

disk USER

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MODEL B+
MASTER I28**

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**A&B
COMPUTING**

FROM **LOTHLORIEN**

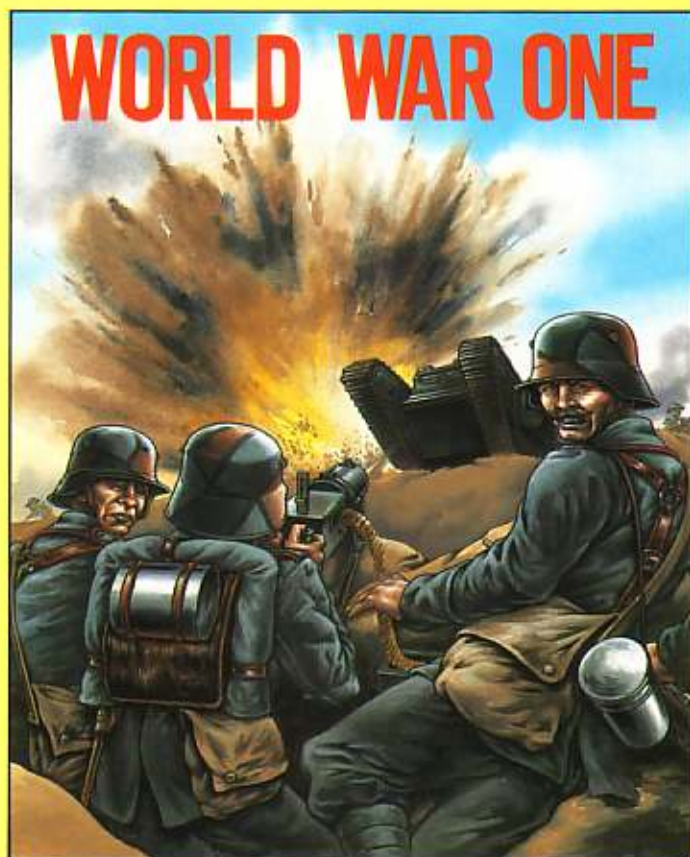
TWO CHANCES TO CHANGE HISTORY!

Our history is recorded by the battles we have fought. But how would our present differ if the battles had turned out differently? If Napoleon had won? Or Hitler?

Who would rule us now if the Cavaliers had won the English Civil War?

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LOTHLORIEN

Argus Press Software

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London WC2H 7NB Telephone: 01-439 0666

Roundheads

1642 saw the beginning of The English Civil War between the Roundheads under Cromwell and the Cavalier supporters of the tyrant Charles I. We all know who won, but will they win again in this realistic reconstruction?



BBC DISC ONLY

£12.95

disk USER

Number One June/July 1987

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Disk user is constantly on the lookout for original and well written articles and software for publication. Feel free to submit your work to us for consideration for publication.

All submitted material must be in machine readable form. This applies both to programs (in any language) and to documentation, which should be prepared with a BBC Micro wordprocessor. 5 1/4" disk (DFS 40/80, ADFS large/small) equally acceptable. Please also include hardcopy and any suitable illustration, photographs and/or screen dumps.

If you are considering submitting material to Disk User then please send a SAE for a comprehensive style sheet. It's also sensible to give us a ring before going ahead with any major work. All submissions will be acknowledged and material returned if not required. On acceptance the copyright in such works which will pass to Argus Specialist Publications Limited will be paid for at competitive rates. All work for consideration should be sent to the Editor at the above address.

- Discussion** 4
Welcome to our unique interactive disk magazine
- Disk Instructions** 5
How to get the best out of Disk User – including 40 to 80 track conversion. Make sure you get the full picture by reading these pages before using your Disk User disk
- Disk Data** 7
Latest releases and news for disk users
- Barmy Butterflies** 10
A platform game with a built-in screen designer. Players can freely and easily design their own games to test friends and family
- Auto Index** 12
A powerful utility which automatically catalogues your disk collection
- Tape Transference** 14
A guide to one of the most awkward of operations when moving to disk storage
- Disk Examiner** 16
A convenient and efficient way of checking and managing the contents of your disks
- The Cube of Zoth** 18
This science fiction adventure comes complete with a scenario which should leave you in no doubt as to the pleasure of beating Zoth at his own game! A substantial three-parter, 'Zoth' is playable to the finish for a unique winning number and our competition prize
- Competition** 25
Details of how to enter the Cube of Zoth competition
- Collectors Items** 26
Animations for you to copy and keep. Build a collection of this entertaining A to Z of animations by computer artist Abbas
- The Master** 27
Learn the moves, outwit your opponents, make your way to black belt status and become 'The Master'
- Winchester Way** 28
Pointing the way to the future? Decreasing prices are making the hard disk affordable today
- Software Sale** 30
Disk software rundown
- Next Month**
Don't risk missing out, order your copy of Disk User 2 now. Another unique issue will include:
- animations
 - disk utilities, analyse, edit, recover
 - three dimensional graphics
 - games

DISCUSSION

A hearty welcome to **Disk User**, the magazine which owners of the BBC Microcomputer have been demanding

Disk User, like other disks, is easy to use and fast. Professional ready-to-run programs, examples of programming techniques and screen graphics, are all on the disk. It's brimming full of data ready for use.

But Disk User is also a magazine, so you get the best of both worlds.

With Disk User you can have your cake and eat it. You can have a regular magazine and the programs where they belong, on floppy disk.

Disk User puts the data on the disk and the print (not the programs) on the pages.

New direction

The BBC Micro has long been the most sophisticated 'home' micro, comparable more with business computers in terms of performance but with a collection of software to cater for all tastes and suitable for the home and school.

When we run software, we run it from disk. We maintain our databases on disk, we save our own programs to disk. So why not get our magazine programs on disk? Disk user is a new concept in delivering the complete magazine for the owner of BBC Microcomputer and disk drive.

Disk User is dedicated to:

- publishing a variety of entertaining and useful programs in an entirely accessible form. The programs are not protected in any way. They can be listed, studied, routines copied, or the complete programs changed for your own use.

- providing full documentation and background information about the programs on the disk. Disk User contains full instructions on how to use all the programs, game controls, hints and tips and so on. In some cases further instructions appear on screen.



- enhancing the enjoyment of programs with a colourful and lively magazine with artwork from the best known computer graphics artists, all working with BBC Microcomputers of course.

- reviewing new software important to disk users, both utilities and application programs

- supplying an up to date information service especially pertinent to disk users

We hope you enjoy this first issue. And before you have exhausted the depth of interest provided by Disk User number one, there will be

another issue on sale. Disk User, August/September will feature:

- the second in our Collectors Items, animations from computer graphics artist Abbas.

- an automenu program to create a unique menu for each of your disks, at the touch of a button.

- disk analyser to make you the Sherlock Holmes of the disk drive.

- and a 'B movie' of a game when 'Antz' takes you into a twilight zone of deadly warring insects.

And much more in issue two of Disk User – out on the 17th July. Ask your newsagent to put one by.

DISK INSTRUCTIONS

We have done our best to make Disk User available to a wide range of BBC disk drive owners. Before booting Disk User see below for full instructions for your system

The programs on Disk User require BASIC 2 or above to operate correctly. Disk User is supplied on a 40 track disk format and can be run without conversion on a 40 track drive. If you have 40/80 switchable drives then make sure the drive is switched to the 40 option.

Conversion for 80 track drives

For 80 track only drive owners, a conversion program is provided, called CHANGE. CHANGE is suitable for Acorn DFS on a Model B, B+ and Master Series. If you have a filing system which allows double stepping to read 40 track disks in 80 track drives then use your system's own command. As a general rule, built-in 40 to 80 converters should be used where available.

Note that all programs in Disk User magazine which need to write to disk (eg Zoth, Barmy Butterflies, Auto Cataloguer) should be copied to another disk before use. Therefore copy to a 80 track disk.

The conversion program, CHANGE, is provided for those with 80 track disk drives and no conversion or double stepping facility in their DFS.

Stephen Wright

Disk User's *CHANGE (Acorn DFS)

The standard Acorn DFS has no double stepping mode. A program called CHANGE is therefore supplied on Disk User.

If you have a 40/80 switchable disk drive then make sure it is switched to 80 tracks before conversion. Insert Disk User and type:

***CHANGE** and hit the <RETURN> key

The program will prompt you to insert source disk (Disk User) and destination disk (new blank formatted 80 track disk).

40/80 switchable drives

If you have two switchable drives then you can use the 40 track setting on drive 0 and the 80 track setting on drive 1. Insert Disk User in drive 0 and a blank formatted 80 track disk in drive 1. Type

COPY 0 1 *. and hit the <RETURN> key

Set the boot option on drive one by typing

***DRIVE 1** and hit <RETURN>
***OPT 4 3** and hit <RETURN>

Acorn 1770 DFS

Depending on the version of the DFS, there may be a ***DRIVE 0 40** command to double step in a 80 track drive. If this ***DRIVE (40) (80)** command is not present when a ***HELP** is issued then use the CHANGE utility supplied on Disk User. Full instructions for CHANGE can be found in the documentation and

program description in these instructions.

Master 128/B+ 128

This Acorn DFS has a software double stepping mode for a 80 track drive. Set it with the command

***DRIVE 0 40** <RETURN>
hit <BREAK>

Disk User will then work without any need for conversion. However this may not allow writing to the disk in 40 track mode. All programs in Disk User magazine which need to write to disk (eg Zoth, Barmy Butterflies, Auto Cataloguer) should be copied to another disk before use. Therefore copy to a 80 track disk.

Alternatively you may use the CONVERT command available on the Master. Insert Disk User in drive 0 and type:

***CONVERT** and hit <RETURN>
Further prompts/ instructions will appear on screen before converting the disk to 80 track.

DFS on Master Compact

The DFS is supplied as an image on later versions of the Master Compact Welcome disk (or is available from Acorn on disk) and this may be used in conjunction with a 5<1/4> inch disk drive to run Disk User. The command

***DRIVE 0 40** <RETURN>
hit <BREAK>
should be issued before use.

Opus DDOS/Challenger 3

If you are using the Opus DDOS disk filing system or Challenger 1.0/DDOS then issue the command

***4080** and hit the <RETURN> key

and Disk User will work without any need for conversion.

Challenger 3

If you have the later ROM version Challenger 1.1 then issue the command

*OPT 8,1 and hit the <RETURN> key to achieve the same result.

Solidisk DFS

With the Solidisk DFS 2.1 and 2.0 you can set a software double stepping mode for a 80 track drive with the command

*ENABLE 80 and hit the <RETURN> key

Disk User will then work without any need for conversion.

Watford DFS

The Watford DFS also has a software double stepping mode for a 80 track drive. Consult your manual for the appropriate FX call or command. Disk User will then work without any need for conversion.

Converting DFS to ADFS on a double disk drive system

(If you have 80 track drives then first use the CONVERT utility to convert your copy of Disk User to 80 tracks).

Place a blank, formatted ADFS disk (small, medium or large as suits your drives) in drive 1 of your system type

*DIR :1 and hit the <RETURN> key
*CDIR P and hit the <RETURN> key
*CDIR A and hit the <RETURN> key
*CDIR I and hit the <RETURN> key
*DIR :0 and hit the <RETURN> key

Place your ADFS utility disk in drive 0 and boot it. Choose the COPYFILES option.

Once loaded, remove the utility disk and place your copy of Disk User in drive 0.

Source filing system is DFS
Destination filing system is ADFS
Source drive is 0
Destination drive is 1
Source directories are \$, P, A and I
Destination directories are \$, P, A and I

Select List mode and type in *.* for each directory you copy
You will have to repeat the process for each directory
It may be possible to use a utility such as Advanced Disk Toolkit to make the transfer for you.

Disk failure

If for any reason your copy of Disk User will not work on your system then:

● if you are a subscriber, return it to Disk User, Infonet, Times House,

179 The Marlowes, Hemel Hempstead

● if you bought it from a newsagents, return it to Disk User, ASP, Number One Golden Square, London W1R 3AB.

Telephone calls concerning the disk cannot be taken but enquiries in writing will be dealt with as promptly as possible and replacement disks sent out immediately. Please use appropriate packaging, cardboard stiffener at least, when returning a disk. Do not send back your copy of the magazine. Only the disk please.

Disk hints

Why not speed up your disk access speeds by either:

1 permanently changing the startup links in your computer or
2 issuing the software command *FX255,15 <RETURN>? The former is available by taking off the lid and following instructions in your User Guide. The latter software effect lasts until <CTRL><BREAK> is pressed. This extra speed is only possible with the latest disk drives – the half-height and slimline drive types.

Disk User files

All change - 40 track to 80 track convertor
author: Michael Spalter
files:

CHANGE machine code file. *RUN

Disk User - disk magazine title page animation
author: Abbas
files:

P.RUNDISC BASIC file
A.DISC machine code file

Menu - what's in store this issue
author: Matthew Fifield
files:

MENU BASIC file

Collector's Items - Abbas' A to Z of animation
author: Abbas
files:

P.RUNALPH BASIC file
A.ALPHA machine code file
Autoindex - the automatic disk catalogue
files:

CAT BASIC file

This file should be copied to a brand new formatted disk before use. The catalogue of disks is held as data on the disk surface and as much space as possible should be made available.

Cube of Zoth - three part sci-fi adventure
authors: Jane and Jonathan Evans
files:

OTH BASIC file
MEGADAT date file
LOCS date file
MESS date file
I.LOCS date file
I.MESS date file

Disk Examiner - checkout your disk surface
author: John Tissandier
files:

DEX BASIC file

The Master - kung fu arcade action for two
author: Clive Dunkley
files:

MASTER BASIC/Assembler file

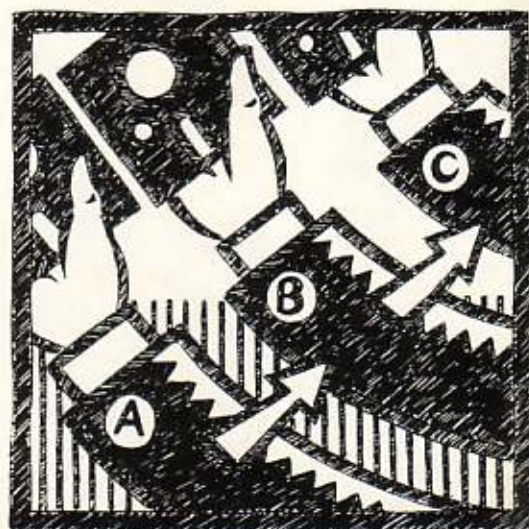
Barmy Butterflies - design your own platform games
author: Margaret Stanger
files:

BMENU BASIC file
DESIGN BASIC file
TEST BASIC file
SOURCE BASIC/Assembler file
GAME BASIC file
HARD graphics data file

HARD is a set of three prepared game screens. Before saving further designs, copy the above files onto a new disk with enough free space.

When choosing GAME, you must load a set of screens with option 1 – load screens, before choosing option 3 – play game.

Note that Disk User almost fills a 40 track disk. Software which may require further disk space should be transferred to a blank disk before use: eg Zoth, when saving a game; Barmy Butterflies, when saving a screen design; Auto Index, when creating a catalogue.



DISK NEWS



Audiogenic compilations

Disk compilation one brings together Contraption, Bug Eyes, Last of the Free and Frankenstein 200. Compilation two consists of Caveman Capers, Bug Eyes II, Flip and Wizard Mansion. These mixtures of best sellers and previously unreleased games cost £9.95 on disk only.

Dunjunz Designer only on disk

Increasingly BBC software companies are seizing the chance to add value to the disk editions of their games. Bug Byte, whose £2.99 Dunjunz has been a great success on cassette are releasing a BBC version on 5¼ disk. The price is £7.95, making it one of the cheapest games around on the format. The "added value" comes from the Dunjunz games designer. The designer allows a complete Dunjunz style game to be created. Dunjunz also plays much better on disk because each set of screens is loaded separately, a cause of some delay on the tape version.

Dunjunz features a four screen display, one each for the four characters who take part in the arcade adventure. You can always see your character in your screen. You can check on other characters and even wander into their screens. There are four sets of player keys defined on the keyboard so it could turn into a yoga session!

The work of Julian Davison, a 17 year old from Devon, Dunjunz has 25

levels, each entered through a trap door. On dropping through the door, you are prompted to start up your tape to load the next level. You can take on the guise of one of four characters, Ranger, Wizard, Barbarian or Warrior in true dungeons and dragons style. There is no shortage of objects to collect and avoid! Magic, weapons, potions of healing and boots of speed all play a part.

Best yet?

Optima floppy disks, claimed by the Verbatim Corporation to be the best yet manufactured, are now available in the UK from Willis Computer Supplies. Both the 48 tpi (tracks per inch) and 96 tpi disks are available single or double sided, offering storage capacities of 500Kb and 1Mb respectively.

Verbatim claim that an average in excess of 76 million revolutions was achieved in tests without failure. The

ultra-thin gold hub ring is just 80 microns thick.

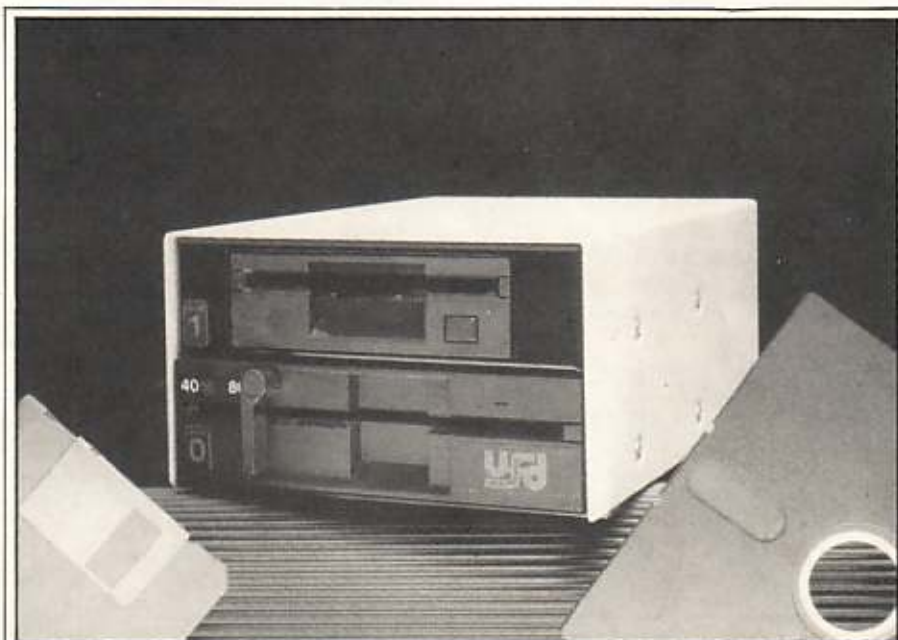
Details from Willis Computer Supplies, PO Box 10, South Mill Road, Bishop's Stortford, Herts CNM23 3DN Tel: 0279 506491

Watford DFS upgrade

Following an agreement with Acorn, Watford have included the Tube Host Code in the latest 1.44 version of their Disc Filing System.

Until now users of Watford's single density DFS have needed Acorn's DNFS ROM alongside. Now the DFS, still costing £16 + VAT, supports the second processor alone.

Further enhancements are faster file handling and auto selection of 40 and 80 track formats. Nazir Jessa, head of Watford, rightly points out that many second processor users have had to tie up a ROM socket with the DNFS. This is no longer necessary. Details from Watford 0923 37774/40588.



User friendly

Akhter have brought out two new 'user friendly' products. "Archive" for the BBC is a 1 megabyte disk drive with a 10 megabyte tape streamer for back-up storage. The most important use of the tape streamer is for winchester backup.

Software is supplied to make the backing up of Winchester or floppy very easy. It can backup individual directories as well as individual files. The streamer and floppy are supplied

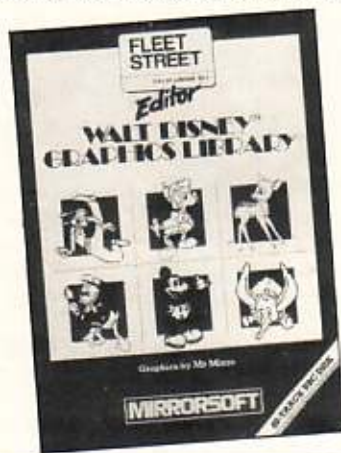
in a rugged plinth style casing.

The second product is a combination of 3½" and 5¼" disk drives. Not only can the combination disk drive act as a standard 40/80 track switchable dual disk drive for all normal applications but it can also read software in either of the two media sizes.

The unit includes all necessary cables, a utilities disk and a comprehensive user's manual. It carries a full two-year warranty. Tel: 0494 40176

Editor Xtras

Three brand new software packs are now available on disk to enhance the popular Fleet Street Editor. The useful ones are Admin Xtra and Fonts 'N Graphics. The former provides: a Mode transformer, all modes to Mode 4 – the native Mode of Fleet Street; a disk indexing utility – Fleet Street is disk based and all those images files and font files and text files do get confusing; Poster Maker – a single panel printer dump for four different sizes of poster; a Panel Viewer – to conveniently view panel contents. The latter, Fonts 'N Graphics, is a standard font designer to create your



own fonts for use in Fleet Street and a brand new set of ready drawn clip-art.

The third package does not need to be useful. It's just great! The enchanting Walt Disney Graphics, the best loved cartoon characters in the world, can be incorporated into your own pages or just printed out for the children to colour in. Word bubbles and a little imagination and you even have your own comic strips. Mirrorsoft say that the cartoons can be reproduced without copyright restrictions as long as the work is not sold for profit.

Each of the new software packs costs £14.95, available on 40 or 80 track. Details on 01 377 4837.

Clipart on disk

AMX Pagemaker users can now take advantage of a large range of graphic cutouts. Each disk of a new picture library – created by Micro Studio – contains 30 cutouts and can be purchased singly or in packs of five.

The subject matter is divided into categories such as computing, sport, people, animals and birds, children, vehicles, plants and trees, objects and miscellaneous – with a selection from all the categories.

The five disk pack made up of the disks of your choice costs £10.00 inclusive. Single disks can be purchased at £2.50 each. Samples of the cutouts can be obtained by sending a SAE to Micro Studio at 83 Clay Street, Soham, Cambridgeshire CB7 5HL.

Intelligent Copying

MB Software are creators of Mastercopy, a fast copier for the Master 128. It copies between filing systems, offering full selective choice of files/directories to be copied. Details from them at 4 Arden Close, Hadrian Park, Wallsend, Tyne & Wear NE28 9YB.

Disking

Disking, specialist disk suppliers, have moved...to 1 Royal Parade, Hindhead, Surrey, GU26 6TD. The telephone number remains the same: 0428 722563.

Disk Aid

Jaysoft are selling a multi-purpose utility for the BBC range. The 16K ROM provides automatic power-up facilities including interlace correction, keyboard turbo, Hi-BASIC auto selection for Tube users and ROM/RAM control and management functions.

Three menus provide disk free space displays, automatic compact, program running and loading, ROM loading, selective multiple file copying and single keystroke * commands.

Various commands for selective memory erase, move and copy, disabling Tube, and Econet, and dumping windows are included. Also included is an automatic disk indexer.

Available from Jaysoft at 114 Kingsway, West Wickham, Kent, BR4 9JQ. Price of Beebaid is £34 for 16K ROM, 40/80 track disk and two bound manuals.

Pics on Disk

Jonathan Inglis, creator of computer artwork for such worthies as the Sunday Times Magazine and A&B Computing, has produced his disk of greatest hits for £6.95. The 40 track version contains nine screens, the 80 track 12 screens. Also available are signed original prints of any of the screens. They measure 32 by 25 centimetres and cost £18.50 each.

Order direct, stating which track

format you require and making cheques payable to Jonathan Inglis. The address to send to is 35 Whatman Road, London SE23 1EY.

Joe Lavery, the artist who 'painted' some of the most stunning AMX demo pictures has responded to demand for his pictures by offering a graphics disk full of colour drawings. It costs £4.95 including postage and packing and all disks will be numbered and signed. Please state 40 or 80 track. Orders to Mirage, 60 Colchester Avenue, Penylan, Cardiff.

Headroom

Advanced Memory Systems, the mouse people, have launched Max, a graphic extension to the disk filing system. Max is compatible with B, B+, B+ 128, Master 128 and Master Compact. It works with both DFS and ADFS filing systems. Supplied on 16K EPROM with manual and reference card, the program will take input from an AMX mouse, joystick or keyboard.

Max provides a WIMP (windows, icons, mice, pick) environment with a wide range of disk operations. These include the cataloguing into separate windows of up to six disk drives of an Acorn compatible DFS or ADFS format in icon form, sorted by name or file type.

Files can be selected from the catalogue window and manipulated to execute BASIC or machine code programs, to display file information, be deleted or renamed, locked, unlocked and copied between drives.

A menu of the sideways ROMs is shown in a window and details such as ROM name, type and length, can be displayed. There is a control panel for the selection of screen colours, keyboard delay and repeat rates, time and the mode entered on leaving Max.

Price is an excellent £19.95. Details on 0925 413501/2/3



The Superior Collection

Volume 1

For the
BBC Micro

NEW
RELEASE



SYNCRON



REPTON



KARATE COMBAT



STAR STRIKER



AIRLIFT



BMX ON THE MOON



WALLABY



SMASH AND GRAB

A New Concept in Compilations

The Superior Collection Volume 1 features one brand new game, Synchron, together with 7 of Superior Software's classic hits for the BBC Micro.

Synchron is a fast-action game set against a backdrop of an enormous graphically-detailed scrolling landscape. The landscape is, in total, 1024 times the size of the screen. You must endeavour to complete 16 hair-raising missions; in each mission you have to collect a number of power cylinders, land your spacecraft on a runway with each cylinder in turn, and finally locate and bomb the HQ Building. Whilst skilfully manoeuvring your spacecraft between the defence pylons and force-fields, you are attacked by alien spacecraft and missiles launched from the land bases. A superb game, worth at least £7.95 in its own right.

Here's what the computer press said about some of the other titles on this compilation package:—

REPTON: "This is an astounding game reaching new heights in BBC arcade adventures" ... MICRO USER

KARATE COMBAT: "Superior's Karate Combat is a superb karate simulation.

Graphics 9
Sound 9
Value 8
Playability 10."
... COMPUTER & VIDEO GAMES



AIRLIFT: "Airlift is an excellent arcade game... It has a very polished presentation that cannot fail to impress and has the element of addictiveness which keeps you going back for one more try."
... A & B COMPUTING

SMASH AND GRAB: "As usual with Superior products the graphics are excellent, with a good use of colour and no flicker. I expect this game will have you rolling with laughter. I certainly did.

Instructions 95%
Playability 95%
Graphics 100%
Value For Money 100%
... HOME COMPUTING WEEKLY

Awarded
★★★★★
(Top Rating)"

BBC Micro dual cassette £9.95
BBC Micro 5¼" disc £11.95
BBC Master Compact 3½" disc £14.95

All games are compatible with the BBC B, B+ and Master series computers.

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Limited

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OUR GUARANTEE

- All mail orders are despatched within 24 hours by first-class post.
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- Faulty cassettes and discs will be replaced immediately.

24 HOUR TELEPHONE ANSWERING SERVICE FOR ORDERS

Dept. SCC2, Regent House, Skinner Lane, Leeds LS7 1AX. Telephone: 0532 459453.

BARMY BUTTERFLIES

Classic platform action at two levels. When you've mastered the game, learn how to design your own screens and improve your programming

The hero of this game, Hugo, is collecting butterflies for a butterfly farm in fairly hostile territory. The caterpillars are a bit anti because they think he has a sideline supplying the fishing industry with maggots.

Source

This program reads in the data for the sprites and assembles the machine code for moving them around. When the test, design or game is chosen from the menu the source program is always run first to store the addresses of the machine code routines as integer variables. The program has been included in this form to make it easier for anyone to change the sprites, or customise the keyboard and joystick routines and test the results with the TEST program.

TEST

This short program tests the sprite data and movement routines. The small sprites are displayed, with the larger sprites underneath, to test the sprite data and the routine for putting them on the screen. A small sprite can be moved up, down, left and right to test the keyboard routine. When the sprite reaches the top or bottom of the screen, a larger sprite can be moved with the joystick until it reaches the top or bottom of the screen.

The designer

This program can be used to create three game screens and save them on disc. Any game screens can be loaded, edited and resaved.

The cursor takes the form of the current sprite and can be moved with Z, X, and /. Put a sprite on the screen with <SPACE> and delete it with <SHIFT>. Change to joystick with J and back to keys with K, or display the instructions with H.

Enter 1, 2 or 3 to change the screen to be edited; Load a new set of three

screens with L or Save a set of screens with S. To change the sprite, move the cursor to the row of sprites at the top and select the one you want. The sprites are:

- | | |
|----|--|
| 0 | Bouncy tuft of grass |
| 1 | Tree trunk |
| 2 | Tree branch |
| 3 | Grass |
| 4 | Water (falling in can be fatal) |
| 5 | Rope bridge going left |
| 6 | Time symbol, for resetting the clock |
| 7 | Stepping stone |
| 8 | Poisonous plant |
| 9 | Finish of screen (Do not forget to include one of these) |
| 10 | Rope bridge going right |
| 11 | Quicksand |
| 12 | Caterpillar |
| 13 | Rope ladder going up |
| 14 | Rope ladder going down |
| 15 | Wobbly |

If an error occurs and <ESCAPE> has not been pressed the computer reports the error, displays the instructions, and goes back to the program without losing any screen data.

The game

When the menu is displayed for the first time three game screens should be read in from disc before the game is played. The next time you can go straight to the game with the old screens, or load in new screens. The time target can be reset for faster or slower players.

The movement keys for Hugo are the same as in the designer, also with a joystick option. He can climb trees and fall from any level without damage. Watch out for caterpillars, deadly nightshade or drowning in the water. There are ladders, bridges, a wobbly and trampoline-like tufts of grass.

When all the butterflies are collected, go to the END symbol. The

Once designed, you can load your own screens and set your own time limit.



remaining time is added on to the score and Hugo goes on to the next screen. There are five lives, and if he loses all five the control goes back to the menu. If an error occurs it will be reported before control goes back to the menu.

The Superior Collection

Volume 2

For the
BBC Micro

NEW
RELEASE



KIX

Voted
COMPUTER
GAMES BBC
MICRO GAME
OF THE
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REPTON 2



DEATHSTAR



SPACE PILOT



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CRAZY PAINTER



OVERDRIVE

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Playability	95%	
Graphics	90%	
Value for Money	65%	

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Value For Money	100%	

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AUTOMATIC DISK CATALOGUE

A fast and efficient means of finding the program you need – in an instant!

Do you systematically label each one of your disks, every time you save a new program? And can you immediately find that urgently needed utility which you saved a few weeks ago on one of your disks? You know it's there somewhere, but on which disk?

If you have built up a large collection of disks, then you have probably experienced this problem at some time. What you really need is a data file from which you can instantly access the catalogue of any of your disks. A computer database is a very good means of storing lots of information on virtually any subject, but it does take a considerable amount of time and effort to enter the vast amount of information required to build up the database in the first place.

This disk catalogue program, will allow you to create a database of all your disk files, but it will read all the information automatically from your disks, thus avoiding the need to enter all the data manually. So no matter how many times you write to your disks, it becomes a quick and easy routine to update the relevant entry in the catalogue.

The program will deal with any type of disk drive combination you may have. Single or twin drives, single or double sided drives and 40 or 80 track systems are all catered for. The program has also been designed to work with standard Acorn 31 file disks and also 62 file disks similar to the Watford DFS format.

Before using the program, you should ideally number all your disks, so that they may be identified easily in the catalogue. If you use double sided drives, then your disks should be numbered with a different number on each side, as the program will store

each side as a separate entry in the catalogue.

There are some variables which you may need to change in order to make the program compatible with your particular disk system. The catalogue will store about 275 records on a 40 track disk, which also contains the program. I have actually initialised the variable 'record%' to 200 at line 460 in the program. However this may be increased to a maximum of 275 if you wish, and 80 track users may increase this variable to 575.

As well as producing a catalogue of the disk filenames, the program also calculates how many free sectors are remaining on the disk. The variable 'max%' is initialised to the number of

available sectors on the disk. This is 400 for a 40 track disk, but 80 track users should change this value to 800 at line 420.

When running the program, the user is first presented with a couple of questions concerning the particular disk drive in use. The program will use this information later on, when adding disks to the catalogue.

The program goes on to display the main menu, which has five options. Option A is used to initially create the catalogue file on the disk, and this option should of course be taken when first using the program. Under option A, the catalogue is first filled with 200 (or whatever the value chosen) dummy entries. This takes several minutes and then the program



OPTION B. VIEW CATALOGUE

DISC NO. 1 TITLE:- DISK-USER
 FILENAMES 24 FREE SECTORS 24

HARD	\$	MESS	I
LOCS	I	ZOTH	\$
CAT	\$	BMENU	\$
RUNALPH	\$	GAME	\$
MASTER	\$	SOURCE	\$
RUNDISCP	\$	DESIGN	\$
DEX	\$	TEST	\$
ZSCREEN	\$	LOCS	\$
MESS	\$	MEGADAT	\$
INIT	\$	DISC	A
ALPHA	A	MENU	\$
!BOOT	\$	CHANGE	\$

(F)orward (B)ack (M)enu

returns to the menu.

Option B allows you to view any record in the catalogue. You must first enter the number of the disk you wish to view, and the information will then be retrieved from the file. From there it is possible to move forwards or backwards through the catalogue by pressing the F or B keys. Pressing M will return you to the menu.

Option C is used to add new disks to the catalogue. To add a disk, input the number of the disk you wish to enter, and the program will then check if data is already stored against this disk number. If it is, then a warning will be issued, and the option to overwrite the data or return to the menu is given. Assuming that you wish to continue, then the program will advise you exactly which disk drive to place the disk in. Just follow the on screen instructions, and the catalogue will be read automatically and stored in the data file.

If you wish to delete a disk from the catalogue, then take option D from the menu. You will be asked for the disk number that you wish to delete, and an 'Are you sure' message is given before the data is deleted. If however you simply wish to update a disks catalogue, then just use the add option, and overwrite the existing record. It is not necessary to delete the disk before updating.

A word of warning. Many commercially produced disks do not contain a true catalogue, as they write directly to the floppy disk controller without using the normal Load/Save DFS commands. Therefore this

program will not catalogue these disks correctly, and the number of files and free space displayed will probably be inaccurate. In view of this it would probably be advisable to use this utility only for your own disks which have been produced using standard DFS commands.

The program has been produced using a standard 31 file DFS with 8271 single density disk controller. Due to the many varied multi-catalogue DFS systems now available, it is not possible to produce a program which will be completely compatible with all these systems. However, the program has been designed to work with the Watford DFS system, which allows a 62 file catalogue. Any other DFS which holds a second catalogue in sectors 2 and 3 of track 0 should be compatible.

The variable 'dfs%' is set at line 430. the value must be 1 for 31 file disks and 2 for 62 file disks. The program checks this variable at several points in the program, and acts accordingly. When using the view option, it takes two screens to see the whole catalogue of one 62 file disk, and these are identified as screens A or B alongside the disk number.

The program will not cope with a mixture of 31 file and 62 file disks. Once the datafile has been created using a particular dfs% value, then all disks stored on this catalogue must be of the correct format.

One final point. A catalogue created for 62 file disks will of course only store half as many disks as a 31 file catalogue.

Main Variables

m\$	Teletext control codes
me\$	Screen message
file\$(x)	Filenames array
dummy\$	
dummytitle\$	
dummy%	Dummy variables used to create file
name%	Number of files on disk
max%	Maximum sectors on disk
space%	Number of free sectors
record%	Number of disk records
number%	Record number to be added to file
drive%	Disk drive to be read
side%	Which side of double sided disks
title\$	Disk title
start%	Disk number being viewed
delete%	Disk number deleted
length%	Length of each file
total%	Total length of all files
sectors%	Total sectors in use
dfs%	DFS type, 31 or 62 file
flag%	Data already stored flag
totalnames%	Total filenames on a disk

PROCEDURES

message	Displays text messages
initialise	Initialises variables
menu	Displays main menu
delay	Delay period
create	Creates new datafile
add	Add new record to file
view	View file contents
delete	Delete record from file
drives	Selects disk drive combination
sides	Selects side of double sided drive
space	Calculates free space on disk
assemble	Assembles machine code routine
check	Checks if data already present

TAPE TRANSFERRENCE

How to transfer programs from tape to disk with as little headache as possible!

Moving files from tape to disk is so awkward that, when you do get round to buying that disk drive, it hardly seems to have been worth it. The favourite game won't run. The company is long gone or doesn't offer an upgrade service. Even some programs you typed in from a magazine and have loaded from tape and resaved to disk give "Bad Mode" error messages now that you try to run them from the disk. What was the point?

Well don't despair. Firstly, if you have a Model B or B+ there are things you can do to get back some of the memory space you have lost now that you have a disk filing system (DFS) or advanced disk filing system (ADFS) installed. If you are the proud owner of a Master 128 then this particular headache has been designed out by Acorn. The starting point of BASIC programs will be PAGE &E00 whatever the filing system you are using. Model B and B+ owners will have to use some tricks of the trade to get PAGE back to that &E00 level without losing their program.

Download is a handy and standard program that gets round this problem by transferring a BASIC program to this page setting. Some disk interface/filing system combinations, notably Opus DDOS/Challenger 3, have a simple tape to disk utility built-in so you may be able to take advantage of this. Watford DFS and DDFS have a command which combines three commands in one:

load
2 download (move the program to &E00, the level for tape machines
3 and RUN

This will work when a program written to work on a tape based computer is simply too long to fit into the remaining memory on a disk based computer. You will find a simple download routine in our karate game this issue. The file on the disk is 'MASTER' and the routine is right at the end so take a look.

On the B+ a simpler solution may be to enable a shadow screen Mode for the program to work in. This can be done by issuing the**SHADOW command or by loading the program and changing the Mode number, say from Mode 1 to Mode 129. The screen display will now live in shadow RAM (which lies in parallel with normal memory) and will free the old screen memory for the BASIC program or machine code data.

On all machines, if a BASIC program has some assembler code embedded in it, then it should be possible to run the assembly separately and to**SAVE the already assembled machine code to disk. The assembler section of the BASIC program can then be deleted. The machine code must now be**LOADED into the appropriate location and the BASIC program RUN as normal. Take care when using this technique to make sure that all the correct locations are used for reloading and running code and that the BASIC program is not going to be overwritten in any way by the machine code data.

Data transfer from cassette to disk takes much the same form. A datafile on a disk is essentially a block of numbers which can be **LOADED under the tape filing system and then**SAVED under the DFS. Information required is the start and

end address of the block, or its length. This can be extracted from the tape filing system by issuing the**OPT1,2 command before**LOADing. A quick example sequence:

***tape**
***opt 1,2**
***load example 1900**

Searching

Loading

example 02 021C FFFF0E00
FFFF8023

***disk**
***save example 1900+021**

The display may vary slightly from model to model but the sequence remains the same. The final line consists of the command to save example to disk, the start address of the block of data which was specifically loaded at 1900 with the third line, plus the length of the block, gleaned from the information in the third from last line.

Although the above will work, Master 128 owners have their own transfer routines for moving files between different filing systems built in so look up**MOVE for enlightenment.

Next step – commercial software

Beyond the simple moves above are the complex 'cracking' sessions which are really only for those who enjoy their machine code routines and hex conversions. If a piece of software is

vital or loved or the tape collection is vast then a commercial transfer utility may be a sound investment, bearing in mind how long the transfer can take and how awkward it could be.

An automatic method of transferring your files from tape to disk is particularly attractive. The tape to disk utility is one of many excellent routines and full blown utilities in the BBC Soft Toolkit II pack by Ian Trackman. It does all the hard work of loading and saving at the right point in memory and with the right file information (length, load address, start address) transferred across along with the data.

If you have bought a filing system such as Opus DDOS or you have an Opus Challenger 3, then there is a TAPEDISK utility within the ROM. This particular one works like the Toolkit II routine but one file at a time. You have to reissue the command for each file. Neither of these two utilities will deal with protection techniques such as locked files.

Watford's tape to disk utility is ROM based. Just plug in and away you go. Watford's update policy has meant that most games will transfer without problem.

Replica III

Clare's old favourite is a disk based system which, in its latest form, allows any number of tape programs to be transferred to a set of disks providing that the master (Replica III) disk is placed in the drive to verify that the user is the same as (or is authorised by) the owner of Replica. This is in line with Clares own strong anti-piracy stance.

Replay

Vine Micros' Replay is not just a tape to disk copier. The Replay system is based upon a small PCB which sits in a ROM socket. Attached to this is a switch which is fitted at the back of the computer. When the switch is thrown the entire contents of memory is saved. It is then retrievable at the exact stage at which it was saved. Thus a program loaded via tape can be stopped midstream and saved in its entirety to disk. The one set of registers which cannot be saved belong to the graphics chip which controls aspects of the screen display. Therefore any 'special' screen Modes defined by a programmer have to be redefined by the Replay user. Editing facilities are made available as part of the Replay ROM software to enable this.

Ice Box

Event One came up with a fascinating product in Ice Box but its advantages are limited to those who own sideways RAM. Solidisk sideways RAM is the one supported but it might be worth checking with the company to see if others have emerged as compatible. With Ice Box installed, you can 'interrupt' a program at any point with a 'hot key'. A number of options can then be programmed into the function keys, such as saving to disk, printing the screen and POKing extra lives for the game you are playing! Like Replay, Ice Box saves the whole of memory, in three chunks, for later manipulation, reloading. A very neat manual gives full instructions, including tape to disk techniques available.

All round

In all the above cases, if you have a specific program which you wish to move from tape to disk then it pays to get the advice of the software publisher. You will find them helpful and knowledgeable. Given a description of the problem, they will be able to tell you in 99% of cases whether the program will transfer successfully.

Data

Ice Box
Event One, 73
Church Street,
Malvern, Worcs
WP14 2IAE

Watford transfer
ROM
Watford
Electronics, 250
Watford High
Street, Watford,
Herts WD1 2AN
Tel 0923 40588

Replay
Vine Micros,
Marshborough,
Sandwich, Kent
Tel 0304 812276

Toolkit II
BBC Soft, 35
Marylebone High
Street, London
W1M 4AA
Tel 01 927 4518

Replica III
Clare's Micro
Supplies, 98
Middlewich Road,
Cheshire CW9 7DA
Tel 0606 48511

DISK EXAMINER

An invaluable utility that will keep your disks neat, ordered and intelligible

This program is a utility to help users to tidy up a disk by identifying files and deleting them with the maximum of ease. I have found it very useful and I suspect that I am not the only person who is baffled months later by what were originally meant to be meaningful filenames.

Although the program is mainly intended for use with word processor files it will work with BASIC programs, though the latter will look a little strange as BBC BASIC tokenises keywords. The program works in 80 column mode and compacts the disk automatically at the end of a session. The drive number, the disk title (if any) and the name of the files are displayed at the bottom of the screen. All instructions appear in the bottom right corner of the screen.

Having selected the relevant drive the program will automatically display the contents of the first file on the screen. The user can pause at any time by pressing the Space Bar. He can then choose to see more of the file or proceed to the "Delete (Y/N)" option. If the file is very short the program will jump straight to this option without the need to press the Space Bar. Having decided to delete the file or otherwise, the next file will now be displayed on the screen. This continues until the last file when the disk will be automatically compacted. The program can then be repeated for another disk. At any time the program can be safely interrupted by pressing (Escape). The reset routine will close any open file and return the system to its original state.

The program will work with the Acorn DFS and also the Watford DFS. The latter has the very useful facility of allowing 62 files. The program will automatically detect if the second Watford catalogue is in use and access all the files on the disk.

Program details

(Numbers refer to line numbers in the enclosed listing)

110 & 120 The DFS command *COMPACT used at the end of the program could overwrite it. This is avoided by these two lines which reserves an area of memory just below the Mode 3 screen area. Normally *COMPACT uses the memory between OSHWM and HIMEM. OSHWM is the operating system high water mark. It is used by BASIC to set the value of PAGE and normally would be &1900 on a machine fitted with a DFS. HIMEM is the first memory location used by the screen display and in this case is &4000. The value of OSHWM can be altered by making the OSBYTE call *FX180,n where n is the high-byte value of the new address. Line 120 alters OSHWM to &2C00 (ie &2C = 44). Line 110 alters HIMEM in the BASIC program to the same value. Hence the BASIC stack is not destroyed by compaction. The operating system however retains the original value of HIMEM set by the Mode 3 command in line 100. Hence we end up with a safe area for compaction of 5K bytes (ie &4000-&2C00).

340 Resets the value of OSHWM to &1900.

400 Sets aside memory to store the disk catalogues.

410 & 420 For BASIC 1 users it is always better to dimension strings to their maximum length at the start of a program, because of the inefficient way strings are handled in memory.

440 Switch off auto-repeat.

500 PROC causes all text to be printed in reverse video. PROCn switches off the effect.

740 Statements preceded by a "***" are sent to the operating system, which means they cannot contain BASIC variables. The routine here gets round this problem and makes the program compatible with BASIC 1.

780-910 There are various official calls available for reading the information on a disk. Because the program is compatible with the Watford DFS it must read not only the filenames in the catalogue in sector 0 of track 0, but also the filenames in the second catalogue in sector 2. As well as this sectors 1 and 3 are read. This is to check if a second catalogue is present (the first eight bytes of sector 3 all contain &AA) and to find the number of files in the catalogues as this controls the FOR...NEXT loop at lines 200-240. An OSWORD call with A%=&7F is used to read the first four sectors of track 0 into the byte array "buffer". A number of procedures in the program access the information they require by locating the correct bytes in this buffer, which is a replica in memory of the first 4 sectors of the disk. Another byte array "block" is used to set up the control block for the OSWORD call (X% and Y% point to the low and hi bytes of the address of this block). The control block is organised as follows:

00	Drive number
01-04	Start address of destination for data
05	Number of parameters
06	Action (&53 = read)
07	Track number
08	Sector number
09	Number of sectors to be read (the &20 specifies the sector length)
10	This will contain 0 if the data transfer is successful.

IMPORTANT: this routine must be handled with great care. For instance a value of &21 in byte 06 would overwrite the catalogue and hence lose the files on the disk.

930 The rather peculiar loop in this procedure is because of the way the disk information is organized. The first 8 characters of the disk title are in sector 0 and the last 4 in sector 1.

1110 Check if second catalogue is present.

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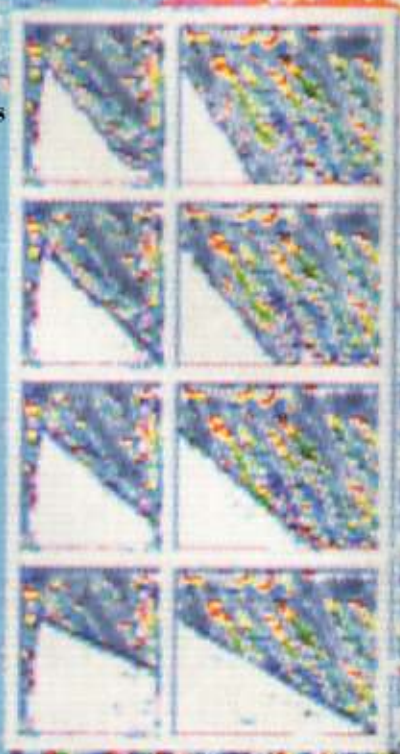


Direct Disk Supplies Ltd.

Dept. DU1, FREEPOST, 129 High Street, Hampton Hill, Middlesex TW12 1BR

CUBE OF ZOTH

Jonathan and Jane Evans



Abbas



For all models of the BBC, this adventure has over 120 locations and a similar number of text messages, puzzle lines and vocabulary of words. It is really three games in one and each can be played separately although all three have to be solved if you want to enter the competition. But before attempting to outwit Zoth the megabeing, you should arm yourself with some background information.

Zoth is, to his knowledge (and there is very little that he does not know) the greatest being in the universe at the beginning of the 29th Century, reckoning from the old Earth time. This method of time scaling is generally regarded as the only cultural contribution of that undistinguished planet, which was destroyed by a meteor storm some centuries ago. But Zoth is no descendant of Earth. He is, in fact, the last surviving member of a race from the planet Partius whose extinction can be traced directly to their extraordinary brain development.

Most intelligent races develop mechanical computing and thinking devices at a certain stage in the evolution of their civilisations – an invention which greatly retards further development of their brains, since the machines eventually assume all major intellectual functions leaving their masters free to idle their time away pursuing sport and leisure. However, Partius, on which Zoth's race evolved, lacked suitable minerals for the construction of any such machinery, leaving the intelligence of the species free to develop over millions of years. As this unnatural development continued the Partian body gradually withered and distorted as the huge brain assumed an ever increasing proportion of the body weight. Without either computing machinery or robots to call upon, the race began to die out through physical inability to feed and care for itself.

Zoth was the final survivor because a biochemical freak produced in his mighty brain an extraordinary telepathic ability shared by no others of his kind. As a child born to a dying planet, Zoth discovered at an early age that he could reach into the minds of those around him not only to extract their every thought and memory pattern, but also to bend them to his will and command their behaviour through pure thought. Whilst ruthlessly harnessing the remaining energy of the dying megabeings around him to his own ends, Zoth came to the rather unpleasant realisation that he could not survive in the long term once the others were dead. Denied any means of travel, he began to cast the power of his mind out into the surrounding areas of space.

Zoth discovered that occasionally space traders from other civilisations would pass in their ships near enough to Partius to permit their minds to come under his extraordinary telepathic control. He began forcing such traders to land their ships on his planet, turning them into zombie-slaves with no will of their own. He was delighted to discover that most were physically strong and healthy – despite, or perhaps because of their tiny brains. One of the first operations that his zombie force carried out under his command was the mass murder of the helpless remaining Partians. This appalling genocide was motivated partly by an intense jealousy of Zoth for any being remotely near to his own intellectual level and partly because he could see no benefit to himself in keeping them alive. It may also be that he wanted no visible reminder of his own feeble and deformed body. Be that as it may, this was a decision which Zoth, over the centuries of life that he was now able to maintain, was to come severely to regret. Put quite simply, the problem was that Zoth became in time extremely bored.

In the early days of his enforced colonisation of the space traders, Zoth amused himself by draining the memory banks of his captives' brains and studying the contents in the finest detail. In this way, he learned of many cultures and civilisations. Amongst his captives were a number of descendants of Earth people who had colonised space quite widely prior to the destruction of their original home planet. Many images of the old planet Earth were available through the minds of these Earthlings left from their childhood education – though none, of course, with their eyeblink life spans had ever seen the planet themselves. Despite the feeble intellect of these creatures, Zoth developed a fascination with the

history and geography of this extinct planet. He even drove his zombies to build him a temple in the style of ancient India in which he had his grotesque body enthroned.

Whilst Zoth became a great galactic historian, he never absorbed any of the moral values that normal beings require to live in a society of peers. A ruthless and total obsession with his own physical and intellectual needs continued to dominate his every (mental) action. Whilst the former were satisfied by the slaves, the need for intellectual stimulation became critical once the fund of knowledge acquired from his captives reached its inevitable limits. To his disgust, Zoth eventually discovered that the new traders that he was continuing to capture had little or nothing in their memory banks that he had not already extracted from earlier victims. His boredom grew ever greater.

One of the features of Earth culture that Zoth had detected was the prevalence of sporting and competitive leisure activities. Earth people would set themselves extraordinary challenges such as climbing mountains, or engaging in peculiar games involving the physical movement of balls and other objects. An essential feature of such recreation, he decided, was that the participants exposed themselves to risk. Their games were always challenging, and the pleasure of success built always upon the risk of failure. So how could he, Zoth, create some sport to relieve his own boredom?

Eventually, he decided that his sport would involve newly captured traders whose minds were still their own. To gain pleasure, he must also take the risk – however small – that his captives might be allowed to leave free and unharmed. Of course, he would present them with challenges that they were very unlikely to meet, so that he could enjoy the pleasure of winning. The games that Zoth devised involved setting a new captive three puzzles to solve, each of which could be set in any location of the galaxy and at any period of time that he chose. Of course, with his telepathic powers, Zoth did not need actually to construct the physical environments in which his victims struggled for their freedom. He merely created illusions in the minds of his victims that appeared totally real to the unhappy captives. Not only did he create an illusion of time and place, but he even provided his playthings with a persona, that is the consciousness and memories of a real individual within each of the game scenarios. However, he left each with their natural level of intelligence to provide what he liked to think of as a 'fair' game. Occasionally an exceptionally clever and brave captive would solve one of the puzzles, and on very rare occasions two. None, so far had solved all three, however, so it is impossible to say whether Zoth would really keep his self promise and let them free. All failing victims were either killed or added to his zombie force, depending upon the size of the current slave population.

The three puzzles of Zoth

In constructing his puzzles, Zoth was rather biased by his interest in Earth history, actually setting two of the puzzles on this planet, though at different times in history. One of these he decided to place on a small island in the South Pacific ocean during the 18th century. The persona which gave to his subject was that of a pirate who had spent a number of years sailing with a shipful of tough and ruthless outlaws who made their living by attacking peaceful trading vessels and stealing their cargo – often butchering the crew in the process. Zoth had no sense of good and evil as we know it, and simply projected this personal history because it struck him as interesting.

As the subject enters the pirate's persona he discovers himself to have been shipwrecked on a small, fertile but uninhabited island. The pirate is

the only survivor of the wreck and must find by his own initiative alone some means of escape from the island. Zoth provided the means of achieving this within the telepathically constructed environment, whilst doubting – correctly as it proved – that many of this victims would have the wit to detect and use these means correctly.

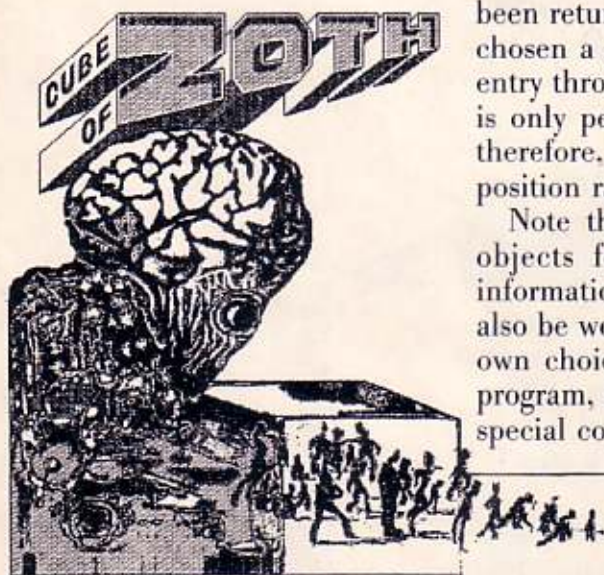
For his second puzzle, again set on Earth, Zoth chose the city of London during the early 21st century. Zoth held some admiration for the totalitarian regime of this period which had replaced the almost unbelievably pathetic system called 'democracy' which had prevailed within Britain and a number of allied countries during earlier centuries. Zoth found the notion that those holding power should voluntarily relinquish it on the basis of something as whimsical as a popular vote almost impossible to comprehend. However, he was also fascinated by the notion of political assassination which featured so strongly in Earth history. Hence, he decided in this puzzle to project the persona of a fanatical subversive whose life was devoted fearlessly to destruction of the head of the prevailing regime.

Although his third puzzle was set some 500 years later in a different part of the galaxy, Zoth's interest in Earth style politics influenced his construction of the scenario in this case also. He chose the unlikely setting of a fully roboticised mining planet (or rather a moon of a nearby planet) called Manta, which he had extracted from the mind of a recently captured trader who had actually visited the place. Manta was – and since its colonisation and exploitation always had been – a boring, automated producer of the metal Titanium. But suppose something had mysteriously gone wrong and the mineral production dropped drastically without explanation? Would his subject have the ability to discover and correct the problem that he had in mind? Zoth provided his subject with the persona of an official investigator of one of the several Galactic trading companies of the period which ruthlessly exploited the natural resources of the galaxy with the sole aim of maximising the profits and wealth of their owners.

Playing the game

Well now that you know the background, you may have some idea of what you are up against. At the start of the game, you are a recently captured space trader floating within the 'Cube' of Zoth. The four faces in the directions North, East, West and South are each of a different colour and each opens into a correspondingly coloured room. Three of these will permit entry to each of the three puzzles. In effect, these constitute three quite separate adventure games which can be played and solved in any order. No objects are retained once you have solved a game and have been returned to the Cube. However, you must note that once you have chosen a game you cannot return to the Cube without solving it. Also, entry through the fourth room to your final encounter with Zoth himself is only permitted if all three puzzles have been solved. It is essential, therefore, that after solving one game, you continue play from a saved position rather than starting again from the beginning.

Note that only one- or two-word inputs are accepted, but that all objects found can, and should be, examined to provide further information. Some objects can be carried around and some of these may also be worn. Games may be saved at any time under a filename of your own choice. Attempting to load a file not on the disk will 'crash' the program, but you can check the disk catalogue within the game by the special command.



COMPETITION

Win a double disk copy of the Adventurescape Adventure Generator in our first Disk User competition. To take part, just put your copy of Disk User in your disk drive and choose Cube of Zoth from the menu page. Playing and completing Zoth is the key to the competition prizes

The Cube of Zoth is a science fiction adventure with three games to complete. The three tasks of Zoth take you into the past, near and distant future. Here's a taste of where you will be going.

An undistinguished but honest space trader, you made the mistake of taking a short cut through an uncharted piece of hyper-space. You have been captured by a bored mega-being who has set you a few puzzles to solve. Solve them and you escape: fail and you die.

1. You are in a blue room. There is a large screen on one wall with a small digi-pad beneath

The screen comes to life:

"Place: London, Earth. Time: Early 21st century. Mission: Infiltrate Mega-Party Central Office and assassinate PM. Codeword: Cockroach. Do you accept this mission?"

2. You are climbing on a set of natural steps. A warm wind buffets you and looking down you see the mighty surf of the Pacific ocean lashing the sand and rocks below.

Tropical birds of bright plumage swoop all around you, taking food to their young in precarious cliff nests.

To the west you see an area of dense jungle, while a spectacular range of volcanic mountains is visible in the distant north.

3. You are in the control room of a small space buggy, surrounded by controls and instruments. The view from the vid-screens indicates that you are perched on top of a large building surrounded by the inhospitable rock deserts of Manta. Visible exits: east, down you see a control panel you see a computer display unit

If you have the talent, then you will be able to complete all three games of the Cube of Zoth. On doing so you will receive a number, a unique number only obtainable by winning the game. The first 30 people to complete the game and send us their unique number will win a double disk copy of Adventurescape. To claim your prize send your number to:

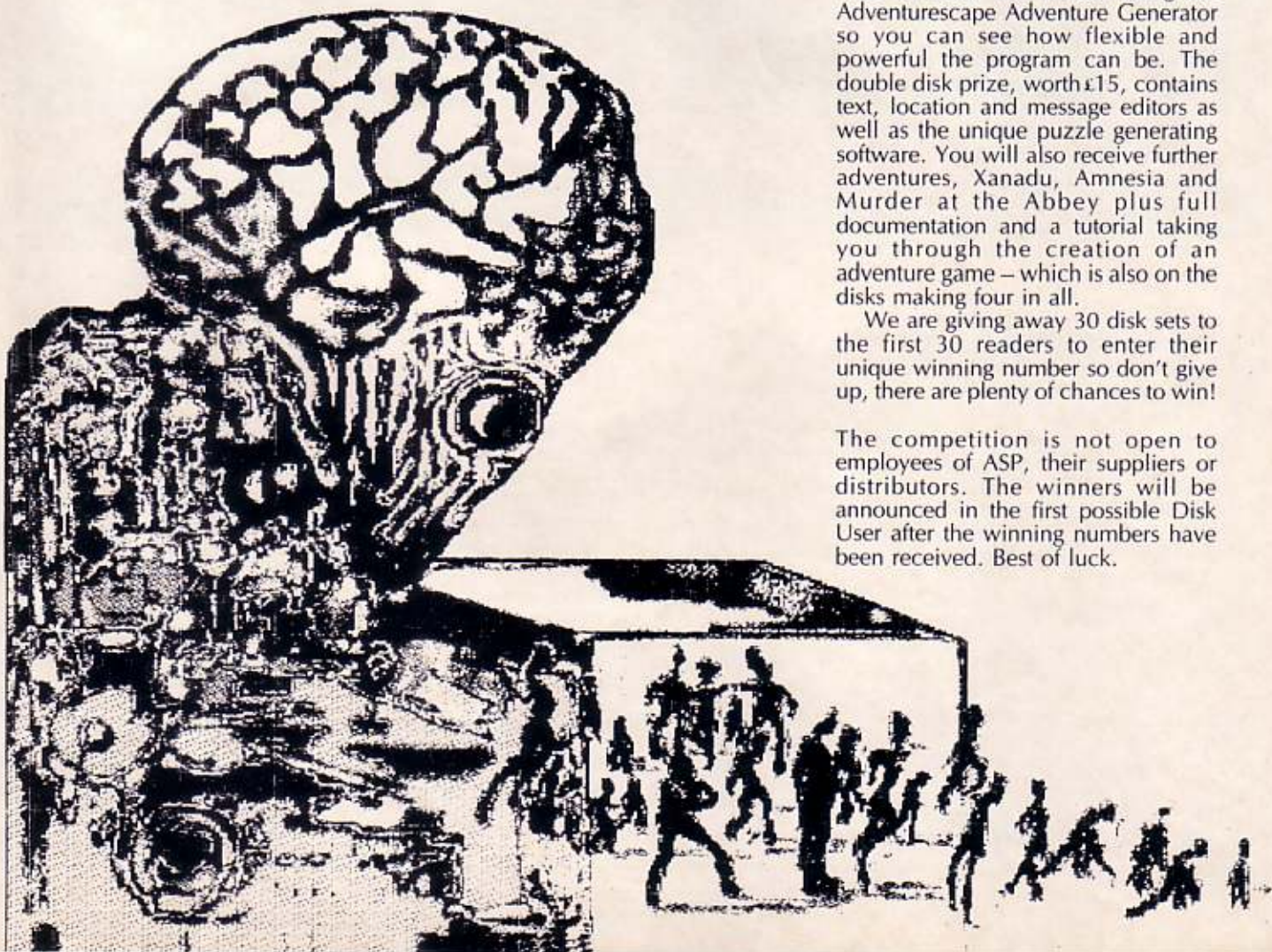
**Cube of Zoth
Disk User
Number One Golden Square
London W1R 3AB**

The Prizes

Cube of Zoth was written using the Adventurescape Adventure Generator so you can see how flexible and powerful the program can be. The double disk prize, worth £15, contains text, location and message editors as well as the unique puzzle generating software. You will also receive further adventures, Xanadu, Amnesia and Murder at the Abbey plus full documentation and a tutorial taking you through the creation of an adventure game - which is also on the disks making four in all.

We are giving away 30 disk sets to the first 30 readers to enter their unique winning number so don't give up, there are plenty of chances to win!

The competition is not open to employees of ASP, their suppliers or distributors. The winners will be announced in the first possible Disk User after the winning numbers have been received. Best of luck.



COLLECTORS ITEMS

Amusing and entertaining animations created by Abbas. Collect the complete set of A to Z animations, only in Disk User



Computer graphics have come a long way recently with add-on hardware to bring the basic BBC Micro up to the standards required of professional art, video and television studios. However, computer artists are still coming up with stunning screens on standard Model B and Master computers. Disk User has commissioned a series of animations from top computer artist, Abbas.

Ignore the Atari and Amiga and check out the brilliant skills of an artist at work with this series we are calling 'Collectors Items'. Why not set aside a newly formatted disk and copy the animation over, the start of a collection you can show friends and family.

The two files which make up the "A is for Archer" animation are:

P.RUNALPH
D.ALPH

Just copy them across to your animation disk with the *COPY command. CHAIN "P.RUNALPH" to set the animation running.

Abbas and the Prisma II

As well as contributing to Disk User, the disk, Abbas has supplied the artwork for our science fiction adventure, Cube of Zoth. This artwork was created on the Prisma II, a specialist graphics processor which is controlled from a BBC Micro. Graphics can be achieved in a variety of ways, from simple VDU commands in BBC BASIC to instant 'cut and paste' on screen under the control of a digitising pad. The very high resolution screen, which will soon become more familiar to Acorn

followers when the RISC based computer is launched, can be panned sideways for up to seven screen widths.

Prisma II is now used extensively in video work, at the Cardiff studio of BBC Wales for instance. Abbas makes use of Prisma for screen graphics that stun boards of directors when financial results are presented with Prisma produced slides. Book and magazine covers and brochures have all been produced with this system. This BBC Micro based system is performing desk top publishing, in colour, to the highest standards.

Abbas' animations grace Acorn show stands, specialist medical software and building society promotions, and now the screens of Disk Users. Collect "B is for..." in issue 2, out on 17th July.

THE MASTER

Tie your hair back, put on your robes and prepare for combat with fist and foot!

The Master is a two player Karate simulation in which both opponents are fighting to be the first to attain the status of a Black belt. Each player has a repertoire of five moves:

low
punch
sweep
low kick
high kick
arm block.

Although you can step backwards you can only advance by doing a high kick. (This automatically makes you take one step forward.)

Program notes

The Master will automatically download itself to &E00 and therefore should be saved before running. Once run there will be a short delay while data is poked into memory.

Keys

Action	Player One	Player Two:
High Kick	S	O
Low Kick	Z	O
Sweep	D	=
Low punch	W	>
Arm block	2	K
Retreat	1	L
Freeze	F	F

Main variables

P1 Player 1's belt
P% Player 1's position
E% Player 1's current move
P2 Player 2's belt
C% P ayer 2's position
F% Player 2's current move.

The combatants square up to each other. A number of 'moves' are possible for each player



PROCEDURES

PROCgame Main control loop
PROCreset Start next round
PROCinstr Instructions
PROCblack Blank out picture
PROCcolour Define colours
PROCTitle Print title banner
PROCScreen Set up screen
PROCbow Introductory ritual
PROCmessage Scroll message onto screen
PROCbelts Print player belts
PROCbelt Used by above

PROCinit Set up arrays/chr\$/assemble machine code/etc
PROCbig Print large characters
PROCdata Poke data into memory
PROCck Player 1 low kick
PROCch Player 1 high kick
PROCcs Player 1 sweep
PROCcl Player 1 low punch
PROCcb Player 1 arm block
PROCcre Player 1 retreat
PROCd Player 1 dead
PROCplayer Player 1 control

PROCpp Player 1 wait
PROClf Player 1 stance
PROClk Player 2 low kick
PROChk Player 2 high kick
PROCs Player 2 sweep
PROClp Player 2 low punch
PROClb Player 2 arm block
PROCre Player 2 retreat
PROCc Player 2 dead
PROChuman Player 2 control
PROcp Player 2 wait
PROClf Player 2 stance

THE WINCHESTER

With hard disk drives we are at a similar stage to where we were with floppy disks two years ago. The prices are rapidly falling within BBC budgets

Could this be the year of the Winchester?" one magazine asked recently. "Maybe next year" was the almost universal reply. But hang on, the starting prices of decent sized hard disks now look just about within reach although the £600 plus price tag remains a major outlay.

Pounds and pence per K of storage is a logical calculation in deciding what to buy and it is essential to plan your requirements carefully. Ten and twenty Mbyte drives are major purchases which need justifying and floppy storage capacity has also gone up recently, perhaps enough to cope with your needs. But what you will gain with a hard disk is rapid response as well as large storage. This is becoming increasingly relevant with disk based products becoming the normal way for software to get around the small 8 bit memory of the BBC Micro.

Five Mbyte drives are no longer available but if you can pick up a second hand drive then this kind of storage is fine for a home user. A small business application, say a video library running a database of customers, logging dates and periods of hire and a form of stock control, won't get away with five Mbytes, perhaps not even ten.

Tidying up unused files, temporary storage and so on can put off the dreaded moment when backing-up old data to floppy disk becomes necessary. If you want to hold accounts and correspondence too, and most firms want to keep such records over at least six months, then space gets tight. Twenty Mbyte hard disks are now almost a standard first purchase and prices as low as £600 are not unknown.

When buying a hard disk, watch out for the difference between old style hard disk and the new slimline disks with smaller casing and faster response times hidden away. There is a comparison here with the old and new style floppy disks. A bit extra for the latest technology is usually worth it when storage is concerned.

The hidden extras

A good set of utilities is essential for both transfer to hard disk from floppy and for housekeeping when up and running and backing up to double density floppies. Acorn's own DIRCOPY is friendly and automatic. You may have encountered the Acorn ADFS utilities on floppy and thought them awkward but they were originally designed for hard disk where access time is acceptable. Solidisk supply the bare bones *commands as utilities in their DFS 2.1 ROM to be used in conjunction with their ADFS 2.1. You can easily write small BASIC programs or EXEC files to automate a copying process to fit your needs. Viglen supply Acorn ADFS and compatible utilities, plus an ADFS menu program. Technomatic's winchesters are also intended to be controlled by ADFS. In all cases you will need the Acorn 1770 DFS so take this upgrade into account when budgeting.

Disk space

The ADFS handles the vast amount of storage in a fairly friendly form but if you have a favourite ADFS utility then it may come in handy as the number and depth of directories naturally increases.

A consideration for Master 512 owners is the possible partitioning of a hard disk, one section for ADFS and one for DOS+. Ten Mbytes will usually handle all the work generated by a small business (but see above) with a bit of room to spare so it is possible to run the two side by side. DOS+ and GEM are heavy users of memory and storage so you won't be able to maintain quite so many records or wordprocessed files. There is always a price for power.

Under normal circumstances a 20 Mbyte Winchester is hard to fill. We are talking about millions of characters making only a small dent in the totals displayed on screen after a *FREE command.

Under normal ADFS circumstances, the 20 Mbyte option can be enough even for the medium sized business. The analogy of a school using 20Mbyte winchesters as a fileserver on a network should not be ignored, and a business winchester should ideally have someone looking after it, the equivalent of the Econet manager who keeps the use of storage efficient and regularly backs up important directories. Backing up a 20 Mbyte unit to floppies is a long, boring job. Tape streamers are expensive and slow but at least you don't have to sit by the disk drive popping in floppies all night! Optical disk storage has appeared on the market but still carries the price tag of an "innovative" product.

Viglen, whose new range of winchesters for the BBC have just come to market, use a remarkably sensible idea. They backup to a second Winchester. You might say that, with a six million turnover, they can afford to do so, but on price, speed and 'not having to stand over it'

ESTER WAY

factors, it's a sensible option for those whose data is vital to the running of their business. The pain on peoples' faces when one Wordwise file of a couple of hundred words is lost is a terrible sight. The accounts for the last three months of a large business could result in a call to the Samaritans!

Linking up

The other growth area for winchester disk storage is in the networking of computers together, all linked to a single central storage device. Acorn of course sell Econet level 3 to schools and colleges. It's a system which relies on the large storage capabilities of the hard disk. The network has, until recently, required a BBC Micro to be set aside as the file-server. Acorn's new File-Store product now takes over the fileservers role.

S D Research, who supply one of three or four alternative manifestations of Econet, are investigating its potential in linking micros used in business via Econet. These include Research Machines Nimbus, Apple, IBM and MSDOS machines. Acorn themselves are working on incorporating the Olivetti MSDOS (IBM PC clone) M19 into Econets for those who wish to run standard business software and so on for their students. And the new Acorn RISC computer will also be capable of linking to other Acorn computers via Econet.

Many other business micros don't network at all but are bunched together around a central storage device, sharing data on it, but not actually linked to each other. This also suits the multi-user micro (potentially the Master 512 running Digital Research's Concurrent DOS). Without

going for a full network, a small office can thus take full advantage of an investment in hard disk storage and expand the number of micros in use as and when they wish. The way in which this can be achieved with two or four BBC Micros is to purchase a multiplexer, a device which allows each micro access, without hardware modification, to the 1Mhz bus on the winchester but makes sure that they only use the device one at a time! The multiplexers are not suitable for use with random access files.

There's no doubt that the hard disk will have its day, especially with storage-hungry high resolution screens and disk operating systems becoming the norm, even on Acorn machines.

Maybe this will be the year of the hard disk after all.

Factfile

- Technomatic
17 Burnley Road
London
NW10 1ED
01 208 1177
- Viglen
Unit 7
Trumpers Way
Hanwell
London W7 2QA
01 843 9903
- Akhter
Perry Road
Staple Tye
Harlow
Essex
CM18 7PN
0279 443521

Disk Data

Akhter's Archive includes a one megabyte floppy disc drive together with a ten megabyte tape streamer for a fast, cheap, and reliable backup storage system for all BBC machines.

Archive is part of Akhter's expanding "UFD" (user friendly drive) series. It connects to the BBC via a generous length of ribbon cable straight into the disc drive port - this makes it compatible with Amcom and Acorn winchester drives.

The tape streamer will probably be of most use to winchester disc users as it can back up a complete winchester, as well as back up individual files and directories. The unit takes the form of a plinth which fits over the BBC Micro or Master. Prices start at £599.95 (ex VAT) for the 10 megabyte winchester disc, and £949.95 (ex VAT) for Archive.

Hot on Akhter's heels are Amcom

Software Ltd, who have released a complete range of Acorn ADFS compatible winchester drives and tape streamers.

An Amcom Winchester can be either 20 or 40 megabytes in size, although larger sizes are available to order. By replacing the connecting cable from the Beeb to the Winchester, you can connect an Amcom tape streamer if you need the backup facilities. Such a device will back up a 10 megabyte winchester disc in about five minutes - about as long as it takes to tidy up, and shut up shop for the evening.

Amcom winchester drives start at £850 (ex VAT) but educational discounts are available. For more information contact Amcom on (0908) 569212.

The Viglen range incorporates, 20Mbyte, 28Mbyte, 40Mbyte and 56Mbyte options.

SOFT SALE

9 Hall Road, Marylands Wood Estate,
Hemel Hempstead, Herts HP2 7BH

CHECK WITH THE TABLES TO SEE IF OUR SOFTWARE IS AVAILABLE FOR YOUR COMPUTER. PLEASE INDICATE YOUR REQUIRED PRODUCT NAME, NUMBER AND TRACK FORMAT IN THE ORDER FORM INFORMATION

Software is only available on the formats recorded in the tables. It is not available on cassette tape. All prices include VAT and postage and packing. Please make cheques/postal orders payable to Argus Specialist Publications Ltd and print your name and address clearly on the back of your cheque. Telephone orders are taken for Visa and Access. All software is sent first class. Prices include postage and packing for European destinations. Please include £1.00 postage and packing (airmail) for other overseas orders. Please allow 28 days for delivery.

PRODUCT CODE NUMBERS

PROGRAM TITLE	BBC B/B+	MSTR 128	COMPACT	ELECTRON
Global View	DB01	DB16	DB33	DE06
Graphics Pack 1	DB03	DB17	DB37	DE01
Ikon Utilities	DB19			
Musician	DB06			
Venturescapes	DB48			
Ed Compendium	DB47			
Mode 7 Utilities	DB12			
Adventurescape III	DB20	DB28	DB35	
Combat Zone	DB21		DB32	
Procyon	EB1			
Easyword	DB22			DE22
Videobase	DB24			
Delivery	DB25			
Easy Font	DB26	DB39	DB44	
ADFS Menu	DB27	DB31		
Graphics pack 2	DB28	DB34	DB38	DE38
Colour Ikon	DB36			
A&B Bibliography	DB40			
Statistics	DB41	DB42	DB43	
Games Compendium I	DB45		DE45	
Home Office	DB46			
Graphics Constr Set	DB49	DB50	DB51	
Compact 100			DB52	

AVAILABILITY AND PRICE

Name	Product	40(small)	80(large)	Price	Videobase	DB24	yes	yes	£6.00
double disk					Delivery	DB25	yes	yes	£7.50
Global View	DB01	yes	yes	£10.00	Easy Font	DB26	yes	yes	£10.00
Electron +3	DE06	no	yes	£12.00	ADFS	DB39	no	yes	£12.00
ADFS	DB16	no	yes	£10.00	Compact 3 1/2	DB44	no	yes	
Compact 3 1/2	DB33	no	yes	£12.00	ADFS Menu	DB27	yes	yes	£12.00
Graphics Pack 1	DB03	yes	yes	£10.00	Compact 3 1/2	DB31	no	yes	£14.00
Electron +3	DE01	no	yes	£12.00	Graphics pack 2	DB28	yes	yes	£10.00
ADFS	DB17	yes	yes	£10.00	ADFS	DB34	yes	yes	£10.00
Compact 3 1/2	DB37	no	yes	£12.00	Compact 3 1/2	DB38	no	yes	£12.00
Ikon Utilities	DB19	yes	yes	£6.00	Electron +3	DE38	no	yes	£12.00
Musician	DB06	yes	yes	£6.00	Colour Ikon	DB36	yes	yes	£6.00
double disk					A&B Bibliography	DB40	yes	yes	£10.00
Venturescapes	DB48	yes	yes	£10.00	Statistics	DB41	yes	yes	£10.00
double disk					ADFS	DB42	yes	yes	£10.00
Educational Compendium	DB47	yes	yes	£10.00	Compact 3 1/2	DB43	no	yes	£12.00
Mode 7 Utilities	DB12	yes	yes	£6.00	double disk				
double disk					Games Compendium I	DB45	no	yes	£10.00
Adventurescape III	DB20	yes	yes	£15.00	Electron +3	DE45	no	yes	£12.00
ADFS	DB28	yes	yes	£15.00	Home Office	DB46	yes	yes	£6.00
Compact 3 1/2	DB35	no	yes	£17.00	double disk				
Combat Zone	DB21	yes	yes	£6.00	Graphics Construction Set	DB49	yes	yes	£10.00
Compact 3 1/2	DB32	no	yes	£8.00	ADFS	DB50	no	yes	£10.00
Procyon	EB1	EPROM only		£11.50	Compact 3 1/2	DB51	no	yes	£12.00
Easyword	DB22	yes	yes	£7.50	double disk				
Electron +3	DE22	no	yes	£9.50	Compact 100	DB52	no	yes	£15.00

Global View suite

This Global View package incorporates full global graphical displays of the seasons, day and night; alternative maps; continental drift; equidistance maps; a module to design your own world; model globes — section printouts with which to make your own model globes, of the earth today, 1 million years ago, or a planet of your own making!

With the Pangaea programs you can go back to a time when the world didn't look quite the same! You can run through the history of the earth's development up to the present day. Further background information and additional graphics (of fauna and wildlife) are displayed for each period. You can even go into a predictive sequence to see what the earth may look like to future astronauts lucky enough to look down upon its surface.

Our animation programs incorporate a DUMP key so that any of the screen windows can be saved to disk from any of the Global View suite of programs under a unique filename determined by the month/day/time parameters.

These displays are then retrieved from disk in sequence. Different screen windows can be animated up to the capacity of your disk drives. When using RAM disk, the effects are even more stunning.

HAM Radio enthusiasts who wish to update the on screen information at regular time intervals will find this upgrade invaluable.

As well as full on screen instructions, the package comes complete with necessary documentation. The whole suite is a uniquely educational and enjoyable package for the BBC Microcomputer, Model B, B+ or Master 128 (this version supplied on one ADFS disk). On two DFS disks for just £10.00.

A single disk Electron +3 version of the suite contains all the above but not the animation facilities, which the hardware does not support.

●BBC Model B/B+ disk £10.00

Order product number DB01

●Master 128 ADFS disk £10.00

Order product number DB16

●Electron +3 disk £12.00

Order product number DE06

●Master Compact 3.5" ADFS disk £12.00

Order product number DB33

Musician

Musician is a suite of programs to help you compose, edit, store and play sounds and pieces of music on the BBC. The main program employs the Creative Sound Language with which you may compose or copy tunes to incorporate into your own programs. A further module allows the music to play in the background while loading a game. Example data include classical and modern pieces.

Supporting programs are Soundstore — an electronic

library of envelopes and sound statements, **Player** — which turns your BBC into an electronic keyboard with digital recording, editing and playback and **Composer** — a music editor with standard musical notation on screen. Other musical examples are included. Make music, get **Musician!**

●BBC Model B/B+/Master disk £6.00
Order product number DB06

Home Office

Desk Diary — full diary facilities with search dates, key string search, full diary description per entry and browse facility. **Desk Diary** is so quick in operation that it actually makes using a computer based diary a practical possibility

Notepad — an 80 column wordprocessor

Financial Manager — bank and savings account processing

Mail List — a database program tailored for mailshots
Further programs produce invoice and delivery notes, statements, orders and credit notes. Menu driven and very easy to use. Disc only.

●BBC Model B/B+/Master 128 disk £6.00
Order product number DB46

Easyword Word Processor

Menu driven and simple to use yet capable of sophisticated search and replace, block move and replicate, status information and 80 column viewing of text. For the finished document, **Easyword** provides full printer control, headers, footers, incrementing page numbers, page control, top and bottom margins, line length etc.

●BBC Model B/B+ disk £7.50

Order product number DB22

●Electron +3 disk £9.50

Order product number DE22 double disk

Venturescapes

Two disk package, a fun packed variety of adventure situations to solve. They include

2002

Jungle Quest

Snow Bound

Live Aid

Death in Poglovia

Puss in Boots

Secret Agent

The Orb

Mysterious Yeti

Diamond Adventure

(40 track versions do not contain Puss in Boots)

●BBC Model B/B+/Master disk £10.00

Order product number DB48 double disk

Games Compendium

Massive two disk package including

Bouncer — the classic ladders and levels arcade game with the adoring Kangaroo trying to save her baby. The mischievous monkeys have got other ideas and the fruit is flying!

Wiggler — a fast worm game

Revsquare — a mind bending puzzle

Grand Prix — taking the track officials to the cleaners!

Grisley Gardens — adventure fun

Skoogs — takes you into the swamp

Formula One — antics at the track

Star Encounter — shoot out in space

Spacehawk — fast action duelling

Darts — classic pub game to test your aim and your maths

Qman — multiple screen bounce to freedom

Lifter — judge your jumps in a game of ups and downs

Scrooge — the multiroom scrolling arcade adventure

1984 — sliding block puzzle

Tank Battle — two player firepower

Back Gammon — play the computer

Doodlebug — swift reactions required

Domgrid — domino style puzzle

Dune Fighters — two player duel

Falcon Pilot — vertical scrolling shootout

Fortune Teller — great for parties

Pontoon — classic cards

Scissor, Stone, Paper — amusement unlimited

Rokrace — boulder time!

Aladdin — panto adventure

Kitchen Capers — platform game

Classic games. Excellent value.

●BBC Model B/B+/Master disk £10.00

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Combat Zone

Play our combat simulations and then go on to write your own. The wargame generator allows the author to simulate any battle, to juggle the type, number and strength of the forces involved and choose the terrain on which the battle will be fought.

Sea Battle and Jungle Warfare are the example games. For strategy fans, the disk also contains Battle of Hastings and the intergalactic struggle, Mabwars. Special versions included for shadow RAM machines.

●BBC Model B/B+ disk £6.00

Order product number DB21

●Master 128 ADFS disk £6.00

Order product number DB30

●Master Compact 3.5" ADFS disk £8.00

Order product number DB32

Mode 7 Utilities

A full Mode 7 suite. Scrolling, text and graphics editor, pixel plotting, automatic conversion of Teletext screens to BASIC, a Mode 7 screen dump and frame management. Disc only.

●BBC Model B/B+/Master disk £6.00

Order product number DB12

Procyon EPROM Toolkit

Many new commands at your fingertips with this value for money EPROM toolkit. BASIC error handling, packing, memory editing. You name it, it's on PROCYON. EPROM only.

●BBC Model B/B+ £12.50

Order product number EB1

ADFS Menu

The ADFS Menu is a sophisticated menu utility for ADFS

disks on Model B/B+ or Master 128 computers. The Menu becomes active automatically when a disk is booted. Files and sub directories are displayed along with other system information. Just move around the files with the cursor keys or 'games' keys and highlight the file required.

The menu handles files in an intelligent manner. BASIC, machine code and text files are treated appropriately. If View or Viewsheets is fitted then the software will be entered automatically and the file loaded. Sideways ROMs can be saved to disk and ROM images loaded into sideways RAM banks and automatically installed. This is an essential utility for Master 128, Master Compact (faster than the Desk Top) and Model B with ADFS fitted. The Menu will operate on floppies (5¼ or 3(1/2)) or Winchester disks.

Example files are included on the disk as well as full instructions and the source code in ADE.

●BBC Model B/B+(with ADFS)/Master 128 disk £12.00
Order product number DB27

●Master Compact 3.5" ADFS disk £12.00

Order product number DB31

Educational Compendium

A two disk package literally full of educational games — with documentation files where necessary. From telling the time to interactive punctuation tests to a program generator for computer synchronised audio.

Disc includes:

Big Ben — tell the time

Edu-dot — drawing made simple

Bingo and Alpha — vocabulary teasers

Hangman — create your own special word sets

Letters and Words — expanding vocabulary

Punctuation — mini wordprocessor with automatic correction

Solar System — plot the course of the planets

Walk the Plank — judging measurement

Treasure Hunt — takes you on a countrywide quest.

You move about the country from county to county, investigating the allocated towns and finally homing in on the famous landmark to log your time. Single or multiple player competing against the clock. You'll need your atlas! The geographical content can be redefined as required and full instructions are given

Island Hopping — you play the ferry master. You face a test of judgement and planning at sea as you plot a course through various maritime hazards

Zim — a colourful shape matching game for young children incorporating Acorn speech

Phonics — vocabulary tester

All Change — joystick control

Magic Squares — maths squares

Number Crossword — simple arithmetic

Snakes & Ladders Maths, Invasion Times — motivating maths

●BBC Model B/B+/Master disk £10.00

Order product number DB47

Delivery

Problem solving and map reading skills are both tested

C O N T I N U E S ►

by this interactive travel game, full of humorous dialogue and rewards for children who do well.

●BBC Model B/B+/Master disk £7.50

Order product number DB25

●BBC Model B/B+/Master/Electron tape £5.00

Order product number CB25

Master Series Software

Use your B+, Master 128 or Master Compact to the full with these programs which make use of shadow or sideways RAM and the ADFS filing system

Since we have supported the B+ and the Master 128 heavily in A&B Computing it seems only right to make software available which utilises some of the new features of these machines. We are also making software available on 3.5" disk suitable for the Master Compact.

The following Soft Sale products are all available for the Master 128 or Compact (for full details see the individual entries in the Soft Sale):

- Graphics Construction Set
- ADFS Menu
- Easy Font
- Combat Zone
- Global View Suite
- Adventurescape III
- Graphics Packs 1 and 2

The following DFS format disks are also compatible with the Master 128:

- Musician
 - Venturescapes
 - Games Compendium
 - Educational Compendium
 - Mode 7 Utilities
 - Home Office
 - Delivery
- double disk

And NOW, there's the COMPACT 100

100! programs for the Master Compact including arcade and adventure games, programming and business utilities, educational software, graphics, music and Mode 7. One and a half megabytes of software on two 3.5" ADFS disks. Master Compact only.

●BBC Master Compact 3.5" disks (2) £15.00

Order product number DB52

Look up any A&B article, news item or listing with the A&B Bibliography

The A&B Computing Bibliography contains every reference relevant to the BBC Micro from every issue of A&B Computing since May 1983. The Bibliography is sold in parts, each containing an average of over 1,300 references.

The Bibliography contains information on all listings of games, educational and utility programs, including later corrections, updates and enhancements; reviews of hardware, firmware, peripherals, software and books; articles of specific and general interest, such as programming techniques for beginners and the experienced, writing adventure programs, computer implementation and applications etc. It even contains every news item and reader's letter; in fact, anything remotely related to the BBC Micro!

Unique Reference

Each reference has 5 components- the *title* of the reference; a *description* of contents, including keywords and the major areas covered; title of magazine; the *date* of publication and the *page* number. The references are stored in chronologically ordered sections, each chaining the next, and the user may specify the starting month and year.

Main Options

The Bibliography offers 3 options:

(1) View the whole Bibliography from May 1983 onwards. (2) View it from a specific section, missing out earlier ones. (3) A choice of a one or two-string search of the Bibliography.

For the *one-string search*, all the references containing the string will be presented, whether it is in upper-case, lower-case or a combination of both eg "PRINTER", "disc", "Graphics" or "UserRAM". It can also present references from one month (eg Nov '85).

For the *two-string search*, only references containing both strings are presented eg "LISTING" and "WORDWISE", "PRINTER" and "REVIEW".

This is obviously a most useful and versatile option with numerous possibilities for finding that reference that you knew was there somewhere, in some magazine or other; for example, it can find that hint or tip that solves your programming problem, or find all those reviews you need to read before making your final choice and spending your money on hardware or a peripheral!

You can find all references to a particular topic, such as robotics or interfacing. It is also ideal for cataloguing, cross-referencing and indexing your magazine collection according to subject, content, date etc.

Printer or Screen

The user can specify screen or hard copy. For *screen presentation*, references are displayed one at a time without *split* words and descriptions are left and right justified. When any key is pressed the screen clears and the next one is presented.

The printer hard copy can be global or selective for all three options and references are formatted for 40, 80 or 120 columns. For example, with global printing of *option 3*, all the sections are automatically searched and chained and only references containing the specified string(s) are printed; with selective printing, the user chooses whether each reference is to be dumped to the printer, after reading it on the screen.

The software is user-friendly. The constant on-screen information provides details of the option chosen, the strings being searched for, global/selective printing or

printer off, and the month currently being searched. The Bibliography is available for 40 or 80-track disc drives and it is updated regularly. It currently comprises two discs, A&B May '83 to April '85 and A&B May '85 to May '86.

Available From

The Bibliography is produced by Jim McHugh of Mc Hugh Enterprises and is available from A&B Computing Reader Services.

- BBC Model B/B+/Master 128 disc
- Order product number DB40

An unparalleled collection of graphics software direct from A&B Computing

Graphics Construction Set

This two disk set provides two 'studios' for the computer graphic artist: an *animation* studio and a *three dimensional graphics* studio.

Quickstep provides routines for the rapid display of graphics in quick succession in a special screen Mode, resulting in fast animation of your existing static drawings. Generation and animation are two separate processes resulting in high speed redrawing from graphics data. The sideways RAM option further increases Quickstep's animating abilities.

3D Construction Set is a suite of programs, *Design*, *Rotate* and *Perspective*, which allow three dimensional structures to be designed, edited and displayed on screen. Both Mode 0 and Mode 1 are available. 3D Construction Set is equally at home helping you to design practical structures or inspired sculptures.

Full instructions for both studios are supplied in an accompanying manual.

- Model B/B+ disk £10
- Order product number DB49
- Master 128 with ADFS disk £10
- Order product number DB50
- Master Compact 3.5 disk £12
- Order product number DB51

A&B Graphics Pack 1

Four great programs for computer artists/art departments. Documentation supplied. **Ikon** A&B's own answer to mouse software with full graphics facilities and icon editing. Keyboard or joystick.

Touch of Class A very classy printer graphics program (Epson FX80 compatible) for designing and dumping personalised letter heads.

Mosaic Multicoloured building blocks for your own cartoon characters, landscapes and sprites.

Cadpack Computer Aided Design. Sophisticated drawing, filing and retrieving facilities. A full library of drawing routines, scale, post and redraw.

●BBC Model B/B+ disk £10.00

Order product number DB03

●BBC Master 128 ADFS disk £10.00

Order product number DB17

●Electron +3 disk (Ikon/Ikon Utilities/Cadpack) £12.00

Order product number DE01

●Master Compact 3.5" ADFS disk £12.00

Order product number DB37

Ikon Utilities

Bring colour to your Ikon, AMX Art or other Mode 4 pictures and diagrams with Paintbox and then display them, slideshow style, on the Cascade. Mix your own colours, fast fill, foolproof operation. Many example screens included.

●BBC Model B disk £6.00

Order product number DB19

Colour Ikon

Colour Ikon utilises disk overlay techniques to bring you a full high resolution, four colour drawing package with a whole range of drawing and colouring utilities.

The icon environment makes selection of facilities as easy as pointing to the relevant picture or colour fill on screen. Disc only.

●Model B disk £6.00

Order product number DB36

Graphics Pack 2

Graphics Pack 2 is a single disk packed with graphics based programs published in A&B Computing during 1986. We think it represents superb value. Whatever your interest, Graphics Packs 1 and 2 should now offer you an opportunity to experiment with computer graphics.

Graphics Pack 2 for the Model B and B+ contains all the programs bar the Master Graphics set. The Master 128 and Compact versions both come in ADFS format, allowing us to pack a considerable number of example screens and extra programs onto the disk. All the programs are documented in an accompanying manual.

●Model B/B+ disk £10

Order product number DB29

●Master 128 with ADFS £10

Order product number DB35

●Electron +3 disk £12

Order product number DE29

●Master Compact 3.5 disk £12

Order product number DB38

Easy Font

This is range of attractive fonts supplied on one 80 track or two 40 track disk(s). There are eight fonts in all, choose from: Old English, Cloister, Tea Chest, Folio, Futura, Old Towne, Japanette and Corvinus.

The fonts are controlled from BASIC and example routines are given for each font.

●BBC Model B/B+ £10.00

Order product number DB26

●BBC Master 128 ADFS disk £10.00

Order product number DB39

●Master Compact 3.5" disk £12.00

Order product number DB44

ADVENTURE- SCAPE — THE ADVENTURE WRITING SYSTEM FOR DISC BASED SYSTEMS

Adventurescape is supplied on two floppy disks.

Disk One: Adventurescape adventure generator locations descriptions puzzles dungeon adventure tutorial to be used in conjunction with the 20 page manual packaged with the software Murder at the Abbey, the classic whodunnit

Disc Two: Amnesia, massive adventure Xanadu, based on Coleridge's Kubla Kahn poem

Adventurescape III

Adventurescape is an adventure writing system for disk based BBC Microcomputers (all series). The system consists of a 'shell' program which will run any one of a number of different adventure games, and two utility programs which provide friendly menu-driven editors to allow people to create the data files for a game of their own design. The system is unique in treating all the content of the game as a database — including the

puzzles. This means that it is comparatively simple for anyone to use and no programming expertise is required.

The adventure games which can be created include the following features:

(i) Up to 250 locations and 250 messages can be used.

The descriptions may be lengthy and the total text far exceed the memory capacity of the computer, since these files are accessed directly from disk while the games are run. (ii) A range of Mode 7 coloured text is used to distinguish different types of message, eg location descriptions, general messages and inventory lists. (iii) Locations are connected by pointers allowing one way exits, twisty passages, mazes etc to be constructed. (iv) Objects may be examined leading to messages which expand upon their usual description.

(v) A very wide range of puzzles may be constructed using the unique puzzle generator of Adventurescape as will be explained in detail below. (vi) Players may SAVE and LOAD game positions under their own choice of filename as often as required.

What is more, this package includes no fewer than three sample games written with the system: Murder at the Abbey, Lost in Xanadu and Amnesia, in addition to the files of a short demo game 'Dungeon' whose construction is explained as a fully worked example in the manual. A utility for squashing text files once a game is complete is also provided. Text from Adventurescape can be exported to the Robico Midge Compression System.

●BBC Model B/B+/Master disk £15.00

Order product number DB20

●BBC Master ADFS disk (utilises sideways RAM) £15.00

Order product number DB28

●Master Compact 3.5" ADFS disk £17.00

Order product number DB34

A&B SOFT SALE ORDER FORM

PRODUCT NAME	PRODUCT NUMBER	DISC <small>Please specify 40 or 80 track</small>	QUANTITY	PRICE
I enclose a cheque/postal order made payable to ASP for £.....			TOTAL	

Name

Address

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..... Postcode

Signed Date

Please complete the form in block capitals on Sale, Reader Services, 9 Hall Road, Maryland send it with your remittance to A&B Software Wood Estate, Hemel Hempstead, Herts HP2 7BH

DISK USER SURVEY

Complete our survey and WIN over £50 worth of Superior Games on disk

In order to gauge exactly what you require from our future editions of Disk User, would you be kind enough to answer our few brief questions about the magazine. We won't ask you to do it for nothing because Superior Software have been kind enough to offer £50 worth of disk based games software for you to win in our prize draw of survey replies.

When you have completed the survey just pop it in the post to:

Survey
Disk User
1 Golden Square
London
W1R 3AB

and we'll immediately include you in the draw, which will take place on June 15th 1987. The winner will be announced in issue 2 of Disk User, in your newsagents on the 17th July. Best of luck.

1. Rate the software featured in Disk User in order of preference. (Please place a number beside each item)

Barmy Butterflies
Collectors Items
Auto Cataloguer
Karate Kid
Disk Examiner
Cube of Zoth

2. Which disk drive combination do you own? (Please tick all the boxes which describe your setup)

40 track only single sided
80 track only single sided
40/80 switchable single sided
double sided dual drives
double sided dual drives
double sided dual drives

3. Which model of BBC Microcomputer do you own?

Model B
Model B+ 64K
Model B+ 128K
Master Series 128

4. If your answer to 3 was Model B then please tell us the following: (B+ and Master owners can move on to 5)

a. Which disk interface do you have fitted?
old style 8271
new style 1770

b. Which filing systems do you have fitted? (Please tick all those fitted.)

DFS which make?
DDFS which make?
ADFS which make?

c. Do you have sideways RAM?

Yes
No
If yes, which make?

5. What will be your next purchase for your BBC Micro system?

6. Feel free to add your comments here about Disk User Number One and tell us what you would like to see in Number Two and beyond.

Please indicate whether you would like us to send you information about Disk User through the post:
Yes
No

Please fill in your name and address below so that we can enter you in our prize draw for £50 worth of Superior Software games on disk.

Name _____

Address _____

Postcode _____

Competition Time

Superior Software quickly caught on to the fact that BBC owners wanted their games on disk and naturally their last five major launches, all chart hits, have been available on 5¼" disk format.

Stryker's Run – changed the games player's perception of what was possible with graphics on a BBC Micro. Attractive and fun to play.

Ravenskull – a new team of programmers and a graphically original game, arcade adventure style. Superior Collection Volumes 1 and 2 – a clever marketing move in compilations, with hits like Repton 2 and Deathstar plus brand new games like Synchron and Kix.

Grand Prix Construction Set – first time on the BBC Micro for this concept of 'build your own' racing games. Play against the computer or two player, with both cars shown on screen. Just in time for the Formula One season. Move over Nigel Mansell!

DUNJUNZ

Including
DUNJUNZ
Creator
exclusive to
DISC
version



Amazing all action 1-4 player option arcade adventure.



Deep down under with 4 characters, 25 levels, treasure, weapons, spells, traps, teleporter, potions and armour - all with hot action! It's fast, furious, funny and really playable. You've never played anything like this on your BBC before.

Bug-Byte's game of the year now available on disc for the BBC 'B' and Master Series.

Victory House, Leicester Place, London WC2H 7NB
Telephone: 01-439 0666

BBC DISC
£7.95

GRAND PRIX

CONSTRUCTION SET



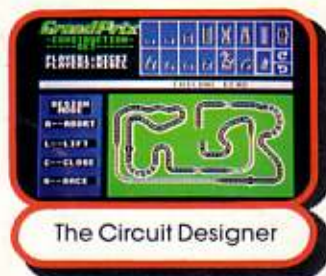
								
Brands Hatch	Silverstone	Mallory Park	Oulton Park	Castlecombe	Snetterton	Thruxton	Donnington	Monza
								
Monaco	Kyalami	Zandvoort	Nurburgring	Paul Ricard	Imola	Long Beach	Zolder	Estoril

Drive into a New Dimension

Grand Prix Construction Set is a motor-racing game with a difference: it allows you to design your own race circuits — using straights, fast bends, sharp bends, chicanes and hump back bridges. Or you can select one of the many pre-defined race tracks, which include most of the world's famous Grand Prix venues. Then race against another player, or against the computer — there are 5 skill levels to choose from.

Features of the Game

- Easy-to-Use, Icon-Driven Circuit Designer
- 1-Player and 2-Player Options
- Save and load your own Track Designs
- Spectacular Split-Screen View of the Race
- 18 Pre-Defined Grand Prix Race Circuits
- Dramatic Skids and Crashes



The Circuit Designer



On the First Lap

BBC Micro cassette	£9.95
BBC Micro 5¼" disc	£11.95
BBC Master Compact 3½" disc	£14.95

Grand Prix Construction Set is compatible with the BBC B, B+ and Master Series computers.

SUPERIOR SOFTWARE
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