrade to the PCW8256, Serial i/f for PCW, as well as PCW8256 and PCW8512.

Also 3", 3.5" and 5.25" Disk drives, Philips Monitors and modems. 3.5" and 5.25" diskettes

3" Compact Floppy disks CF2
pack of 5 £19.50 box of 10 £34.95
All prices include VAT and postage

INFOTEK Design Limited
Unit I(c), Cavendish Courtyard, Sallow Road, Corby, Northants NN17 1DZ Tel: (0536) 201743

ARE YOU IN A RUT??

Then climb out by learning to use your **AMSTRAD** to it's full potential with our unique step-by-step **Programming and Applications Courses** designed for any age or interest.

If you have had enough of playing games or typing in endless program listings that don't run there's a **MICROWISE** correspondence course designed for **you.**

* For CPC464/664/6128
* No Previous Experience Required
* Beginners & Childrens Courses
* Texts & Software Supplied
* Coursework Graded to Suit
* Individual Tutor Support

Send coupon, NO STAMP REQUIRED, TO:

MICROWISE UK
FREEPOST Colchester, CO3 4BR.

Name .....

Address .....

.....

.....

ACU12

PRINTER STAND FOR AMSTRAD 8256 AND 8512

NEW LONG AWAITED PRINTER STAND



Now you can make printing so much easier and release valuable desk space with this superb new printer stand designed specifically for the Amstrad 8256 & 8512 printers.

The printer sits perfectly on top and there's plenty of space beneath to store paper, accessories and even the computer keyboard.

Manufactured in the U.K. and made of sturdy 6mm steel, the stand is finished in pale grey PVC to match the computer and keyboard.

Available now at the special introduction price of £9.95 inc postage and packing. (Allow 14 days for delivery).

CTC Ltd, PO Box 4, Knebworth, Herts, SG3 6EP

ONLY £9.95 INC. P&P

Please send me _____ printer stands at £9.95. I enclose cheque/PO payable to CTC Ltd.
Phoned orders with Access and Barclaycard to 0920 84561

Barclaycard Access No: | | | | | | | | | | | | | | | | |

Signature _____ Expiry date: _____

Name _____

Address _____

_____

To: CTC Ltd, PO Box 4, Knebworth, Herts, SG3 6EP

The Shape of Things to Come.....

All Prices Inc. VAT at 15%

Prices and Delivery–Subject to Availability

3" CF-2 Amsoft Microdisks

From the U.K.'s LARGEST Supplier

Indivually packed in Plastic Cases – Boxed in 5's or 10's

Only.... 5 BOX ~ £16.00 +£1 p&p / 10 BOX ~ Only.... £27.95 +£1 p&p

Bulk Order Discounts Too!!!

ALL Disks carry a LIFETIME Warranty

Prices Slashed!

Save £££'s Use CF2's as CF2 DD's Guaranteed Same Result! Save £££'s

Printer Ribbons for DMP-2000/3000 & PCW-8512/8256

Only... £4.95 each Post Free

Please Specify Printer

24 Hour Credit Card Order Line 0509-233893

Compumart

We've taken off...Our prices haven't!!

VISA Access

Please send Cheques/P.O.'s to...

Compumart · DEPT ACU · Unit 8 · Falcon Street · Loughborough · Leics · LE11 1EH

☎ 0509 262259

Despatch: Same Day on ALL orders Before 3pm Disks – Same Day 1st class post

Phone NOW for details of our NEW..... SENSATIONAL 'Software Store' on 'Softline' 0509 266322



PRE-SCHOOL, PRIMARY, JUNIOR

Education

By a Teacher. Tested by Pupils

Approved by Parents and Schools

For All AMSTRAD Computers. CPC and PCW

Cassette £6.50 Disc £11.00

SAE For Lists (Please indicate CPC or PCW)

ARC (ACU6) 53 Bentley Street, CLEETHORPES,
South HUMBERSIDE DN35 8DL. (0472) 699632

TELETEXT ADAPTOR

The Microtext adaptor converts your CPC464 664 or 6128 into a sophisticated Teletext Receiver. Giving you full colour text and graphics display of any of the hundreds of free pages from Oracle or Ceefax. You can save pages too! to disc or cassette, print them on your printer and even access them from your own programs.

PLUS Telesoftware – free software on teletext pages which the adaptor will load for you to save or run. Supplied with a manual, the adaptor is cased with a through connector, it fits neatly on the expansion port. A connecting lead goes to the 'VIDEO OUT' socket of any video recorder – this concept means no complex tuning procedures and saves you a great deal of money!

ONLY £69.95 inc P/P.

Please send cheques/POs to:

MICROTEXT

7 Birdlip Place, Horndean, Hants PO8 9PW
Telephone: (0705) 595694

BRIAN THURSTON

Locoscript Tuition

(Freelance Qualified Further Education Teacher)

In-house training
Small groups or individuals

Vacancies 2 day Residential Courses
at Exmouth Rolle College January
(s.a.e. for prospectus)

Brian T. Worts
18 Danby Terrace, Exmouth EX8 1QS
Tel: 0395 277496

LernLoco. UK Tutorial Disc £16.95
(Includes monthly competition for THE OWL'S STORY)

TempMate.AMS Transparent Overlay, Saves Time & Headaches, **£2.95**

ChaoTica: for Christmas: **£19.95**
Text Disc of Physical Party Games & Recipes for all ages
Creates unlimited bedlam and infuriates neighbours
Includes £500 SeekLoco (a hide-n-seek with the word processor)

✪ UNBEATABLE SOFTWARE FOR AMSTRAD 8256/8512/PC 1512 ✪

A FULL C COMPILER FOR ONLY £69.95

IN TOUCH supply a huge range (over 1000) of affordable software for the IBM PC & compatibles (including the new PC 1512)

EC0-C 'PROFESSIONAL' FOR AMSTRAD 8256/8512 ***SOLD OUT LAST MONTH!***
FULL C COMPILER • K&R C Syntax • All Data types & operators (except bit fields) • Super fast assembler & Linker • Full preprocessor with macros • CP/M BDOS/BIOS access • Over 100 library functions (Unix V7 compatible) • Romable Code • Manual • **All for only £69.95**

EC0-C88 v3.0 FOR AMSTRAD PC 1512 *** NEW * BEST VALUE ***
FULL 'DEVELOPMENT' COMPILER • All the above + • Prototyping • Enum & Void types • Structure Passing • CC & Make • 8087 Math support • Over 200 Library functions • (Many Sys V Compatible) • Romable code • Manual • **Only £69.95**

Send cheque with order to:
(add 15% VAT + £2.25 P&P)

IN TOUCH
FAIRFIELD HOUSE, BRYNHYFRYD, CAERPHILLY,
MID-GLAM CF8 2QQ
Telephone: (0222) 882334

AMSTAT AMSTRAD STATISTICAL AND MATHEMATICAL SOFTWARE

Fully available for BOTH PCW and CPC ranges

AMSTAT1 (V1.2!!) – means, s-devs, var, skew, kurt., 1-sample, 2-sample, and paired t-tests, 1-way-AOV inc. single/multiple conf. intervals, 2-way-AOV, correl'ns, regressions, histograms, scattergrams, transformations, file storage and retrieval, output to wordprocessor file, manual. Any number of variables to a total of 500 (+) data points.

AMSTAT2 – 27 nonparametric tests in 4 programs providing a "complete Siegel". Binom., Chisq. (3), Kolm-Smirn (2), Runs, McNemar, Sign, Wilcoxon, Walsh, Randomisation(2), Fisher, Median (+extension), Mann-Whitney, Wald-Wolfowitz, Moses, Cochran, Friedman, Kruskal-Wallis, Contingency, Spearman, Kendall, Kendall partial, Concordance.
"tremendous value" – Tony Kendle, Popular Computing Weekly, 8-14th May 1986.
"I now give it an unreserved recommendation . . . "Jo Stork, Business Computing with the Amstrad, July 1986.

AMSTAT3: FORECASTING
Business oriented mathematical and statistical software: Lin. and Polynomial regression, Trend and Seasonal Variation, Multiple Regression Analysis, Transformations, Exponential Smoothing, Adaptive Filtering. Graphic display, full printout, manual suited to immediate use and for teaching.

AMSTAT4: RESOURCE MANAGEMENT – LINEAR PROGRAMMING MODULE
General Purpose Linear programming + Specialised Transportation and Assignment variants. Capable of analysing and solving problems of sequencing, scheduling, blending, and allocation of scarce resources. 40 page manual, 18 worked examples.

The programs have applications in research of all kinds, education, sales, production planning, work and method study, financial planning, personnel, social work etc.

	CPC	PCW		CPC	PCW
AMSTAT1 v1.2	£25.95	£27.95	AMSTAT4	£25.95	£27.95
AMSTAT2 v1.0	£39.95	£39.95	AMSTAT 1+2	£49.95	£49.95
AMSTAT3	£25.95	£27.95	AMSTAT 1+2+3+4	£99.95	£99.95

All prices include P&P within U.K. Cheques, POs to

S. C. Coleman, 33 Leicester Rd, Ashby-de-la-Zouch, Leicestershire LE6 5DA.
Tel 0530 415919. (AMSTAT1 v1.1) for the CPC still available at old price)

24 hours



SIMPLE ACCOUNTS

Book-Keeping Made Easy For The Small Business
CPC464/664/6128 PCW8256/8512

- **Rapid Entry of Sales and Purchases**
- **Full Analysis of Income and Expenditure**
- **Constant Update of Creditors and Debtors**
- **Monthly and Year to Date Reports**
- **Quarterly Totals for VAT Returns**

"Most definitely this system removes most of the chore from doing the books, including the dreaded VAT" . . . CWTA, Dec. 1985.

Only £34.95 incl VAT

Detailed Program Specifications Available on Request

CORNIX SOFTWARE LTD.

Spirella Buildings, Bridge Road, Letchworth, Herts. SG6 4ET. Tel: 0462 682989

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
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. I enclose a cheque/PO, U.K. for £11.50/£15.50 (inc p&p). Outside UK add 50p; or, I enclose a large sae for free catalogue.

Name .....

Address .....

ASTROCALC (Dept A) 67 Peascroft Road
Hemel Hempstead, Herts HP3 8ER Tel: 0442 51809

O. J. SOFTWARE

FAST FRIENDLY SERVICE

ADVENTURE	Cass	Disc
Affair Vera Cruz	£8.50	£11.95
Lords Midnight	£8.50	£11.95
Doomdarks Revenge	£8.50	£11.95
Jewels Darkness	£11.95	£15.95
STRATEGY/SIMULATION		
Fighter Pilot	£7.50	£10.95
Tomahawk	£8.50	£11.95
ST/Force Harrier	£8.50	£11.95
Spitfire 40	£8.50	£11.95
Space Shuttle	£8.50	£11.95
3D Grand Prix	£8.50	£11.95
Cyrus II Chess	£8.50	£11.95
Monopoly	£8.50	£11.95
Scrabble	£8.50	£11.95
Trivial Pursuit	£11.95	£15.95
ACCESSORIES		
Discs £3.95	5 £18.95	10 £36.95
Ribbons PCW/DMP2000		£5.50
MP2 Modulator 664/6128		£27.95

ARCADE	Cass	Disc
Night Gunner	£6.95	£10.95
Druid	£6.95	—
Light Force	£7.50	—
Street Hawk	£7.50	—
Glider Rider	£7.50	—
Galvan	£7.50	£11.95
Prodigy	£8.50	£11.95
Dan Dare	£8.50	£11.95
Amtix Accolades	£8.50	—
Starstrike II	£8.50	£11.95
Now Games II	£8.50	—
Impossible Mission	£8.50	£11.95
Revolution	£8.50	£11.95
Tempest	£8.50	£11.95
Working Backwards	—	£11.95
Comp Hits 6 Vol I	—	£11.95
Comp Hits 6 Vol II	—	£11.95
Sold a Million I	£8.50	£11.95
Sold a Million II	£8.50	£11.95

BUS/UTILITIES	Cass	Disc
Speech	£8.50	£11.95
Mini Office II	£11.95	£15.95
Music System	£11.95	£15.95
Advanced Music Sys	—	£24.95
Art Studio for 6128 only		£15.95
Protext	—	£21.95
Promerge	—	£20.95
Prospell	—	£20.95
Masterfile III	—	£33.95
Mastercalc 128	—	£29.50
Money Manager CPC and PCW		£24.95
PCW GAMES		
Batman		£11.95
Fairlight		£11.95
Cyrus II Chess		£12.95
G'Gooch Cricket		£16.95
Tomahawk		£16.95
Colossus 4 Chess		£12.95
Jewels of Darkness		£15.95

PLEASE SEND CHEQUES/PO'S TO O.J. SOFTWARE (PRICES INCL UK 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 WELCOME AT NO EXTRA COST. (OVER £10 VALUE CHEQUES IN STERLING DRAWN ON UK BANK PLEASE
**** SPECIAL OFFER ALL SOFTWARE ORDERS OVER £30 FREE CREDIT CARD SOLAR CALCULATOR ****

Be your own composer, studio engineer – or rock star!



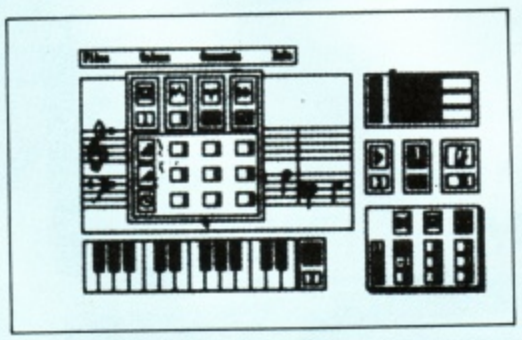
AMSTRAD COMPUTER USER Exclusive READER OFFERS

Make the music YOU want to hear with this sophisticated music development package for the CPC series.

Whether you're a stylish performer already or a complete beginner, you'll revel in the creative possibilities presented by The Music System. With it you can turn your Amstrad CPC into the heart of a modern digital recording studio. And if you buy *Amstrad Computer User* you'll save £5 off the retail price!

Switch on to great new sounds on your Amstrad!

Editing's simple with icons, windows and pull-down menus. There's a detailed manual to help you get started, 30 pre-set sounds plus sample music files you can use to create new compositions!



OUR PRICE
£10.95 on tape
SAVE £5! RRP £15.95

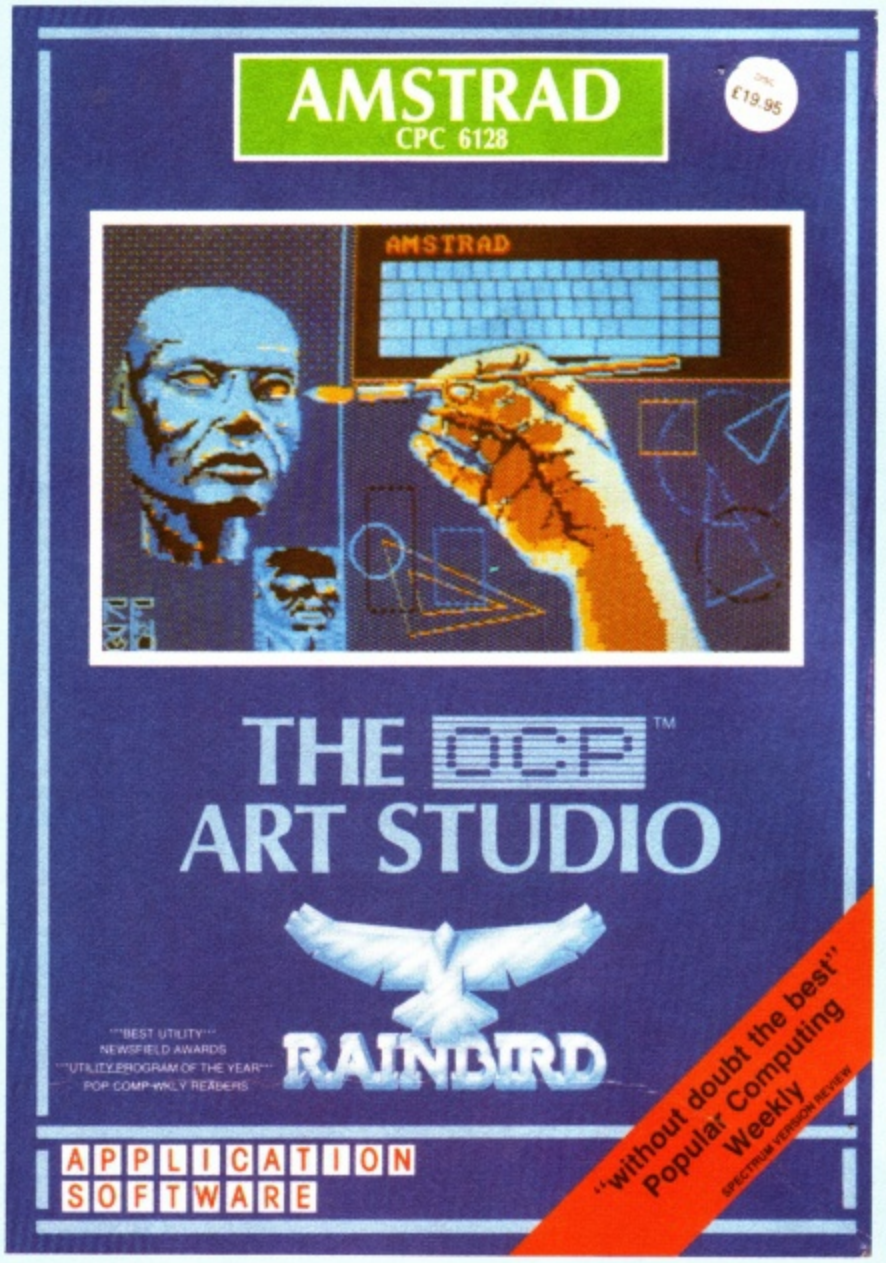
OUR PRICE
£14.95 on disc
SAVE £5! RRP £19.95

To order please use the form on Page 119

AMSTRAD COMPUTER USER

Exclusive READER OFFERS

Find out why it was voted No. 1 in 'Best Utility of the Year' contest!



Here's your chance to turn yourself into a superb artist – even if you've never used a paintbrush in your life!

This brilliant software design package for the CPC6128 puts a full range of unique facilities at your fingertips – and with this exclusive offer from Amstrad Computer User you save £5 off the retail price!

Look at its many features:

Operates in Modes 1 and 2. Windows, icons, pull down menus, pointing devices. All information on screen. Works with keyboard, joystick or mouse. Dot matrix printer dumps, 25 sizes in grey scale. Supports Amstrad and Epson compatible printers and includes user definable option. Save, load and merge pictures and fonts to disc. 16 pens, variable-flow airbrush, 16 user-definable brushes. Undo facility. Windows can be cleared, inverted, cut and pasted, enlarged, reduced, squashed, stretched, flipped and rotated. Solid fill. Textured fill, 32 user definable patterns, Wash texture facility. 3 levels of magnification with pixel edit pan and zoon. Text, 9 character sizes, 3 directions, bold, rotate font. Font editor, clear, invert, flip rotate characters or whole font, copy ROM, capture font from window.



Create an image – Shrink it, expand it, move it, rotate it, copy it, colour it. Spray a pattern or a shade. Make elastic lines, triangles, rectangles, circles – stretch and manipulate. Add text or characters, up, down, sideways – any size or proportion. Zoom in to draw in fine detail. Shrink the whole picture to add background.

OUR PRICE

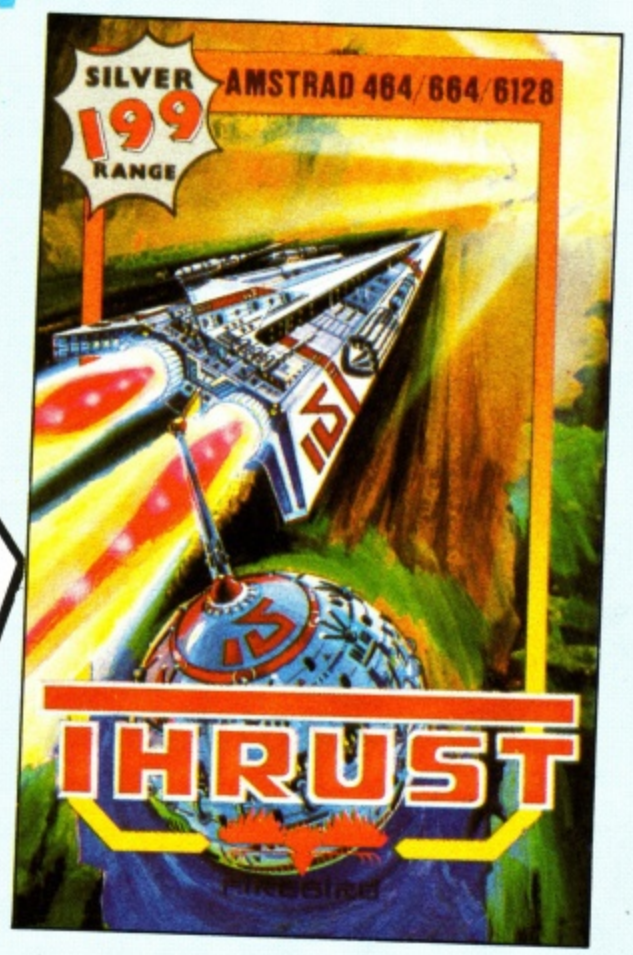
£14.95

SAVE £5!

RRP £19.95

Special offer to subscribers!

This is the game that's got everything. And now it's got an extra – a lower price tag!



ONLY 99p*

. . . when accompanied by subscription order or renewal to Amstrad Computer User

RRP £1.99
(CPC range)

(Existing subscribers can renew early to take advantage of this offer.)

This is what our independent reviewers said:

Liz

"Simple and addictive – passes the 'just one more game' test with flying colours".

Nigel

"Keeps me playing at four in the morning".

Colin

"You've just got to keep playing".

To order please use the form on Page 119

AMSTRAD COMPUTER USER

Exclusive READER OFFERS



only **£3.95** UK

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 £3.95.

Subscriptions offers



Cheap discs – WOW!

Discs are essential to anyone with an Amstrad disc drive so if you own a DDI-1, CPC 664, CPC 6128, PCW 8256 or even a PCW 8512 you will be interested in this special offer.

Our discs cost £2.74 each.

You could pay as much as twice that, the usual price is around £4 per disc. "There must be a catch". Yes, there is – you can only qualify for the offer when you subscribe to *Amstrad Computer User.*

These are official, thoroughly tested discs made by Panasonic. They are NOT the cheap, unreliable imports now coming on to the UK market.

See details on the order form alongside.

Dustcovers

NEW
DMP2000 Printer £3.95

CPC range
Keyboard £3.95
Monitor £5.95

Keep your equipment free from dust and grime with an *Amstrad Computer User* dustcover, made from clear pliable vinyl and bound by strong red cotton and sporting the ACU logo.

DMP 2000 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
PCW 8256 keyboard, monitor and printer set	£11.95

Back issues

1985 – March: *Interrupt driven screen dump. Music explained. Fill routine.*
April: *Printer reviews. Joystick reviews. Proportional printing.*
May: *CPC 664 review. Virgin interview. Using 5¼ inch discs.*
June: *Maxam assembler review. Rock Hopper listing. CP/M user group feature.*
July: *664 (and 6128) to 464 conversion. Graphics toolkit listing. Speech synthesisers compared.*
August: *Screen designers compared. Technician Ted map. Knight Lore map and pokes.*
September: *Double height routine. Unsung heroes – MEJ. Crazy legs listing.*
October: *CPC 6128 review. Okimate 20 review. DK'tronics light pen.*
November: *Amgraph business graphics listing. DMP – 2000 review. Life program.*
December: *Everyone's a Wally map and pokes. Protext review. Enhanced trace utility.*
1986 – January: *Mode 3 revealed. Sorcery plus pokes and map. Shaded dump listing.*
February: *Brainstorm review. Graphics adventure creator. DK'tronics ram expansion review.*
March: *Communications survey. Laser Basic reviewed. The Music system examined.*
April: *Using the 6845. Screen flipping on the 6128. Graphic packages reviewed.*
May: *Max Headroom. Joysticks compared. Teletext adapter reviews. Home spread listing. Dummy Run map. CPS review.*



The Reel Time audio tutor is the fastest and most effective way to learn LocoScript word processing on the PCW 8256 and 8512. The course comes with two tapes, together with full instructions and a LocoScript command reference card. As it is aimed at the novice, it assumes no prior knowledge of either the PCW or LocoScript.

This is an ideal teaching medium, because you sit at the keyboard listening to instructions and taking appropriate action. You learn how to load paper into the printer to subjects like Cut and Paste, Find and Exchange, Set and Clear, block operations, copying files – and a complete overview of templates and layouts.

Everything is explained with remarkable clarity, with the material carefully paced to maintain interest throughout the course. And we are offering it to subscribers at HALF the normal retail price!



only £4.95
if accompanied by subscription order

PCW8256/8512 Keyboard, monitor and printer set
only £11.95 set





Back issues £1.25 each

June: *Batman Map. Biggles preview. Get Dexter Map. Music made simple. ABC Planner calc.*

July: *Palace interview, Activision, Load Spectrum screens into an Arnold, Battle of the cars program.*

August: *Equinox mapped, Printer mini-survey, Midi interface, Interceptor listing, Mastertronic interview, Last free issue of ABC.*

September: *Spindizzy map, detailed assembler survey, joystick reviews, PCW games.*

October: *PC 1512 reviewed, compilers tested, LocoMail, Basic 2 and Animator reviewed, Hacking help with joysticks and Storm. Sound add-ons examined. Which flight simulator?*

November: *Art package three-way test. Combat games compared. Using PIP. Mikro-Gen interview. Double trouble listing.*

AMSTRAD COMPUTER USER ORDER FORM

Offers subject to availability Valid to 31.12.86
All prices include postage, packing & VAT.
All overseas items despatched by air mail.

Subscriptions

		(✓)	£	p
£12 UK and Eire	8000			
£25 Europe	8001			
£40 Overseas	8002			

Commence with _____ issue

Subscription offer†

Five 3" discs £13.70* Europe add £2. Overseas add £5	8110		
Ten 3" discs £27.40 Europe add £2. Overseas add £10.	8111		
Realtime Audio Tutor £4.95 Europe/Overseas add £2.	8112		

†Only available if accompanied by subscription order.

Back numbers £1.25 each

		N/A			
Jan/Feb '85	8003		January '86	8014	
March	8004		February	8015	
April	8005		March	8016	
May	8006		April	8017	
June	8007		May	8018	
July	8008		June	8019	
August	8009		July	8020	
September	8010		August	8021	
October	8011		September	8022	
November	8012		October	8023	
December	8013		November	8024	

Rainbird Music System

Tape £10.95	8107	
Disc £14.95 (CPC range)	8108	

Rainbird Art Studio

Disc £14.95 (CPC range)	8109	

Dust-covers

CPC 464/664 keyboard	8100	
CPC 6128 keyboard	8101	
£3.95		
CPC range green screen	8102	
CPC range colour monitor	8103	
£5.95		
DMP 2000/3000 Printer	8105	
£3.95		
PCW 8256 keyboard, monitor and printer set	8104	
£11.95		

Binders

£3.95	UK	8106	
£6.95	Europe		
£10.95	Overseas		

European and Overseas readers, 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 indicate method of payment (✓)
☐ Access/Mastercharge/Eurocard/Barclaycard/Visa
Expiry date /
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
Signature _____
☐ Cheque/PO made payable to Amstrad Computer User
Name _____
Address _____

PLEASE PRINT IN BLOCK CAPITAL LETTERS
Please allow up to 28 days for delivery ACU12

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



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



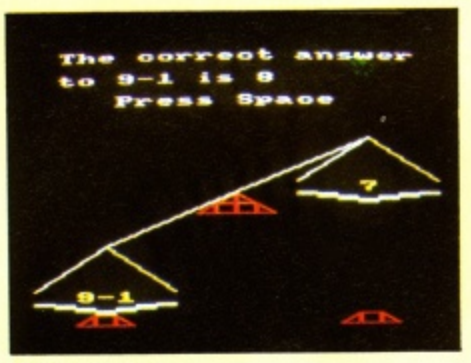
HOUSE
Select the colours to draw a house – hours of creative entertainment

Ages 5-8

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



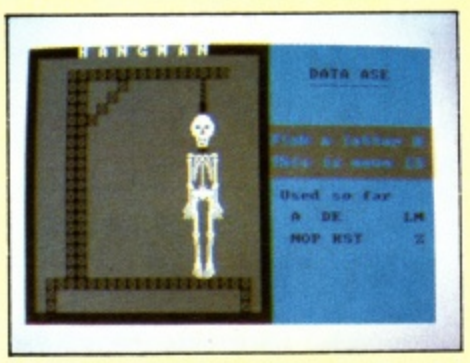
NUMBER SIGNS
Provide the correct arithmetic sign and aim to score ten out of ten



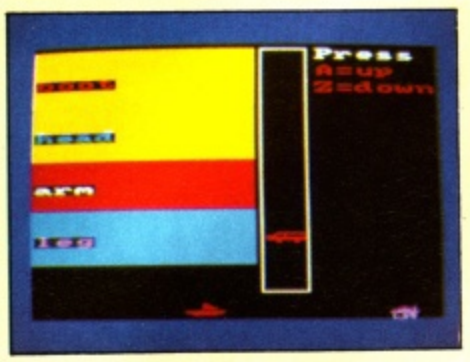
BALANCE
Learn maths the fun way. Type in the answer to balance the scales

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.

		Tape* £5.95	Disc* £8.95
Age 2-5	6077/6078		
Age 5-8	6079/6080		
Age 8-12	6082/6083		

*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

Expiry date /

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

☐ Cheque/PO made payable to Database Publications Ltd.

Name _____ Signed _____

Address _____

Tel: _____

Please allow up to 28 days for delivery

ACU12

Amsoft

SHOPPING BY POST – IT COULDN'T BE EASIER!



LOCOMAIL and LOCOSPELL AVAILABLE NOW at ONLY £39.95 EXCLUSIVELY FROM AMSOFT

- "MEMBERS ONLY" SPECIAL OFFERS
- THIS MAGAZINE EVERY MONTH TO YOUR DOOR
- PRIVILEGE CARD
- 15% DISCOUNT ON YOUR PURCHASES – INCLUDING LOCOMAIL + LOCOSPELL
- YOUR OWN MEMBERS NEWSLETTER

VISA

Telephone us for a faster, easier service.
Orders using credit card (Access or Visa)
0783 673395. 24 hour service

Send for FREE information
Complete this coupon and return it to the address shown on the envelope

*Approximate discount on most items, see price list for details.

DELIVERY ONLY WITHIN U.K.

Lazahold Ltd, trading as Amstrad User Club and Amsoft

I would like full details of Amsoft Mail Order and the Amstrad User Club Software Catalogues, Sales Leaflets, and order forms.

Name .....

Address .....

..... Post Code 11/86/B

TWO FANTASTIC OFFERS from AMSTRAD USER CLUB

- **AMSTRAD Modem**
  (with **FREE** *Micronet 800 and Prestel)*
  £84.95
  (to Club Members only)
  SAVE £15

- **AMSTRAD RS 232 Interface**
  (with **FREE** *Commstar communications software)*
  £50.95
  (to Club Members only)
  SAVE £9

PLUS:
SPECIAL OFFER!
Buy both the Amstrad Modem and RS232 Interface for
Just **£129.95***
and save an extra £6

Access VISA

NON-USER CLUB MEMBERS	
Modem Offer	£99.95
Interface Offer	£59.95
* Modem & Interface	£153.95

Prices correct at time of going to press, and include VAT and p&p. Please allow up to 28 days for delivery. All items subject to availability.

SEND TO AMSTRAD USER CLUB,
PO BOX 10, VICTORIA HOUSE,
SUNDERLAND SR1 3PY. Tel: 0783 673395
(24 hour service).

NAME _____

ADDRESS _____

_____

_____ POST CODE _____

TEL NO. _____ (Day) _____ (Eve)

Modem only ☐ *(Please tick)*

Interface only ☐ " "

Both ☐ " "

My Member Number is _____

My Access/Visa Number is _____ 11/86/L

The Least Significant Bit

Now it can be told: Joyce reads The Guardian. A few weeks ago the Grauniad ran a little piece on Alan Sugar and an interview he did for a business magazine. "If there was a mass market for portable nuclear weapons", the man said, "we'd produce them". It is thus entirely coincidental that the new spelling checker for the PCW 8256 denies all knowledge of the word Amstrad. Instead, it suggests, you must mean Amoral. But then it's never heard of Joyce either. The closest it can come to spelling its own name is Joke. There's a thesis in there for someone.

Careless talkers soon leave the kitchen. Mixed metaphors aside, it's not often that someone opens their mouth, puts their foot in it and burns their fingers. But William Poel, doyen of Computer Trade Weakly, ex of Amsoft and now supremo (it's true) of NewStar, might have cause to reflect on the wise words above. A large proportion of Newtzar's business was done by shifting a word processing package called NewWord. It's a Wordstar workalike, but with a few little extras.

Those in the know generally proclaim it to be superior to the venerable Wordstar, and as it was written by deserters from Micropro, the Wordstar company, this is quite possibly true. William Poel proclaimed this at the top of his voice, and took great delight in doing down WS/Micropro whenever appropriate. Micropro are of course totally above trading insults, and aren't touchy at all. Even when the Voice of the Poel took to laughing raucously about the WS1512 affair, Micropro remained unmoved.

Not so long ago Micropro bought the rights to NewWord and took over the distribution. To nearly everyone. So if any programmer out there's got a nifty word processor they want to sell, they could do worse than try 200 North Service Road, Brentwood.

Once upon a time it was the done theological thing to argue away the wee small hours by counting the number of angels who could cavort upon a pinhead. A slightly more irreverent discussion is taking place as to the number of magazines the Amstrad owners of the world can support. Even discounting the various Sinclair organs (wisely), and the What Clone style of publication, there appear to be seven on the market at the moment. LSB knows of two definite New Year newcomers, with the consensus among the more cynical onlookers being that just one more "Taking your Amstrad to Bed", or "Squelch!!!" will equal the critical mass for the market. There'll be so many hacks reading each other's mags and slagging each other off that it won't matter if the public never buy a single copy. Which is just as well, considering.

Ave Atque Vale (that'll fox LocoSpell). Alex Martin follows his recent promotion from editorial assistant to assistant editor on this illustrious magazine by leaving. LSB wishes him the very best of British with his new projects (you ain't heard the last of him yet, mark our words), and wonders who'll run the magazine while Simon Rockman gets his car fixed.

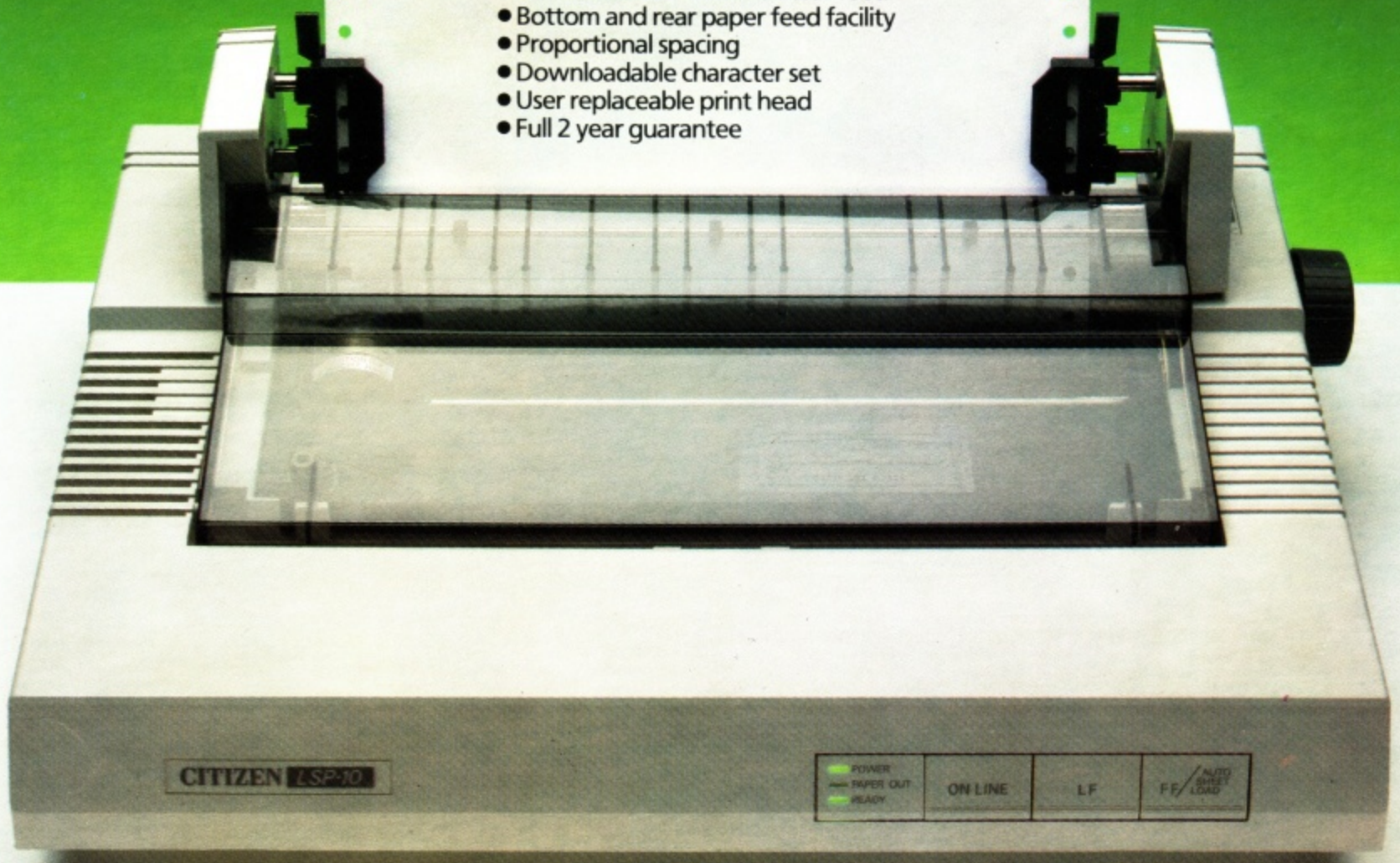
ACU

ADVERTISERS' INDEX

Adams World 82
Advanced Memory Systems 20
Advantage 82
Akadimias Software 47
Aladdink 80
Al-Tukhaim 76
Amsoft 30, 121
Amstrad 58,59
Amstrad Distribution 100
Amstrad User Club 121
ARC 114
Arnor 68, 69, 86
Astracom 108
Astrocalc 114
BBD Dustcovers 111
Brian Thurston 114
Campbell 4
Cascade Games 2
Cheetah Marketing 28
Cirkit Distribution 111
Citizen Computer Printers 123
Compumart 113
Computer Cupboard 106
Connect Systems 48
Cornix Software 114
CTC 112
Cyca 97
Danum Computer Systems 19
Dart Electronics 43
Database Software 15, 72, 73
Datel Electronics 76
Digital Research 8
DK'Tronics 52, 53, 124
Elite Management 80
Evesham Micros 90
Garwood Software 78
Goldmark Services 44
Hi-Soft 12
HSV Computer Services 43
Incentive Software 103
Infotek Design 112
In Touch 114
Jackson Computers 80, 105
KDS Electronics 47
Kirk Automation 90
Konami 37
LCL 97
Leigh Computer Systems 112
Leisure Games 10
Load And Run 111
Mancomp 26
Matmos 80
Meac Designs 80
Meridian Software 100
Micronet 800 33
Micro Power 89, 106
Micro Simplex 92
Microtext 114
Microwise 112
Mighty Micro 80
M.J.C. Supplies 105
Nemesis 100
Newcrown Computers 111
O.J.Software 114
Opus Supplies 36
Parrotry 100
PMS Communications 9
Pride Utilities 44
Richard Reeves 34
Romantic Robot 89
Rombo 112
RSD Connections 105
Sandpiper Software 27
SBS Data Services 85
S.C.Coleman 114
Scot Byte 47
School Software 97
Screens Micros 77
Selec Software 88
Seven Stars 97
Silicon City 80
Siren Software 64
Software Insight 106
Spectravideo 24
Squirrels Byte 85
Tasman 98, 99
The Software Toolshop 12
Trafford Technology 65
Transform 48
Trinity Business Systems 80
Typeshare 106
Virgin 10

TOUCH IT AND YOU'RE SOLD

- Full IBM® and Epson® compatibility
- 120 CPS draft speed
- 25 CPS correspondence speed
- Standard 4K buffer
- High resolution graphics capability
- Built-in variable width tractor feed
- Bottom and rear paper feed facility
- Proportional spacing
- Downloadable character set
- User replaceable print head
- Full 2 year guarantee



No matter how predisposed you are towards the best known names, if you're looking for a printer for your PC, even a brief encounter with the Citizen LSP-10 will prove an eye opener.
With Citizen, it's a straightforward case of getting rather more for rather less.
On features and performance, we can match absolutely anyone in the business.

As for guaranteeing our printers, giving one full year more than any other manufacturer speaks volumes for the quality of our products.
And as for price, well, the very idea of saving money has always been an irresistible selling proposition.
For the full Citizen story, just contact
Matthew Masters on 0800 282692

CITIZEN
COMPUTER PRINTERS

There are some things you can always depend on.

TURN YOUR MONITOR INTO A COLOUR T.V.





NOW YOU CAN USE YOUR MONITOR FOR BOTH COMPUTING AND WATCHING TELEVISION

Employing the latest chip technology the DK'Tronics receiver will convert your CPC monitor into a high quality television set, giving crystal clear pictures on all four channels.

HOW TO ORDER
DK'Tronics products are available in all good computer stores or may be obtained direct by telephoning and quoting your Barclaycard or Access number.

£69.95 including VAT

dk'tronics
POWER BEHIND YOUR AMSTRAD

DK'Tronics Limited · Gorleston, Great Yarmouth, Norfolk NR31 6BE · Phone 0493 602926 (24 hours) Telex 975408