

Page 6

Atari users
Magazine

Issue 23

£1

September/October

WATER SKI SCHOOL



*A Bigger Screen for
your ST*

In Depth Reviews

Replay
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Cut & Paste
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ZOOMRACKS review



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relies entirely on readers' support in
submitting articles and programs.

The aim is to explore ATARI
computing through the exchange of
information and know-how. We will
 endeavour to pay for articles and
programs where appropriate and we
hope that readers will enjoy seeing
their work published. In turn we
hope that other readers will learn
from the articles and programs
submitted and increase their
enjoyment of ATARI computing.

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2 BIT EXTRAS

2 Bit Systems are to extend their range of musical hardware add-ons for the Atari with a new MIDI interface and a hardware Drumkit. The latter is entitled Percussion Master and will be available for 48k or 64k machines. The comprehensive array of built in drum sounds can be supplemented by your own samples from the company's Replay system. The entire range of products will also be available shortly for the ST.

TWO FROM S.E.C.S.

Software company S.E.C.S. have released the first two titles in their planned range of Atari software. The first is a true multi-tasking Forth language entitled Go-Forth which comes on disk complete with a 70 page manual at £34.99. The use of Go-Forth can write programs for commercial use without need for a run-time license and indeed S.E.C.S. encourage users to write commercial software with this package. They will even assist in putting the right software onto the market.

The other release is Font Constructor, written with the aid of Go-Forth, which enables programmers to design and edit character sets to include animation. Font Constructor is also on disk at the low price of £9.99.

ITS NOT ALL ST!

At the CES show in Chicago last June several companies set out to prove that publicity and interest in the ST has not diminished the interest in the 8-bit machines and, as predicted in our recent editorial, several companies who came into the market with ST products are now planning 8-bit releases. Among these is Haba Arrays who have a financial planning package entitled Get Rich. Artwrex have re-released their Bridge program and have a new release entitled Poggamon. Softbyte have another financial program called Personal Accountant and several companies have new educational programs, some of which may only be suitable for the American market. Among these are Spinnaker, and Britannica Learning. Several companies showed hardware add-ons and there are developments in the area of enhancing the 8-bit machines with a mouse from one company and GEM-like windows from another. There were many other 8-bit products on show. Who said 8-bit was dead?

NEW ADVENTURES

Atari Adventures are in for a treat this year as Robico Software convert their best-selling BBC adventures to the Atari XL/XE machines. These text adventures will not be just straight conversions but will be enhanced to take advantage of the Atari's capabilities. The first release will be RICK HANSON, part of a trilogy, which will have ten more locations added to make a total of 200, a few extra problems and 'a vast amount of text'. The parser can handle full sentences and multiple statements of the nature 'Fill the bottle with water, get the blue book, the book with the red cover and the yellow book and examine all the books apart from the red one'. Wow!

The Atari version is being converted by Nick Gregory using a customised version of The Slave, an adventure writing utility available separately, and Robico are confident that the program will be first class.

Other titles to follow are Project Thomas, Island of Xaan and the 'mega-adventure' Elnar Seven. All titles will be available only on disk starting at £34.95. Elnar Seven will be £17.95.



News News

MORE BUDGET TITLES

Blue Ribbon have reduced the prices of their existing titles to £1.99 and have introduced five new Atari titles - Nightmare Man, Scoreball, Darts, Diamond Mine and Carol's Assault. These new titles on cassette cost just £1.99 and all five games are available on one game disk at £9.95.

ARIOLASOFT

Recently released from Ariolasoft is Lapis Philosophorum, a graphic adventure featuring 83 screens, 'superb' graphics and multi-tasking. You must go in search of the Philosopher's stone to save your dying King. On disk only at £34.95.

STAYING TOGETHER?

Once, several years ago, I saw an advertisement for a new computer with lots of memory (MR), four sound channels, onboard disk drive/printer interface, and more colours than I could ever imagine in a computer. After seeing a DIV motherboard and all the necessary add-on utility boards of another computer, this new one seemed expensive. However, it did have a little brother with only 16K but all the capabilities of the bigger model. This was the one I was to buy as my first ever computer.

In the ensuing months, I was to learn in vain for articles in magazines relating to my machine. To be fair, computer magazines were in their infancy then. I did write happily by buying the first edition of an American magazine which was dedicated 100% to my computer. I can remember those halcyon days when everyone was a beginner and helped each other over the difficult bits.

The Americans took to the computer with open arms and the market leaders at that time began to worry. Over time it was a difficult story. Most of the computer magazines wanted to know about it. They pushed all other computers but mine. I was fortunate in a way. At the same time there appeared what seemed to be a far superior machine from IBM which quickly disappeared without trace. It had no baby brother so I could not afford it, and I stuck with my computer.

Strangely enough, all the fish from the U.K. were brought as owners more and more together as a family. A club member from the mainland finally started up a U.K. magazine. He was dedicated to both the computer and the magazine which you will realize if you read the magazine. Now, with our own magazine, we did not care about the nationals not writing about 'Our Computer'. At the same time, they struck a bitter blow. Bad management, poor advertising resulting in low market sales, a downturn in the sale of computers generally and other minor adversities seemed to be the manufacturer's big kiss. Rumour was rife that we were to see the end of our much beloved machines.

This only brought us even closer together, and we hung on to other rumours about cheaper chips, a new and better machine, change of management, you name it, we believed! I do not think that we would have believed what was to eventually happen to the management if we had been told. That the directors of our most recent deal would have wanted to do with new ideas from the creator of their business, that he would leave them and take over our firm! Surely not!

Crazy as it is not it happened. This man was strong enough to disregard the laughter and lambasting from the press about his new business. After all, he saw it from a competitor's angle and realized the potential. He then stood on the heights and told all about the unbelievable power and low price of a new generation of machines that he was to bring out. Again the article came from the press (notably in the U.K.). How can this man compete against the overwhelming sales of the market standard 'Big Blue'? In fact, looking back, he was to do for the sixteen-bit machines what Sir Clive Sinclair did

for U.K. home computers in general, i.e. sell a machine at an affordable price and force the competitors to rethink their own over-inflated prices. We are the owners who are now talked about and not talked down to! We are the ones who are going places at last. But glory is not won at a cheap price.

All of our eight-bit models will run the same software, but sixteen-bit is another world. Our happy family now seems to be dividing itself into two camps. I recall this in readers' letters published in the American magazine that I still subscribe to. Complaints about a magazine within a magazine, less eight-bit articles (even though the magazine is thicker than ever and the number of eight-bit articles remain the same) and a general feeling of being left on the shelf. Why this I do not know. I never felt any animosity towards my computer's big brother, nor its replacement and certainly not to the new version that has almost three times the memory of my machine. I suppose that, having bought the sixteen-bit model, I can be accused of having the best of both worlds. True, but that still does not help me understand this disturbing trend that has now appeared. Certainly everything is now-forgotten about this machine and it is much publicized, but not to the detriment of the eight-bit models. Our new owner has promised to support existing models and is peering software houses who have never done so in the past to write for the eight-bit range. He is even supporting the VCS!

When such economic equalities occur it is only the users themselves who come out worst and they can only blame themselves for such shortsightedness. They three years ago that sixteen-bit was the future, only memory price hindered home ownership. Now it is within their grasp and they should be using their existing machines or learn about the new generation. Believe it or not, a lot of software is downloaded from mainframes to the sixteen-bit, and new techniques worked out on the sixteen-bit computer can be used for eight-bit computers. Software houses who would never dream to work on these machines are now looking seriously at what, to them, is a new and unexplored market. We will reap the benefit by being able to buy upmarket programs at a reasonable price and not be stuck with the cheap and nasty that certain other computer owners have to contend with.

Some people complain that when I do start talking I can be quite verbose, so I had better end this diatribe. Suffice to say that those who recognize my name will know that I am dedicated to helping beginners come to grips with their computer, regardless of the model involved.

As a footnote, I have occasionally not mentioned my computer, although you should have recognized it by now. This was done purely because the attitudes arising are not restricted to this computer alone. Users should stick together for the benefit of all.

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EASY FORMATTING

Dear Les,

I have a little comment on Steve Podder's article "A Guide To Better Games". On Error 162 (Disk Full) he says the only solution is to use the cassette recorder. I have a better solution. By using the following XIO commands with DOS 1.5 in direct mode (Atari BASIC) you can format a disk without going to the DOS menu and still have your program intact.

XIO 194, #16A,TD" (for enhanced density)

XIO 195, #16A,TD" (for single density)

A little word of warning, make sure you have inserted a fresh disk before attempting this since it will erase everything on your disk.

I hope that this little tip will be of use to others. It has helped me out of many sticky situations.

Bern Drosschmann,
Gwynedd

ANOTHER BBS

Dear Editor,

This is just to let you know that yet another Bulletin Board is in operation and I would be most grateful if the information could be published in your journal.

Name of System: The System
Transmission rate: 9600 baud
Times: 24 hours
Town/Country: Nottingham
Phone number: 0662 817919 (ring back)
Sysop: Paul Bates

This is not a commercial board and is run on an Atari system. Messages are welcome from all.

P. B. Bates,
Nottingham

CHEAP UPGRADES

Dear Sirs,

First let me thank you for Les Billington's "Error 8" program in Issue 21. It helped me debug two games that I've struggled with for the last year. Each simply had a comma at the end of a DATA statement, and how many times had I proofread them!

Now perhaps I can help any readers with 60KSL's in their quest to upgrade at a reasonable price. I recently placed a 64k upgrade kit from a friend in the States for US\$85 and installed it in a friend's 60KSL. It now performs exactly like my 80KSL and runs everything I can throw at it. The kit consists of two RAM chips to replace two already installed and three jumper wires, two of which require some easy soldering to install. The instructions are very clear and simple and the whole job took less than 30 minutes.

The company will be glad to send through the international mail but payment must be in US dollars such as an International Money Order. The address is Computer Service Land, 1675, W. Broad Street, Falls Church, Virginia 22048, U.S.A.

Tip: Bob Marini,
RAF Bruggenore,
Suffolk.

RENUMBER POSSIBLE?

Dear Les,

Can anyone tell me how I can get an 80KSL to perform the "renumber" function found on the BBC which I am using at college. Although generally the Atari company favourably with the BBC, the former's lack of this facility is annoying when attempting to edit and debug programs.

Also I have seen offered a

"single-density" and a "double-density" second hand 1050 disk drives. What is the difference? Can either run Atari-writer on a 1050?

Ian Hayward,
East Sussex

Some languages such as BASIC XL have a built in cassette feature although this is an expensive way of obtaining the facility unless you want the other features of the language. Several cassette programs have appeared in magazines and in the public domain which work either as an "add-on" program at the end of your listing or reside in memory to be loaded by a CTRL alt. There are a few programs on the public domain disks in the PAGE 5 library and many User Groups may have such programs.

There is only one model of the 1050 disk drive which can be used in either single density or enhanced density (not the double density) as you wish. Warehouse address only is obtained to see the drive as was

double density. There are no restrictions to the type of programs that can be used on the drive.

TELECOMPUTING ILLLEGAL?

Dear PAGE 5,

I am very interested in telecomputing but it seems to be forbidden in Belgium. Could you or any reader tell me if it really is?

Ferdinand Paquet,
Belgium

Also wrong? Can anybody check any facts on this?

ASSEMBLER EDITOR PROBLEMS

Dear Les,

Help! How about a feature article on the Atari Assembler Editor used with the XC11

DO YOU WANT MORE SOFTWARE?

Dear Les,

My name is John Davison (you), my Dad wrote the Flight Simulator II reviews.

I would like to start a campaign for Atari owners. With the help of Page 5 readers I believe that we could go through to software companies and get them to write good software for us. There are a few companies who have written things, like Mastertronic, but they treat us like we own a defunct computer, which we don't!

There are some software companies who have treated us very badly, and those are the companies I would like the campaign to be aimed at. Ocean Software and Hiss, are the main "nasties". At the

beginning of 1983 Ocean ran big colour ads with Atari written alongside Commodore, Sinclair and Amstrad. We waited eagerly for Daley Superstar and Frankie etc. Atari User even had a news article about Ocean's! We then waited and waited and then gave up. Else on the other hand actually brought something out, but they might as well not have bothered! "AIE-WHOP" is said in big letters "GREAT! The number 1 top seller" then underneath the big letters it said this was originally not marketed under the name "Blue Thunder" WHAT??? Why did we get Blue Thunder and Commodore, Amstrad, Spectrum, BBC, Electron, C18, Plus 4 and Tandy Electron owners get the real thing! This infuriated me and I wrote a letter of complaint to the Managing Director, within days I

remember I recently purchased an Editor and the manual simply says to COMMAND an object listing into BASIC but this results in an error. Using ENTER 'C', everything seems to work but on PEEKing (B), nothing is there. I'm stuck. Also is the G command in Debug mode supposed to execute the machine code as to my simple mind this is what the manual seems to imply?

OS/2 Window

The manual for the Assembly Editor has been wrong for years! I did leave the owner to this problem some time ago but it now appears to be lost in the mist of time. It has been fairly well documented or perhaps another reader would care to step in a line so that we can publish the details and keep a note of the issue for future reference.

Write to READERS
WRITEL, P.O. BOX 54,
STAFFORD, ST16 1UR

received a reply saying that they would be bringing out 'Paperboy' for the Atari at the end of June, they better have not been lying or they'll get another letter!

If you are any software that you think should be out on the ATARI, write to the Manager of that company and say you want it. We are no longer a minority group, there are a lot of Atari owners about now. A campaign such as this worked very well in the USA and Acric readers managed to get BROTHERHOOD software to bring out Luke Romero, Rescue and Championship-Luke Romero. They also got 'Firebird III' from another company.

This campaign should not only apply to games. Utilities and word processors, anything you want! If you want it, write and ask for it!

I believe if we all write at least

1029 PRINTER SUPPORT

Dear Les,

I recently bought a 1029 printer so I could run off Assembly listings and do graphics dumps. Unfortunately I do not feel that I am using the printer to its full potential as I have no idea how to program it for control characters, inverse characters or screen dumps of my favourite games. I have seen this done on other printers and wonder why it is not easily available on an Atari printer.

At the Atari Show I purchased Magic Construction that from Anaheim. This is an excellent program that includes the option to print the music scores to a printer. However, the program requires you to set up a printer before dumping the screen by typing in a code of some sort. The most infuriating thing is that the manual for the program gives examples for an Epson printer but not for the 1029. Does anyone

own a letter we could get the software companies thinking, no-go to it, WRITEL. John Davison (m), Sandy, Bala.

I would love to see such a campaign work but I suspect that the more national British Atari users could not take to letter-writing campaigns with as much fervour as the Americans. SWL, it could be done. It will take a lot of work but, as John says, start with just one letter. Start by writing to the Managing Director of Ocean Software Ltd at 4, Central Street, Haverhill, MK17 9XZ, tell him you want Ocean software for the Atari and ask him to send details of future Atari releases to JEFFREY S. If he receives several thousand letters in the next couple of weeks, it may have some effect! We'll let you know if it does.

know this secret code or indeed know anything useful about this printer?

Tim Hyles,
Basingstoke.

If you have a few articles and programs about the 1029 which only need to be checked through before we can publish them, they should throw some light on the subject.

One of the problems with the 1029 is that it only uses a plain text matrix of 7x5 whereas most other (and more expensive) printers have a 9x9 matrix. While the 1029 can print graphics it is not possible to simply use a routine designed for another printer, a custom program has to be written. The other problem is that most of the commercial software that includes facilities for screen dumps is written in assembler where the 1029 printer was either not sold or not sold in very limited quantities. As a result most companies do not bother to include a 1029 option in their programs thinking that the demand would not be worth the effort. The 1029 has to stand more extensively and we hope to begin publishing some programs in the next issue.

LONG LINES

Dear Sir,

I recently bought my son an IBMXL and he loves typing in the programs from PAGE 5.

The reason for writing is that I managed to get hold of some back issues of PAGE 5 and we are having a problem with House of Secrets from Issue 18. It is possible to hit the home, or home key print, the TYPO 3-codes for that and older listings! Also, sometimes when my son is typing in a certain line, before he gets to the end of the line there is a beep from the computer and when he presses RETURN he gets an error code and the end of the line is missing. He can cure this by entering out all the spaces but when he presses

RETURN the computer puts them all back again. Why?

MR Headwell,
Grimsby.

The early issue of PAGE 5 used TYPO 2 for error checking and you will find a table of codes for the programs in each issue. The original TYPO 2 program was published in Issue 5 which is now out of print but we will happily send a copy of the program to anyone who writes in a l.a.s. We're interested at some stage to produce TYPO 3 codes for all of the programs in past issues but it is one of those projects that will take a considerable time and keeps getting put off when more important things crop up. Hopefully one day we will publish some sort of supplement.

The reason the Atari beeps at you when you have typed in a lot of information is to warn you that you are coming near to the maximum amount of characters that you can type on a line. You are allowed only three physical lines on screen for each program line although internally the computer can accept longer lines. There are several ways to squeeze more information onto a line. One, as you suggest, is to leave out spaces. Another is to use abbreviations for BASIC words, check your manual or Mark Hutchinson's A-Z OF BASIC published in PAGE 6 is a handy one. A third way is to type POWER 8.5 and press RETURN before you start typing. As you enter each line the Atari checks it before accepting it as part of the program. It can recognise legal abbreviations and missing spaces and will automatically correct them for you but when it finds something that it does not recognise, it will tell you so in the form of an error message. The system checking on the Atari is one of the very best but it can only check to see if input is legal as defined by BASIC. It cannot check for all characters that are typed incorrectly which is why the TYPO programs where developed.

where NUMBER is the variable number of the required variable (use 'Names Only' Mode to find the number of the variable of interest). This command will list on the screen the name of the specified variable followed by the numbers of all the lines which refer to this variable. For example, X = USR(1536,128) will list all references to the first name shown in a 'Names Only' listing.

SENDING OUTPUT TO PRINTER OR DISK

It is quite easy to switch the XREF output to a printer or a disk file. In order to keep the size of the utility below 256 bytes (so it could fit into page 6) a channel to the appropriate device has to be opened before XREF is called. When XREF is called, it is given an extra parameter which identifies the channel to be used. For example to use a printer use commands like:

```
OPEN #4,0,"P:"
X = USR (1536,0,4)
```

to send a names only listing to a printer. Once the channel is open, subsequent XREF calls can be made, e.g.:

```
OPEN #4,0,"P:"
X = USR (1536,0,4)
```

X = USR (1536,128,4)

X = USR (1536,150,4)

CLOSE #4

To use a disk file instead of a printer simply change the OPEN command.

ERROR MESSAGES

XREF has one error message, ERROR 0, which means too many parameters have been supplied. In addition to this, the normal I/O error messages may be generated by BASIC, e.g. if the USR call specifies channel 3 for output when that channel is closed then ERROR 153 will be produced.

To stop the XREF output, e.g. if a full XREF was requested by accident, press the BREAK key (there may be a short delay before the STOPPED message appears).

Note that XREF can show when it is time to clean up the Variable Name Table. If XREF does not list any line numbers for a variable then either the lines which referred to it have been deleted or else some immediate mode commands have used it. These 'unused' variables take up space which can be reclaimed by LISTING the BASIC program to disk (or tape), trying NEW to clear out the old program and then ENTERING the program from disk (or tape).

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14. MINDSHADOW

Mindshadow is a relatively new release from Activision, which follows the tried and tested format of the good, old-fashioned illustrated text Adventure. It comes on a double-disk shell for the IBM Atari's, but I believe it is also available for the ST. I played the 8-bit version, but I have no doubt that the ST version is similar.

The concept of the illustrated Adventure should not be new to long time readers of this column, as I've covered many illustrated Adventures in the past. The basic format was pioneered by Sierra On-Line, but has since been refined by the big name companies like Datasoft, Sirinx, Froggins and Movelabs. Improvements have generally been in the areas of graphics, vocabulary and the all important parser. The complexity of the puzzles has never really expanded beyond that of the early games and has certainly not reached the sophistication of some of Infocom's best puzzles. This doesn't mean to say that the games are easy. Some are. Some aren't.

I would perhaps put Mindshadow in the easy category. It only took me a day or so to solve, but don't be disappointed if it takes you longer. One reviewer said "The puzzles certainly are tough - I wouldn't have made it through the game without the cheat sheet Activision provided". Atari Explains Winter 1986 page 76. I can't understand anyone finding it THAT tough. I guess the degree of difficulty is proportional to your previous adventuring experience.

The reason I found Mindshadow to be easy was that it was so well written. It's the sort of game that you can flip into any easily. You don't have to create with a poor parser or a limited vocabulary. You feel comfortable within minutes of starting the game. It does a good job of prodding the type of actions the user will try to carry out and it provides plenty of clues. Let me give you a sample transcript from the opening moments of the game. All text provided by the game is in lower case. The prompt is a simple colon. User input is in upper case and my comments are in italics.

You are on a beach with a marvellous and intriguing view of the ocean. You see a hut to the north. You see a shell.
You are greeted with a picture of a tropical beach. In addition to the items mentioned, you can also see some palm trees.

EXAMINE BEACH

You see nothing unusual.

EXAMINE HUT

You see a tiny hut in the distance.

Wow. You decide to get closer as soon as you've examined everything else on the beach.

EXAMINE SHELL

You see nothing unusual.

GET SHELL THEN EXAMINE IT

A shell takes.

It is a colourful shell.

The picture is not seen on a Atari, but without the shell.

LISTEN TO SHELL

You hear Lorne Greene narrating an ocean series.

What? Is this a hint? Is it more relevant?

EXAMINE THE OCEAN

Could it be? Yes, a ship is sailing along the horizon.
What? Already you have an idea of how to escape the island.

EXAMINE SHIP

The ship is too far away to see clearly.

You decide to attract its attention somehow.

BLOW INTO THE SHELL

You blow till you're blue in the face, but nothing at all happens.

Notice how well the program predicts your action.

CLIMB TREE

Hey! Those natives make it look easier than it is. How to climb these palm trees is a mystery.

EXAMINE TREES

There are some monkeys playing in the trees.

LOOK AT MONKEYS

The monkeys seem to be enjoying themselves.

GET MONKEY

The monkeys are far too nimble to be caught.

Fair a mistake! You get a better idea...

SWIM

Hey! This is great! Warm water, blue sea, sunny sharks... sharks??

It seems that the game has ended.

Would you like to try again? (Y/N)

So much for that idea! Next time, you decide to climb out the hut...

And so it goes on. The parser is not as sophisticated as (say) Infocom's, but it does allow the inclusion of definite and indefinite articles and some adjectives and prepositions. When these are included, they are generally ignored. Hence LOOK AT THE PALM TREE becomes LOOK TREE. The parser also understands conjunctions (THEN, AND) and at least one pronoun (IT). This allows compound commands such as the one used above - GET SHELL THEN EXAMINE IT.

Other useful commands are GET ALL, DROP ALL, THINE (used about this under "Game Playing Strategy") and HELP. HELP is a bit unusual. If you type HELP (or any of its variations) or press the HELP key on the XL/XL2, then an old friend called the Condoe will sometimes help you. His help is normally available only in the game, but he becomes less generous with his help as the game goes on. Fortunately, you probably won't need his help very often. If you do, you may find that the advantages are outweighed by the disadvantages. Firstly, you will have to flip the disk over to get the help you need. Secondly, you are only allowed three HELPs per Adventure. And thirdly, the help that Condoe gives you is sometimes so obscure that it's probably of little or no help anyway! Here's an example:

The floating bird are high above in the island mountains.

by Garry Francis

left. Turning my head from side to side (to alternate eyes), I power the central vent again. Land makes me up. SHIFFT-SWITCHING are my up. One down to where you walk up. Gravity, it's a choice lot, 10%, down, down-to-day, 80-year-balloons program.

Does that make sense to you? If it does, then you'll enjoy reading the rest of the hints there's an interesting exercise. When you've finished the game, play it again from the start, but this time, your aim is to read all the help screens. In doing so, you will have to work out what conditions cause the help screens to change. For example, will the help screens change if you are carrying the shield (Answer: No.) I found about nine screens of help. See if you can do better. (Hint: Type QUICKSAVE before HELP, then do a QUICKLOAD immediately afterwards. In this way, you can see more than three screens per game.)

Mindshadow allows you to save up to seven different games numbered 1-7 by using SAVE GAME. These may be restored using LOAD GAME. This was one thing that really bugged me. Why can't all software houses use the same commands for carrying out the same functions in an Adventure? What's wrong with the simple and established standard - SAVE and RESTORE? Perhaps we should get the International Standards Organization onto this...

The QUICKSAVE and QUICKLOAD commands mentioned above are a spikier way to save a game without having to assign a number to it. Very useful. Regardless of whether you use SAVE GAME or QUICKSAVE, the data is stored on side B of the disk. If you are worried about writing to your master disk (as I am), then you can probably use a sector copier to make a backup of side B only. I know I made a copy of mine and I don't remember encountering any problems. Side A, however, is copy protected, so don't bother trying to copy it unless you've got one of those fancy disk drive modifications. Needless to say, you can only make a backup for your own personal use. Selling or giving away copies is a criminal offence.

Mindshadow contains one unique feature that I haven't mentioned in an Adventure before, and that's software (or function keys as Activision calls them). If you press SHIFFT-1 a number from 1 to 8, then a whole command is printed on screen ready for you to press RETURN. For example, SHIFFT-1 is SAVE A GAME, SHIFFT-2 repeats the last command and SHIFFT-3 is QUICKSAVE. I didn't find these very useful, because by the time you look them up in the instructions, you could have typed the whole command for yourself. However, what WOULD be useful in future would be macros. Macros allow you to define your own software. For example, I could define CTRL-D for DROP, CTRL-S for EXAMINE, CTRL-S for SAVE and so on, whereas someone else might prefer CTRL-D for DOG, CTRL-E for ENTER and CTRL-S for...well, who knows?

A Few Bugs

Despite my generally favourable impressions of Mindshadow, there are quite a few bugs and/or design flaws which I find you should know about. The one that stands out most in my mind is a rather nasty bug in Luxembourg which actually works to the player's advantage. If you wear a certain item, the program appears to set an internal flag. However, if you drop the item, the flag is not cleared and the program thinks you're still wearing it. When you enter a certain room later in the game, the item you're wearing (which, of course, you are no longer wearing) saves you from certain death! Strange.

Another interesting bug was in the GIFT ALL and DROP ALL routines. I found myself getting and dropping items that I'd never even seen! Try it.

Talking about bugs, the review of Mindshadow in *Arcade* January 1988 page 42 mentioned a bug whereby the program crashed if you forgot to flip the disk at one point in the game. This bug has apparently been eliminated. I tried all sorts of combinations of having the wrong side of the disk in at the wrong times and the program merely told me to insert the correct side.

Graphics

At last we come to the graphics - and very soon they are used. Mindshadow's graphics are fairly typical of the genre. The bulk of the screen is used for pictures of the various locations in the game and the remaining four-line text window is used for the user input and the program's responses. The picture can be toggled on and off by pressing RETURN on an empty input line. Every time you enter a new location, a new set of picture instructions is loaded from the disk. Once the new instructions are in memory, the old picture is erased and the new picture is drawn. This whole process is very fast.

The quality of the drawings is very good apart from an occasional glitch in the fill routine. In fact, the pictures have a sort of cartoon feel to them, especially those with people in the scene. However, the one thing that really impressed me was the colours. The advantage of colours is fantastic! I particularly liked the bright greens and blues on the tropical island. This makes it a real thrill every time you discover a new location - and with over 80 locations, you're in for a lot of thrills.

As though all that's not enough, a few locations have been spiced up with some animation. The bits I liked were the birds flying over the second beach and the pirate ship, the shark at the London docks and the moving man in the alley.

Game Playing Strategy

Now, let's take an abrupt change of direction and get on to the game itself. The following section includes some game playing strategies, so don't read any further if you're worried about making the game easier than the designers intended.

Once you've booted the game, progressed through all the obligatory title screens and eventually flipped the disk inside B, you'll find yourself standing on the beach of a tropical island. You are apparently suffering from amnesia and do not know who you are, where you are or how you got there. The aim of the game is to find your identity. In doing so, you will pass through four regions - the island, a pirate ship, London and Luxembourg.

The first three regions are entirely independent. Each has its own series of puzzles and all the objects necessary to solve the puzzles are found within the relevant region. You might like to think of them as mini-Adventures in their own right. In the first region, your aim is to escape from the island. This was probably my favourite because of the colourful graphics, the clever interweaving of the puzzles and the novelty of a new game. In the second region, your aim is to get off the ship - not surprising, once you've seen the crew. In the third region, your aim is to get a plane ticket to take you from London to Luxembourg, although you don't know why.

You'll note that the aim in all three regions is essentially the same, i.e. solve all the puzzles to allow you to progress to the next region. However, there is a further aim common to

Garry Francis' ADVENTURE HINTS

MINDSHADOW

all three, but possibly not obvious until later in the game. You must find an object in each of the three regions that will somehow help you solve the puzzles in the fourth and final region. Once you know this, the respective objects will probably be obvious because of their usefulness in the region that they are found.

Examine everything...and that includes items in the pictures that aren't mentioned in the text. I know I say this all the time, but it's amazing how often people get stuck because they haven't examined something. Every object has a use, so hang onto it until its use is found. On the other hand, don't worry too much about THINGS. The instructions overemphasize its importance. You can only think about people or places and you won't discover any of these until London and Luxembourg. When a person or place is mentioned, then by all means think, but otherwise don't worry.

Once you have found all the objects and solved all the puzzles in any given region, there is no need to return to it. In fact, you CANNOT return to the island or the pirate ship, so save a game just before leaving these regions in case you find that you've forgotten something.

Sooner or later, you will find yourself in Luxembourg. If you've solved all the earlier problems and brought along the objects mentioned above, you will be able to solve all the puzzles in this region and ultimately find your identity.

Hints

Adventure offers a hint sheet for US\$1.00. I don't know the best way to send a small amount of money overseas or how they would respond to your request, but it's certainly worth a try. Details are in the instructions packaged with the game.

Alternatively, you can always rely on your wits. The usual coded hints are at the end of this article. Just look for the area where you're stuck in the list of questions, then match the numbers for that question with the words in the accompanying list to create a hint.

Summary

Well, that about wraps it up for Mindshadow. I found the game to be very easy, yet satisfying and hence would have no hesitation in recommending it for beginners. The parser is good, the vocabulary is good, the puzzles are good and everything's logical. It's also got pretty good graphics.

Other published reviews haven't been as lenient as I am towards Mindshadow as I have, so maybe it's not everybody's cup of tea. You might want to try it before you buy it, but for my money, it's highly recommended.

Next Issue

Next issue I'll have a full rundown on The Slave. Is it as good as the advertisements imply? You see next issue to find out!

In the meantime, I can be contacted at the address below if you have any comments or suggestions for the column. Note that this is a different address to that published previously. Please include a couple of International Reply Coupons if you expect a reply and please enclose yourself to Adventure's club chat. It's amazing some of the things I've been asked in the past, but rarely anything about Adventure! See you next issue.

Garry Francis, 26 Hastings Road, Eastwood, N.S.W., Australia 2206

The Island

1. Can't get off the island?

21 00-11 24 07

2. Missing key?

21 00-12 4 07 51 32 57

3. Missing a book of matches?

21 02 00 71 30 00 11

4. Missing sword?

21 02 00 50 00

5. Missing a note?

71 02

6. Can't get down the cliff?

00 70 1

7. Can't light a fire?

00 02 10 00 10 10

8. Can't stop the captain?

00 02 10 1

9. Missing a bottle of milk?

00 00 50 50

10. Can't get past the quarantine?

10 12 4 00 71 10

11. Missing a map?

71 27 12 00 00

12. Haven't found the foodstuffs?

00 02 00

13. Can't get past the island?

00 02 00

14. Can't get past the island?

00 02 00

15. Can't get off the ship?

07 70

16. Can't use the chest?

00 0 00

17. Missing a candle?

07 00 00

18. Can't get past the island?

07 70

19. Confused about the compass?

21 00 0

20. Can't get the table?

00 70 00

21. Can't get the falling puzzle?

00 02

22. Can't get the falling puzzle?

00 02

23. Can't find the plant?

11 04 70

24. Don't know the key word?

41 00

25. Haven't got any money?

41 00 12

26. Missing a key?

41 00 12

27. Getting possessed at Rick's Cafe?

44 10 12 01 02 12 01

28. Confused about the two beds near Rick's Cafe?

71 0

29. Missing an oiler ticket?

00 02 00 00

30. Missing an oiler ticket?

00 02 00 00

Luxembourg

31. Don't know what to do here?

00 00 44 00 12

32. Don't know which book to use?

00 00 00 50 10 10 00 50

33. Missing an account number?

00 00

34. Missing a book?

00 02 00

35. Can't afford to sleep?

00 00 00

36. Still getting killed by deer?

00 10 00

37. Still missing an account number?

00 00 0 7

38. Confused about the main room, etc?

11 00 12 70

39. Jewel stolen, yes?

00 0 00

40. Missing a gun?

00 70

41. Still missing a gun?

00 70

42. Can't see, but you're still confused?

00 00 00 10 00 00 00 11 71 00 00

43. Can't see, but you're still confused?

00 00

1	YAMBAK	20	LEAFLET	40	TRUCK	70	FOLLOW
2	LARDED	30	EPHRA	50	ORANGE	10	MAINT
3	ON	20	ON	00	ON	70	TRUCK
4	EST	20	ROSE	60	AS	70	LEAF
5	BLADE	30	BLADE	00	ALCOHOL	70	MAYDAY
6	HEB	30	EMERY	50	LAVYER	00	PERMAN
7	TRUCK	10	CLARK	00	11	00	TRUCK
8	SHIRT	00	EE	00	TRUCK	40	TRUCK
9	TRUCK	10	BLANK	07	00	00	TRUCK
10	MAP	00	NETS	00	ROSE	40	BURTY
11	ON FERN	00	ARCHAN	00	00	00	TRUCK
12	TRUCK	00	TRUCK	00	SHIRT	00	ASD
13	A	00	LUPPER	00	70	00	TRUCK
14	TRUCK	00	TRUCK	00	LUPPER	00	TRUCK
15	OROLOGIT	00	ON	10	SHIRT	07	TRUCK
16	LEAFLET	40	CLARK	44	TRUCK	00	TRUCK
17	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
18	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
19	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
20	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
21	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
22	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
23	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK
24	TRUCK	00	TRUCK	00	TRUCK	00	TRUCK

A highly recommended newsletter on disk is available from **FASTER** in Montreal, Canada. Although produced by a small user group, the newsletter is the finest we have seen on disk, far surpassing those put out by many of the large professional organizations. FASTER is fully edited with drop-down menus for the articles and reviews which may be read from screen or printed out. Text may be read in French or English. Currently available from the Editor, André Lefebvre, at 1994 Des Pavotiers, Boucherville, Quebec, Canada J0B 6A8 for US\$5 plus \$1 postage payable by International Money Order, it is well worth paying with a few pounds for. It is possible that it may shortly be distributed direct in this country.

Prosal users will be interested in a recently produced program **Flying Start** that allows full access to Prosal at 1500/75 despite the fact that the ST's serial port can't handle split baud rates! It is all done by clever programming, fooling the ST into thinking that it is running at one speed, and that Prosal emulation is available in low resolution with all colours being displayed simultaneously. The software will run on the W5200 or any V23 protocol modem and can be used to access Prosal, Telecom Global or Bulletin Boards. To order send £10 plus one formatted single or double sided disk and a stamped addressed envelope with 17p stamp to Peter Conway, 8, Kelsian Close, Brantford, Cheshire, SK3 2PP.

Hahn Systems Ltd. have released a spelling checker and look-up dictionary for use with HahnWriter. HahnSpell can also check text produced with certain other ST word processors and can instantly replace incorrectly spelled words from the 17,000 word standard dictionary. User definable dictionaries can also be created and any dictionary can be printed out in whole or part. HahnSpell retails at £29.95.

Atari's **CP/M Emulator** is now available free of charge from your local dealer, you pay only the cost of the disks, however one overcharging dealer, **Miles Computer Store**, has produced an enhanced package which consists of two disks and a 14 page manual retailing at just £9.50 fully inclusive of post and packing. The original software was written in Germany and much of the instruction is in German. All these documents have been tidied up, though not translated, and other utilities have been added together with catalogues of public domain software. The handbook manual provides a useful introduction for those not familiar with CP/M. The package can be obtained from Miles Computer Store, 290, London Road, Wrayceff-on-Sea, Hove, BN3 7JL.

Utilities Included have a formidable array of productive software lined up for imminent release. Already available is **Thunder**, a real-time spelling checker that will work with most GEM based word processors or can be used as a normal spelling checker for other text files. **Time Link** is a scheduling and time-keeping tool for your daily appointments and **BTS The Spreadsheet** is a sophisticated full featured spreadsheet that is also available as a desk-top accessory. Several of these already established, and highly respected, 8-bit programs are being released in ST versions including **HomePak**, **PaperClip** and **B.Graph**. The latter two are distinguished by the addition of 'Elite' to the title and a new Elite version of the highly acclaimed **DEGAS** is on the way. A number of ambitious enhancements to this program are planned making it the first of the second-generation graphics programs for the ST. Features will remain compatible with

several other programs including **PaperClip Elite** which will enable text and graphics to be combined in any documents.

Several ST titles are now available from **Artic Publishing Inc.**, including Tom Hudson's computer-aided design program **CAD-3D**. Artic have taken the ST very seriously and have commissioned and assisted in the development of several new professional programs. **CAD-3D** can create and animate three-dimensional objects in wireframe and solid modelling with various light sources in monochrome or colour. Example drawings are included, including a remarkably complex model of Stonehenge. **Maps and Legends** enables the user to create maps of any part of the world from different perspectives and distances. These can be saved to disk in DEGAS format and be enhanced or amended with data. This program is being used by the U.S. Air Force to chart their flight plans at Davis-Monthan Air Force Base in Arizona. Other programs include **Red Alert**, a new wargame which lets the player defend against a nuclear attack on North America and **Planit**, a new communications package that uniquely combines a straight text terminal with a GEM based word processor.

And finally ... some appetite whetters from the CES show in Chicago last June which may well be on their way to the shops by now. **Arrows** have **Halo-in-One-Golf** and a **Bridge** program. **First Star Software** are coming out with **Comic Strip Maker** and **Activision** have **Painworks**. Even **Prosim Winter Games** and **Temple of Apollon** while **Micropro** are due to bring out **Ednet Service**. Another animation program comes from **Artis Associates** entitled **Make It Move**. There are several desk accessories from **Blue Moon Software** and a number of educational and education programs from **Academy Software**, **Spiranator** and others. In fact it looks like almost all the programs that have been available for the 8-bit Atari are being planned for conversion to the ST. ■

REVIEW

CUMANA 1 Megabyte Disk Drive

If you are looking for a disk drive for your 500ST or a second drive for an existing system, take a look at this little beauty from Cumana. From the front it is barely wider than a 5 $\frac{1}{4}$ " disk and just 1 $\frac{1}{2}$ " high and 9 $\frac{1}{2}$ " deep. Being so small you wonder whether it can cope, but it is very solidly built and is housed in a grey metal case to match the ST. It is in-plate in use that without the busy lights on the front you may never know that it was working.

The drive is switched on at the rear and is connected to the computer with a flat ribbon cable and an adaptor which is certainly not as neat as a conventional round cable but causes no problems. It is plugged directly into the mains with the three pin plug supplied and does not therefore lend you with another large transformer to hide.

Not much more to say except that it works perfectly, and quietly, it is a full 1Mb double sided drive that can be used for single sided disks and, at £158, is £40 cheaper than Atari's 1 Mb drive. Cumana also do two 1Mb drives in a single case for around £275.

Superb-quality, good price, highly recommended. ■

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ZOOMRACKS

One of the common problems with many databases is that they tend to have a fixed format that requires you to adapt your methods to suit. More advanced programs like dBase allow a greater flexibility but these programs are not easy to use for the non-programmer and take many painstaking hours to set up. Quite often it is easier to continue to use a manual system of index cards, particularly with small databases, as many of you will have found out. Now with Zoomracks you can have the best of both worlds.

Zoomracks works on a principle of index cards with each card holding information in any format you wish to define. Unlike other systems such as Asa's Home Filing Manager for the 8-bit systems however, Zoomracks offers you almost unlimited flexibility and can be adapted to hundreds of applications. Each of your cards is held in a 'rack'. You can define as many racks as you wish and save them to disk. Up to 9 of these racks can be used at any one time, although individual racks can be deleted and replaced. Each rack is displayed on screen with the first line of each card showing for easy reference. A quick click of the mouse moves a chosen rack to full screen and you can then select a particular card. Click on the card and the screen goes full screen for viewing or editing. Each command is a toggle, so clicking again, or using function keys, will return you to the previous state. After a while it is amazingly easy to move around between different racks and cards.

The amount of information that can be held on each card can range from a couple of words to literally pages of information. Each card is divided into fields which you specify and which can be easily changed, rearranged or deleted, even with information on the card. Up to 27 fields can be used on each card and each field can have up to 250 lines of 80 characters. What's more you don't have to define the size of each field, just keep putting in information. If it gets to the stage where you can't see all of the information in a particular field, just click on the field and that will zoom up to full screen. As I sit and write down the capabilities of the program I become even more amazed at its flexibility. Any field can be edited at any time with the built-in word processor which allows you to delete words, cut and paste and more. It is fairly limited as a word processor but perfectly adequate for database use.

Several racks at once

a new concept from Quickview Systems

Reviewed by Les Ellingham

The cut and paste facilities can be used on whole cards as well as fields. Any card can be easily and quickly deleted, copied or moved to another rack. Here lies one of the real beauties of the system. Think of using an index card system for, say, a list of club members who you want to convene to help organise a new event. There is no one common factor to select them, you just know who might be interested and who is not. On a conventional database such totally random choices are not always easy to control and can only be achieved by having some sort of key field which you can mark. Often if you forget to include a spare field when setting up the database, you have had it. With Zoomracks you just set up a new rack, go down your main rack and copy cards over to within. You end up with a completely new database with the minimum amount of effort. And if you should decide that you need another field, just stick it in, anywhere! I don't know of any other database that offers such complete flexibility.

There are going to be many instances of Zoomracks that I will not have space to cover but in addition to those already specified, there are some available on any field, each can be printed individually or the whole rack can be printed out. There are extensive mouse facilities allowing up to 27 single key macros to be defined, including auto-mouse macros that will load defined racks when beeping up. The disk contains many examples of pre-defined racks that can be used as is or that will give you ideas for your own applications. These are simply loaded or copied from rack 0 which is always present and contains a directory of your disk.

The usage of use for Zoomracks is probably worse than for any other database program and is amply illustrated by the use of several racks to hold a full manual for the program. This alone will demonstrate the power of the system and is essential reading to enable you to get the best from the system.

Although extremely easy to use once mastered, it must be said that there are a great number of commands to be remembered, although no more than with a word processor, and it will take several hours to become familiar with them. There are one or two areas which I did not like such as the way in which information has to be entered into cards. The TAB key must be used to move from field to field and RETURN terminates all entry to a particular card. This is particularly frustrating as it is almost automatic to hit

One of the most prolific producers of ST software is Hightron of the U.S.A. whose products are distributed here by Microdeal. Mark Hutchinson looks at the latest batch of releases. Are they good or bad?

CORNERMAN

Microdeal
Mono-Med Res.
£29.95.

This is a desktop accessory file, automatically loaded when the computer is switched on and which sets up a digital clock in the top right hand corner. It takes up 200K of memory, so is best used when you have TOS in ROM. As usual, Microdeal parcel this up in a neat two ring binder with a slot for the disk. The pages are well printed and readable although some details are missing. The booklet also contains explanations of some common error messages. The two utilities can be called by using the function keys or from a menu with the mouse.

The utilities are:

ASCII TABLE	ASCII characters with their DEC, HEX equivalents.
CALCULATOR	16 digit, scientific calculator.
NOTEPAD	Seven lines of 32 characters for small notes.
DIALER	Names, addresses and dial telephone numbers.
PHONE LOG	Keeps track of telephone calls & their results.
FIFTEEN	Small game to pass the time.
CLOCK	Analog clock with privacy feature.
SETUP	Changes default values.
PRINT	Prints from the CORNERMAN data files.
DOS WINDOW	Allows exit from GEM to run a TOS or TTP program.

The ASCII TABLE is very handy when writing a program although the editor must be in GEM to allow entry to CORNERMAN. Much better than hunting through a reference book and never then having photocopied bits lying around.

The CALCULATOR is one of the best

of its kind that I have seen. It allows DECIMAL, HEX, BINARY calculations (e.g. AND, OR etc.) and conversion up to 16 digit precision, all the usual functions plus modular division, three memories, etc. The input can be by mouse or keyboard and a chime is sounded if the function is not valid. The functions change according to the operating mode and the display shows a 'paper roll' with the last four entries and the last line functions printed. You can use it to work with dollars and cents (or pounds and pence) as it is set up to use only two digits to the right of the decimal point. I found that my copy would not accept two figure cents. I also found that the square root took ages to calculate, obviously a strongly chosen algorithm. No mention is given about choosing the memories - it is done with the own key - not the T+ and T- keys mentioned. I think they should stop the 'paper roll' memory backwards and forwards, but they operate a printer. Perhaps an update is due. Although I have a couple of public domain calculators, this is by far the best and almost worth the price of the disk alone.

NOTEPAD will store 32767 notes of 1 line by 32 characters in a data file. All notes are editable. A handy thing to have once you get into the practice of using it, and it saves you having all those little bits of paper lying around that you can never find when you need to.

The DIALER is somewhat similar to NOTEPAD, with 32767 pages of information that stores names, addresses and telephone numbers. When the PHONE LOG is opened, the result of your call is stored. Again the files are fully editable and you can view the files for a name starting with a given letter. The dialer is Hayes compatible and can be formatted for tone or pulse dialling, or a mixture. The PHONE LOG holds the results of any calls made with the DIALER, e.g. line busy, wrong person, no answer etc. Very handy for those of you who make a lot of calls and have a bad memory.

FIFTEEN is a game of sixteen squares, one of which is empty, and you must arrange the fifteen numbers into their proper order. I have a couple of these on public domain accessories. A time passing puzzle well programmed, but it



should be kept public domain rather than to be on this disk.

The CLOCK is an analog clock that can be opened up to the full extent of the screen. It has a security code that must be entered before the clock returns to GEM (optional). I have no idea why you would want this, unless you need to leave the computer for a while without clearing down some private screen.

SETUP allows setup of the accessories (along with an RS232), including their position on the screen.

PRINT allows you to print from the data files, either all, current or before or after a given date.

Finally, DOS WINDOW allows entry to programs with PBIG, TOS, or TTP extensions but is not useful if you have several such programs on the one disk.

As a package the whole thing is well put together and will be particularly useful to someone with a modem. Although this applies mostly to American ST owners, due to the lack of modems in the U.K., it does not detract from the value of this package. I feel that some items should have been left off. If you do not use this accessory with a specific program such as a word processor or spreadsheet then you will not need the DOS WINDOW nor do you require FIFTEEN, there are enough on public domain disks. I think the package is a good idea, but I am not so sure about the price. This may come down as user groups start adding their own routines to the public domain network. One good feature is that it can be copied over to a hard disk - should you own one.

NEXT ISSUE - A Review feature on ANTRC's ST programs including CAD 3-D and Magic and Legends.

MAJOR MOTION. Microdeal Colour Only £19.95.

The disk and booklet come in nice cardboard boxes (but does the disk have to be loose?). The booklet - two uncut pages - gives you enough information to get started and know what you are up against, other details you will find out from experience.

The menu screen is a neat revolving sign and if no button is pressed then the program goes into auto-mode. This is a single or two player game with each taking turns on the road. The object is to destroy enemy cars - but not civilians - and to survive. There are several choices of weapons, and the operating keys can be re-programmed (a nice touch). At the start, you will only have the choice of forward firing cannons. Your success can be recorded on a high score table written to disk.

The game starts with a truck driving along a road. The ramps drop you off and you are on your own. When the truck reappears, fortunately a regular occurrence, you must call it using one of the keys then climb the ramp to be rewarded with a new weapon (anti-helicopter missiles, rockets, turbo, oil jets, smoke). The truck will then dump you onto the road again often, to my frustration, right in the middle of trouble.

So who is the enemy? Any car that tries to slow your tyres, knock you off the road or shoot at you is a car to take out. Added to all this is a helicopter

I normally do not play arcade style games and usually find that I will stop playing them altogether after a few days. This game is in a different league. I really enjoy it and come back to it time after time. As I am quite phobic behind the wheel of my car, I find a 'toadie-and-Hyde' character with this game. How I wish my Saab was like this car! The graphics are good and the scrolling is very smooth.

At a price of £19.95, I have no hesitation in recommending this game. Red points! Apart from the machine truck ship pushing you off the road or dropping you right in it, I have not come across any. One point to note however. You will be using your mouse extensively and the rollers will collect dust and grease. This affects your overall handling and you will need to clean the rollers once in a while. dropping oil and blowing holes in the road. You can also kill civilians but be warned! Knowing not too many civilians will cause a lighter to blow you up! You will soon become adept at knocking cars off the road, and you meet up with your 'Enil Eins'! Watch out for the car that shoots at you. I have nicknamed this the 'Mafia Bull Car', it is very annoying!

Sometimes during the game you will come to the river. Here, your car will become a boat and the terrain will become very treacherous. Oil, mines, other boats and islands are your main dangers. Reverse your own motor ship, I have been pushed into islands by it and lost several lives! This is not an area for high speed. Once past the river you are on the road again.

the screen, most confusing. When you win there is no congratulatory notice. A pity about the graphics as this is my favourite game of the five.

BLONDIE is the most common game played solo. A row of seven cards, with the last normal face up, then a row of six, five etc. The four suit bases are built from Ace up, and cards are played, alternating colours, King down on the rows. Unfortunately, this is a variation that I don't like playing, as it goes through the pack one card at a time and does not allow a re-deal, nor can you move one face up card at a time to five another (not a rule that I know!). I found it hard to recognise cards lying under each other and this was more in memo. The evaluation copy I was sent did not allow me to place the ace onto the bases, something that must be handled or else it is not worth playing! For some reason this game plays with money stakes, has anyone ever heard of a game of pinball in game you play by yourself) played for money! (Strangely enough, this game is not described in the booklet).

POKER SQUARES is a thinking game. The pack is continuously being shuffled and a key press will select a card. The card is placed into a five by five matrix to complete poker hands (five across, five down). The computer sorts out the score for you. I enjoyed this with the computer better than actually using cards. This game could well appear in the public domain, written in Basic.

CRIBbage, a well known game, scores out quite well on the ST. I am not so sure about playing the computer game as I like having a human opponent to talk to. The count is taken too fast for me to check (not proven how little I play the game these days). The fun in cribbage is trying to work out all the variations and arguing with your opponent so with a computer the game is not so alive. This is a personal opinion - the game is good.

BLACKJACK. As I do not gamble (but I have played this game and its variations for fun) I do not find it exciting. I think that I would miss the interaction of a human player, though the game itself is very playable but as usual the odds seem to favour the house!

Overall, the games are good, well designed and written. The only bad part is **BLONDIE** but hopefully a new version will appear. I find it hard to determine value for money, that really depends how much you enjoy playing cards.

CARDS Microdeal £19.95 Colour Mono

The disk and instructions come in a nice little box but, again, with the disk loose in the box. It is nice to be granted that the games are known to the user, including the rules laid out by the 'Official Rules of Card Games', Sid. Rubin, published by the U.S. Playing Card Co. I had never seen this reference before but I found all the games playable without this source of reference.

When you load up the disk and open the game program, it sets up to GEM with drop down windows letting you choose the game to play or the option (if available), including a score

screen. Probably the first one chosen will be **SOLITAIRE**. This is more correctly a generic name for solo card games with individual games having their own names. I cannot recall the name for the game represented here but it is a game that requires a good deal of thought, although if you have the cards sorted neatly then you cannot win. The cards are sorted into groups of three with a base for the suits at the end. The object is to build up the suits from the ones, freeing cards in the process. Cards can be grouped by suit, King down-wards. You are allowed two re-deals that may or may not jumble the cards enough to let you win. This is a good game ruined by an annoying mouse flicker and the redrawing of groups to fill up horizontal lines. This leads to confusion, as the groups you were working with can move several times about

REVIEW

MENU+

Reviewed by Matthew Jones

As I have described in some of my reviews, a typical programming session consists of an edit, compile, link, run (debug) cycle. The GST C language comes with a shell program to allow you to go through this cycle by selecting the programs from a list of menus, as well as setting each program's options (like list file size(s), etc). Megamax C comes with a similar shell. They are very easy to use, and just what is needed to make the boring part of programming resemble what if you don't like the editor that is supplied with the system, or you have a special requirement that is not catered for in the shell? You cannot change either of the two shells mentioned, so the answer is you either accept them as they are, or resort to running each part separately. Megamax have produced their answer to the problem, MENU+.

MENU+ is a user customizable shell. With it, you can customize three drop down menus to contain what you want, and to do what you want. The first menu is called FILE, and typically contains entries like 'choose' and 'choose.C', as well as 'COMMAND' (your program) and 'QUIT' (leave MENU+). The two-choice options are used to allow the user to select which file the commands are to operate on. If you were using an assembler for example, you would have 'choose ASM', with Pascal, 'choose which is loaded by MENU+ when it is run'. In the next menu, TOOLS, the actual working programs are available. While you can have the normal 'edit', 'compile', 'link' and 'run', you can give yourself extra options, like 'compile with debug' and 'compile, link then run' (though not in so many layers).

Behind each option lies one or more command lines. For instance, the EDIT line in the menu could start the line '%d:\utils\edit.prg path file type of_spr'. Thus the edit program would be run, and pass the current file's name, along with options which are given defaults in MENU.INF, and are alterable when in the shell in the third, OPTIONS, menu. With, for example, the compile option you may want to have more than one program run consecutively, and MENU+ allows you to specify both (and more if you want). You can choose to pause after the first one has completed, and to stop the sequence if the phase has failed. You specify a similar command line for each option you want in the menu, and you have all you need to complete your task. The system is very flexible, and will cope with many different situations by having more than one MENU.INF file.

The manual is a 24 page booklet which adequately describes how to use and program MENU+. It also describes UTIL.TTP, a utility supplied to perform basic tasks such as file print, copy, delete and rename.

Despite its very powerful facilities, however, I did find some problems with MENU+. In the first place, it is difficult (though not absolutely impossible) to set an file in a different sub directory, perhaps to perform a link in 'object' when you are using MENU+ in 'source'. Also, much more serious, I found it crashed quite a few times while I was developing a MENU.INF file, so much so that I gave up finishing it. I am using it for another purpose though, where it works just fine.

MENU+ is good when it works, which is most of the time. For the asking price (about £20), or free with a Meta-comex compiler) it is well worth experimenting with if you find your current setup restrictive or slow to use.

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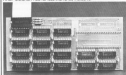
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In the beginning adventures were plain text. Masters of the game like Infocom quickly took these to high levels of sophistication but people still wanted more. Graphic adventures came along where locations were illustrated with pictures but these tended to add little to the adventure save for the occasional clue to be found in the pictures. Software writers used their hand at 'arcade adventures' where the traditional style was replaced by 'action' - of a limited fashion - but few of these could match the breadth of a text adventure and none were that good graphically. The obvious answer, for those who wanted more than text, was a good adventure with top class graphics and animation. New Sierra On-Line have come up with just that - 'animated adventures' - and Kings Quest II and The Black Cauldron are a couple of examples!

What companies have struggled to do on 8-bit machines becomes fairly easy on an ST with 16 colours in low resolution (the equivalent of 8-bit high resolution) and both these adventures have excellent illustrations, although still based on the style developed for 8-bit machines, and full animation with the main character able to walk and swim, go behind or in front of objects and such like. Other characters, who appear at random or according to location, are also animated as are various scenery objects such as rivers, mountains and animals. It is all quite different from what you are used to and has some paragraphs of delight through all these. I know who we it for the first time.

KINGS QUEST II

Kings Quest II is the first I am not sure if there is a Kings Quest I for the ST) of the two and comes well boxed with a guidebook containing an outline of the story and some games which will help. Inside is a nicely embossed and illustrated booklet which gives the rest of the story of King Graham and his quest to find a bride and so ensure an heir to the throne of Daventry. The story is not particularly strong and the choice of names unimaginative (Daventry sounds as exciting as Wigan) but it will still tell us all but the most advanced adventures and give everyone the joy of discovering new locations and action.

Your hero can be controlled by joystick or from the keyboard and is able to walk in any direction at command. Actions are supplemented from the keyboard by typing in the usual commands such as look and get. Using the joystick or keyboard in one of the major departures from the normal format for the program does not recognise words like North and South! Quite frustrating if you impatiently test up the disk and begin to play! Odd villainous characters will appear and you must learn how to deal with them and you must explore everything in the usual fashion. Points are earned for every little 'discovery' as you continue your quest and get deeper and deeper into the game. I've played it a few times now and each time the action has been different so that holds promise for continued interest.

I'm not a great adventurer and therefore find the game a sufficient challenge (I can't really say how complex the plot is) but what keeps me at it is the continued discovery of more superb graphics and I suspect many 'non-adventurers' will be converted by this. There are a few gripes, such as a limited vocabulary and the wait for each scene to load from disk as a screen is exited but the program as a whole is so far ahead of any other graphics in arcade adventures that these must be considered just niggling. Mind you with a hard disk think how fast it would be!

Les Eillingham tries the next generation of Adventures

THE BLACK CAULDRON

The Black Cauldron continues the style but shows immediately how the programmers have learned from their experience in programming for the ST. Kings Quest II is very, very good but The Black Cauldron is much better. The major improvement is that the whole game can be played with the mouse which improves the flow of the game considerably. Whilst it does inhibit the type of response you can give in such situations I found it to be altogether more enjoyable. One problem with the 'hybrid' games that use both joystick and keyboard is that it is often awkward to keep changing between the two but The Black Cauldron overcomes this operability. That's not the only thing that is better, the graphics are much improved, the animation slicker and there is much more movement of secondary characters. These are not major changes but subtle improvements that give this game a much classier feel.

The story is based on the Walt Disney film of the same name and your adventure of the adventure will depend to a degree on whether you like the Walt Disney style of cartoon. I have not seen the film, and would not go out of my way to do so, but still found the game to be quite enjoyable. This is true fantasy having been based on one of a series of books by Lloyd Alexander and, whilst written for children, has many of the elements of Tolkien. The story is basically the search by a small boy Taran for The Black Cauldron to stop it falling into the hands of the evil Horned King. Aided and abetted by Hen Wen, a pig with magic powers, he must find The Black Cauldron and stop the Horned King from capturing Hen Wen who alone has the power to locate the cauldron. If it

PRO-PASCAL

Prospero Software

Reviewed by Mark English
and Adrian Merwood.

The PASCAL programming language was developed by Niklaus Wirth during the early 1970's. It was primarily designed as a teaching language encouraging the use of structured programming techniques. Although primarily developed for use in education the language has been adopted widely in industry and a PASCAL compiler now exists for almost every make of computer. An international standard for the Pascal language has been defined by the International Standards Organisation (ISO), which also developed a suite of validation programs which are used to demonstrate that the compiler conforms to the standard.

THE COMPILER

PRO-PASCAL is a full implementation of Pascal conforming to the requirements of the ISO standard (ISO 7189). The compiler also includes a number of language extensions. These include string handling, double precision floating point arithmetic (IEEE format), random access files and separate compilation facilities. To assist the writing of portable Pascal programs an option is available to prohibit the use of these extensions.

The compiler runs from the Desktop as a TOS application and as such makes little use of GEM facilities. Compilation speed is quite good. The compiler requires two passes to compile a source program to produce a link file. During compilation messages are displayed showing the progress of the compiler through the source file along with any errors encountered. The messages produced may be optionally written to a log file. The error messages produced are quite explicit giving an error number and displaying the line that it is an error. The compiler produces link files in the widely used GDT Linker format. It is possible to link Pascal routines with routines written in assembly language and PRO-Fortran 71.

The disk supplied includes the Pascal compiler, the linker, a system configuration program, a librarian program

to enable the creation of custom libraries, a number of linkable libraries, and a program cross-referencer. Also included is PRL (the Prospero Run-time Library) in the form of a separate program which must be executed before the compiler suite will function. This is identical to the run time system used by Prospero's Pro-Fortran 71 compiler. We share the reservations expressed by Matthew Jones in his review of Pro-Fortran in issue 22.

THE LIBRARIES

The libraries included with the compiler include routines giving full access to the GEM AES and VDI, and GEMDOS. The routines supplied closely resemble the standard C function naming conventions as described in the GEM documentation. User alterable bindings to these routines are supplied on the system disk. Additional routines include memory management, random TEXT files, program chaining etc.

THE MANUAL

The manual comes in a smart blue ring binder. It comprises three main sections. The first gives fairly good introduction to the Pascal language, although a beginner would probably require a good Pascal teaching guide. The second section gives a detailed description of the Pro-Pascal implementation of the Pascal Language. This section includes a guide to the use of the supplied library functions, including the various GEM calls. The third section covers the installation and operation of the various elements of the Pro-Pascal system.

CONCLUSION

Pro-Pascal is a good implementation of the Pascal language which includes a number of useful routines to enable the programmer to produce powerful systems making full use of the facilities made available by the ATARI machines. At £130 the compiler, though not as cheap as some, is good value for money.



sounds too childish, don't let that put you off. If you have children, buy it for them (or yourself too). If you don't, who cares what people think, buy it anyway.

The class of this game extends to the packaging for bound into the gamefile box is a beautiful 18 page booklet, in full colour, illustrated with scenes from the movie. It really is splendid. And you get a map of the kingdom as well as several other papers to help you play or otherwise enjoy Sierra products.

With these two games, Sierra On-Line have opened up a new era in computer games, with the promise of even better things to come. At last we are approaching the true use of the home computer as an art form in its own right. Almost interactive cartoon, not quite but pretty close. These have to rank way up at the top for the way in which they use the graphics of the ST and you may well look back on them in the future as examples of a new departure in computer games.

Sierra On-Line products are now distributed in the U.K. by Microsoft so these should be easily available from your local dealer or by mail order.

HOMEPak Batteries Included/Ariolasoft

Reviewed by John S. Davison

What do you get when a well-known games author turns his attention to producing a serious application package for the 8-bit Atari? When that author is Russ Winnows of Preppie fame, the result should be something special, and it is. Originally released in the USA by Batteries Included, HomePak has now arrived in the UK, by courtesy of Ariolasoft, priced at £24.95.

HomePak is not one, but three programs. It consists of HomeText, a word processor, HomeFind, an internal database program, and HomeTerm, a telecommunications program. They're 'integrated' to a certain extent, allowing you to merge items from HomeFind into a document you're preparing with HomeText, or use HomeTerm to edit files and messages you've received via HomeTerm.

Integration applies to the 'human factors' aspect, too. They all have the same visual style, are similar (slightly zany) and use visual prompts and messages, and all permit you to set the physical characteristics of the screen to your liking, such as background colour and brightness, and text brightness. All three programs are very friendly, using windowed menus and lots of helpful messages when you need them. The bottom few lines on the screen are used for displaying messages, prompts, and current program settings, with actual details varying by program.

HomePak comes packaged in a black plastic box, rather like the library box you get when you buy 10 blank disks. This has a smart, colourful slip-on cardboard cover. Inside you find a single-sided disk containing the programs, and an instruction manual. This manual is physically small, measuring about 3.5" by 3.5" and contains 60 pages (but no index) printed in a tiny font. The printing is rotated through 90 degrees, so you have to turn it sideways and open it away from you to read it. Its small size and method of binding ensure it won't stay open at the page you want. Physically, it's a bit of a disaster.

HOMETEXT

This is a medium level word processor, falling between the ultra-simple such as Cut & Paste, and the heavyweight like PaperClip and Letter Perfect. It has most of the facilities you're likely to need for general home use. It's got a good range of editing facilities, with all of the expected features present. Lines include cursor skip to start or end of line, screen or document, auto-wrapping, and choice of insert or overwrite modes. Pressing the START key calls up a small window containing a menu for block move, copy and delete functions. Search and replace is also accessible from here. You're guided through the operations by on-screen messages, so you can't really go wrong.

Text formatting codes are accessed from a windowed menu. Unlike most word processors, HomeText doesn't just automatically control codes into your text. It inserts an abbreviation of the command in inverse video, so you can tell at a glance exactly what it means. It does all the usual things, like indenting, set margins, line and page size, and line spacing, centring, bolding and underlining. Your text can be printed fullsize, reduced, or underlined, with facilities for customising the codes for your printer. Any other special



requirements, like alternate fonts, have to be done with our printer codes. This is a pity, as it detracts from the general ease of use of the program.

Further choices allow you to force end of page, specify page breaks, footers, page numbering, page width (for single sheet paper), and chain to another file. You can also merge in data from HomeFind, giving you a small merge facility, should you need it. Sadly, there's no automatic paragraphing, one of the few facilities missing.

Another windowed menu provides the manipulation options, such as load, save, delete, directory display, and append member file to the one currently in memory. You can also preview or print the current file from here.

The preview facility is handled graphically. Instead of showing your text, words are represented as black lines, with special features such as underlining shown in different colours. This is not the same as having a full text preview facility, but it seems to work quite well for checking overall document layout. The only snag is that it needs 5000 bytes of free memory to work. As you only have 6000 bytes to start with (so 5000 as stated in the manual), it makes the feature steadily worthless. However, there's a facility to preview a document of any size from disk rather than memory, so this gets round the restriction if you save your file to-disk first.

The menu I use HomeTerm, the menu I like it. It's got lots to offer the casual user, and it's friendly. The only serious shortcoming concerns lack of memory. For documents over about 3 pages you have to resort to writing them as separate files and chain them together. I find this a nuisance, as often I want to refer to an earlier part of a document, and maybe even change it to fit in with something I've written later. Continued saving and loading separate files wastes valuable time. Perhaps Russ Winnows will produce a version for the IBMPC which will overcome this. I hope so, as it would make HomeText even more usable. It might even snipe me away from my trusty old Acariettes.

HOMEFIND

This just has to be the most friendly database around. You don't have to know anything about fields, records and

continued on page 36



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indexing – all HomeFind needs to know is the relationship between a subject and its data, and the data itself. You set up and make queries on the database with virtually plain

English commands, with some other activities available from menus or by prompts from the program at the appropriate time. It's relatively limited as database programs go, but its ingenious design makes it a delight to use, especially for people who normally find computers a little intimidating.

Creating your database couldn't be easier. It's harder to describe than to actually do it. The data and its relationships are input in a simple three-part form, like this:

Subject's Tag's Object

where

Subject identifies the person or item to which the data refers, *Tag* identifies the subject's relationship with the data following, and

Object is the data itself.

The apostrophe and s on the end of subject and tag are important, as they tell HomeFind where the subject and tag end. They also facilitate the use of plain English for input. Let's look at a few examples to see how it works.

Imagine we want to set up a database of our friends. We'd probably want to hold their names, addresses, phone numbers, and other personal details. Straight away we can begin entering the data, in any order, with our own choice of tag name:

Mike's surname's Taylor
John's surname's Burton
Bill's surname's Watson-Smythe

If a subject or tag name's already in the database,

HomeFind responds with a chatty 'news to me?' message, and you choose whether to add it or not. This process is repeated for each line of data input. If a subject and tag already exist, then HomeFind handles the data immediately without further user interaction.

You might decide to enter addresses next, so your input could look like this:

Mike's address's 1, High St, Bingham

This time the subject's already in the database, so HomeFind can handle it. However, address is a new tag so you get a prompt for permission to add. In this way you can add any detail with any tag to build up a collection of related data about each of the subjects. You don't have to have the same tags for all subjects, just include whatever you want to suit your purpose. And that's all there is to setting up a basic database!

You can update your database at any time. To add new subjects or tags, simply enter them as described above. There's also a facility for adding object data to data already stored, or for replacing old object data with a new version.

Deletions were a bit of a puzzle, as the manual doesn't say anything about removing obsolete data. It seems you achieve it using a variant of the replace data procedure, in effect giving each tag null data. Subjects and tags having only null data then have to be physically deleted by 'compressing' the database, available via one of the menu options.

HomeFind's data retrieval features are as simple to use as the data input facilities. To display all object data about a given subject, for example Mike, you need only type:

Who's Mike?

HomeFind replies with:

Mike's surname's Taylor
Mike's address's 1, High St, Bingham
Mike's birthday's 13 January
Mike's computer's Atari 1300E

and so on.

You can ask for any detail, using the words 'what',

'when', 'where' or 'who'. For example:

what's Mike's birthday,

what's Mike's computer,

and HomeFind will reply with the appropriate detail.

Actually, the words 'what', 'when', etc. are only included for clarity – the retrieval works without them.

Retrieval can also be achieved using the tag alone, the object alone, or the tag and object. For instance, you could key in 'who's computer's Atari 1300E', and get a list of all subjects with an Atari 1300E. Or you could enter 'computer' and get a list of all subjects with a computer. Regrettably, there's no wild card feature, a serious omission reducing the usefulness of HomeFind somewhat.

HomeFind's print facilities consist of a printer ON/OFF toggle. The printer has 'relevant' screen output, i.e. it prints what goes to the screen, but filters out prompts, error messages, and the like. There are no facilities for producing customised reports or address labels directly, but you can extract data and write it out as a DMS file. This can then be loaded into HomeText and processed as you wish.

HomeFind is not meant to be a full fledged database program, being limited in scope and facilities. But it's elegant, friendly and very easy to use, and could be of use for basic home or school applications.

DISCUSSION

HomeTerm was designed for use in the USA. Unfortunately, for UK use it's lacking in certain essential areas, these being modem interfacing and split transmission rates for use with Prestel, Microtext, and other services using 1200/75 split baud rates.

I tried using it with the Miracle Technology Datamax interface and W32000 modem and could go no further than the initial screen displaying the message 'Modem Error'. Pressing any key after this resulted in the reloading of the HomePak main menu. Calls to Ascendia produced no solution, but they promised to run tests with the Datamax and call me back. To date I've had no reply.

The instruction manual says HomeTerm's designed for use with Atari E/S and 3000 modems, which aren't available here. You can also use other modems via the Atari 800 serial interface, but this device seems to be as rare as hen's teeth in the UK. It requires the set up procedure required for the MPP modem (again, USA only), which uses a custom RS-232C handler to emulate the 800's RS-232C handler. It seems likely that something similar's required for the Datamax. Anyone out there know of one?

For the review, the best I can do is to describe HomeTerm's facilities without the benefit of practical experience. At least this will be helpful to the lucky few with an 800 interface at their disposal.

HomeTerm has three operational screens. One is for interactive use, when you're online to another computer. This has some nice features, like automatic wrapover to prevent breaking a word across two lines, and a 320 character edit buffer into which you can key your message, and edit it before transmission. The other two screens are menus, one being the Functions Menu from which you control the program's main functions, such as file upload/download, etc. The third screen is the Files Menu, giving you a 'mini-DOS' facility. This allows you to format a disk, list directory, or copy, delete, rename, lock or unlock a file, all without leaving HomeTerm.

HomeTerm handles transmission rates of 300 or 1200 baud only, in full or half duplex mode. It can also handle four different transmission coding methods protocols, these

CUT & PASTE Electronic Arts/Ariolasoft

Reviewed by John S. Davison

Cut & Paste is one of the growing number of word processors now released for the 8-bit Atari. It's produced by the much respected Electronic Arts of the USA, and is available to our American readers on Commodore, Apple and IBM PCs as well as Atari. It's distributed in the UK by Ariolasoft, and costs £24.95.

Cut & Paste comes nicely packaged in a hard plastic box, which opens like a book to reveal two single-sided disks and a glossy 37 page instruction manual. The program disk contains the Cut & Paste program, while the data disk contains a number of example documents. These include a letter, memo, and envelope layout, the idea being that you type your text over that in the example, so helping you get the correct format.

The manual isn't as comprehensive as it looks at first sight, as the first half of it contains four sets of instructions covering the four major computer variations above. The rest of the manual covers general topics common to all of them. It's easy to read, but going through it I got the feeling it must be missing out a lot of the program's facilities. Was this an oversight, or were they really missing? I decided to write this review using Cut & Paste to give it a practical test.

Booting up the program disk revealed instant frustration - no screen instructions telling you what to do, and a menu bar along the bottom of the screen with options shown using the arrow and RETURN keys. All the menu items are shown in inverse video, so to select a particular option you have to 'de-highlight' it with the cursor. I found this illogical and slightly irritating in use.

One of the design principles of Cut & Paste is that the commands you use most often are the easiest to perform. In practice, this means that you only have to press ESC to access the menu bar, then RETURN to perform the command, as the cursor is usually already positioned over the most used option on that menu. Full marks to the author for this piece of thoughtful design.

No marks for the same feature, though! Cut & Paste's files are held on disk in a non-standard format, and there's no facility provided for converting them to DOS files. This means you can't manipulate the files with DOS, process them with other utilities such as spellcheckers, or merge them with Atariwriter files. This, frankly, is appalling. Unnecessary use of custom formats is severely a pet hate of mine.

The fun really began when I tried to enter text on the edit screen. Like Atariwriter, Cut & Paste operates in insert mode, so correcting mistakes involves deleting characters rather than typing over them. But incredibly, Cut & Paste doesn't use the delete key - you have to backspace over a character to delete it. I found this very clumsy and unnatural in practice. In fact, the only other editing keys which work are the arrow keys. Attempts to use anything else elicit a noise like a ball trapped slithering from the speaker!

For deleting larger amounts of text you could use the much wanted cut and paste feature from within the program takes its name. The feature does work quite well, allowing you to mark text, cut it into a buffer, and then paste it back into your document at any point (multiple times if you wish).



The next step is the buffer and you make another cut, or clear the buffer manually. It also stays there across a document load, so you can cut from one document, load a new document in, and then paste the buffer contents into it - a nice touch.

To begin the review I wanted a control, underlined title. Horrors - there's no centering function, or any way of underlining! I like to begin paragraphs with a 5 character indent on the first line only, and separate the new paragraph from its predecessor with blank lines. Cut & Paste can't do this automatically either, you have to do it by hand. There is an indent facility, but it indents whole paragraphs. You can't use it for smaller units of text.

Having looked in the review, I wanted to preview it on the screen. Not possible. OK, so print it out. Selecting PRINT from the menu bar brings up a full screen print menu. This has the usual facilities for modifying margins and page sizes, line spacing, page numbering, number of copies, and single/continuous stationary selection. You can also supply a page header at this point, but not a footer. Unfortunately, the header is not stored on the document file, so each time you load and print the document, you have to remember to type in the header again.

One of the few good points in Cut & Paste's favour is its handling of 'widows and orphans'. These are terms used in the publishing industry - you may not have heard them before, but if you've used a word processor, you almost certainly know them by sight. A widow is the last line of a paragraph which annoyingly prints as the first line on the next page. An orphan is the converse of this, when the first line of a paragraph prints as the last line on a page. Both give your printed text an untidy appearance. You normally have to deal with them manually, but Cut & Paste automatically detects and corrects them. Also, if it finds a single line paragraph it assumes this could be a heading for the paragraph following, and ensures both are printed on the same page. This I like!

There are no facilities for right margin justification, or for selecting fonts or other special features your printer may offer. If you want to use a Near Letter Quality font for your final copy, hard luck!

A feature I find essential in a word processor is the search feature. Without it, locating a particular point in a document can be very tedious and time consuming. Guess which word processor doesn't have this feature? Right!

I find it difficult to raise any enthusiasm for this program. Its few good points are far outweighed by its many bad ones. In sections it seems closer to an electronic typewriter than a computational word processor. But then on the front of the box it does call itself 'The Remarkably Simple Word Processor'. If you want something on which to compose the odd letter or page of notes, then Cut & Paste could be for you. For anything more complex, though, you would be much better off with one of the many other word processors now available for the 8-bit Amats.

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Review

Solo Flight Microprose (distributed in the U.K. by U.S. Gold) 48K disk or cassette

Solo Flight received a full page review in Issue 17 and I was not therefore going to review this slightly enhanced re-release, however I booted it up just to have a quick look and was so enthralled that I just had to write something!

I have tried several flight simulators in the past and have found almost all of them to be virtually impossible due, it must be said, more to my impatience and inability than to any program design faults. So it was with the usual resignation to half an hour's frustration that I pressed START to begin my flight. To my amazement and joy, it was easy! An in-flight instructor 'talks' you through each stage of the flight and by following his instructions and checking your instruments, you can fly! I took off, climbed, banked and generally flew around before re-approaching the runway to attempt a landing. With the instructor talking me down I approached the runway, lowered landing gear, applied flaps and missed the approach! Never mind, pull back on the stick, increase throttle and come round again for another try. This time, with

some fine controls and a little more experience, I landed. Brakes on, engine off and there I was back on the runway. It really gave me a sense of achievement and was quite one of the best little episodes on the Atari that I have had for some time.

The program includes much more advanced flying and you can switch off the instructor. There is also a Mail Pilot game included for you to practice your flying skills. The criticisms in the original review seem to have been attended to, the instrument panel for instance is easy to read, and I would not hesitate to recommend this to anybody.

If you want to experience the thrill of flying with a simulator that you really can fly first time, then this is the one to go for. Believe me it really is a joy!

Les Ellingham

WARGAMER WANTED

Do you have a good collection of wargames? Could you write an overview of wargaming on the Atari? As well as paying for the article, we will send review copies of any war games simulations we receive to the author of the article accepted for publication. Interested? If so, get in touch with the Editor now.

Don't lose your programs

VERIFY!

One of the problems that cassette based systems suffer from is loading errors. That's OK, I suppose, that you have the *SAVE!* (just don't load, and unfortunately *LOADING RETURN* just *ONCE* after typing *LOAD*) device the program currently in memory. No chance to try again!

The utility presented here will help ensure the loading ability of your tapes *WITHOUT* the loss of the original program, which will remain in memory for you to try again if necessary.

FOR BASIC AND BASIC XL!

Listing 1 is the Basic XL version. If you have this first language then you will need no explanation of how it works, and for the less fortunate the program should be clear. I would point out though that *Open(80)* is the same as *FILE(80) + INT(FEEK(80))* in Atari BASIC, which is the state of screen write memory.

Listing 2 is the Atari BASIC version. Please be sure that you type in the correct version. Although listing 2 will function just as well under BASIC XL, listing 2 will not work with the Atari BASIC.

A problem with Atari BASIC is the slowness of I/O using the cassette. Using *GET* or *INPUT* requires that cassette have long gaps between records to allow processing time, during which the motor may stop. The long gaps (*LIRG* or Long Inter Record Gaps) allow the motor time to reach the correct speed before the next record is reached. On the other hand, tapes produced with *CSAVE* have short gaps. *DIRA* it follows, then, that the *GET* command will not be able to process such tapes. We have to use *GET* for this form of data access rather than *INPUT* as the former allows us to read data without regard to whether there are any carriage returns, which will necessary *INPUT*. The machine code routine pointed in on Page 6 requires the cassette buffer rapidly enough so that when the routine is called again by the loop, the Operating System thinks that BASIC has finished processing the information contained within the buffer, to notify that there is no requirement for *LIRG*.

Listing 3 is the source program for the machine code. You do not type in this program, it is provided merely for those readers interested in machine code. Please note that this routine is not relocatable as it contains internal jumps. Relocatable is a different origin if this is required.

When you have typed in the listing, save it on tape using *LIST "C:"*. BASIC XL users should note that strings in quotes are not converted to normal uppercase by the editor, to ensure that you enter filepaths in capitals when they follow *LIST* statements where quotes are mandatory. I like to enter my strings in lowercase!

Atari BASIC and BASIC XL listings by Derryck Croker

```

8 GRAPHICS SCREEN:PRINT "BASIC XL V.1.00";GOTO 1
9 STOP
1 PRINT "BASIC XL V.1.00";GOTO 1
2 POSITION 8,1:PRINT "OPEN(80)";GOTO 1
3 VERIFY:PRINT "FILE(80)";GOTO 1
4 " " : PRINT "Tape read error";GOTO 1
5 SCREEN:PRINT "FILE(80)";GOTO 1
6 CLEAR:PRINT "FILE(80)";GOTO 1
  
```

Listing 1 - BASIC XL

```

100 0 DESTROY P:FOR A=1000 TO 1000:PRINT A;
101 1 PRINT "OPEN(80)";PRINT "FILE(80)";GOTO 100
102 2 CLOSE:PRINT "BASIC XL V.1.00";GOTO 100
103 3 FOR A=1 TO 4999:STOP:PRINT "BASIC XL V.1.00";GOTO 100
104 4 GRAPHICS:PRINT "VERIFY";PRINT "FILE(80)";GOTO 100
105 5 " " : PRINT "Tape read error";PRINT "FILE(80)";GOTO 100
106 6 CLEAR:PRINT "FILE(80)";GOTO 100
107 7 PRINT "BASIC XL V.1.00";GOTO 100
108 8 " " : PRINT "Tape read error";GOTO 100
  
```

Listing 2 - ATARI BASIC

CHECK FIRST!

Check the loading ability of the tape by issuing a *LIST* command, rewinding the tape and press *PLAY* and *RETURN*. The tape will load into the first 128 bytes of screen memory (listing 1) or the cassette buffer will be shown screen error (listing 2) and will continue until the End Of File (*EOF*) is reached or a fatal error condition is detected. In this case you will not be able to load the tape later.

If you do run into trouble then check that the heads, tapes and punchcard are clean and try again. *DIRA* users may like to type *UPRINT* (without a printer present), and ignore the resulting error message before reusing the program as above. This helps overcome a bug in the OS which results in the occasional presence of garbage in the cassette buffer. Errors the program and you are satisfied with the results.

continued overleaf

MAKING NOISES...

Two sound systems reviewed by Alan Goldbro

DIGIDRUM/ DIGISYNTH 2 Bit Systems \$495

Would you like to convert your computer to a programmable drum system or sequencer?

DIGIDRUM is more delicate, the majority of controls are obtained by using the main function keys. **OPTKEY** gets a selection from the main menu, which is permanently displayed across the top of the screen. With each press of the buttons, the highlighted cursor moves from one option to another, left to right. **SELECT** gets an option from the active pull-down menu and **START** executes that option. Using these pull-down menus may look cool but unless you've got a finger to flick over them they really aren't much good. I found them slow and cumbersome, if you miss your option first time sound them it's back to continually pressing the Option buttons until its highlighted again. I was constantly frustrated by this procedure which I feel detracts from the ease of use. Don't let my inability to handle this system put you off this program however, as I enjoyed my time as a drummer.

All the sounds you hear within the program were digitised using the 'Replay' Sound Sampling System from the same authors. The eight drum sounds all 'recorded' at 8KHz are, Bass-Drum, Snare, TomTom, MidTom, Conbalt, HiHat open, Hi-Hat closed and Claps. **DigiDrum** can store up to 29 different patterns using any combination of the drum sounds, these can be constructed, edited and played at different tempo's. **DigiSynth** employs the same method as **DigiDrum** except that the rate is recorded at 16KHz.

Within **DigiDrum** there are numerous sections all connected to give you hours of enjoyment by constructing, editing and composing patterns to make songs. Functions include, selection from any of 19 Patterns, Wiping (erase), Editing, Playing, changing the Tempo and linking patterns to form Songs. All the patterns and songs can be stored on either disk or tape. If you have a disk drive, a

rating can also be displayed thus enabling easier selection. Up to 16 files can be stored on disk although the programmers don't employ the same procedure here as they do with the menu. With the menu all you do is highlight your option and press **START**. When loading files though, you have to type in the filenames and press return. I can't work out why they don't use the same principle as the menu.

I would have liked the opportunity to send my patterns to the printer so further study could be made, however, at this price I'm not going to make a song and dance about it(!) The manual is a small concise table size to prove document which is quite readable but it lacks in-depth information and clarity and I found some of the instructions a little vague.

DIGISYNTH is not as complex as **DigiDrum** but is still an effective program. Employing the same design structure (and looks!) it can handle such functions as entering Music, Editing, Erasing, Tempo, Playback and Piping.

Entering the notes is achieved by using the bottom two rows of the keyboard. Editing is by real time use of delete and cursor control keys. As with **DigiDrum** whatever you do is seen on screen immediately through a little grey window, in fact in this program there are windows popping up and down all over the place and what's more I could've sworn to get rid of them. Never mind you always get to see what you are doing.

You will probably have realised by now from the lack of detailed musical comment that I know nothing about these funny little things like notes, rests, sharps and flats but I did thoroughly enjoy myself creating as yet another unattended masterpiece!

The manual is part of the **DigiDrum** manual and again is a little sparse. The disk comes packaged in the more almost standard hard vinyl case. All in all through **DigiDrum** and **DigiSynth** are well worth \$495 and when you've got tired of trying to beat your last score playing that arcade game you could always come back to this and write a different type of score!

REPLAY SOUND SAMPLING SYSTEM 2 Bit Systems

Real music from your computer??
Speak to words with clarity??

The **Replay Sound System** consists of a plug-in cartridge and disk or cassette based software comprising of the main program (**Replay**), sample sound files and supportive programs. All the sounds in the **DigiDrum/DigiSynth** package are derived from this system. **Replay** allows you to produce high quality digital sound through your TV or Monitor speaker. Once a sound has been recorded it can be played back without the use of the **Replay** cartridge.

To create effective and realistic sounds a good quality tape recorder is required to play music or sounds on the **Replay** cartridge can 'record' it. The sounds can then be stored to either disk or tape. The cartridge comes with a lead about 18 inches long terminating in a small 3.5mm phone plug which should be inserted in any output socket of the recorder although the manual makes no reference to this whatsoever. I managed to plug it into the headphone socket after first getting a conversion unit as, like most recorders, the headphone socket was of a larger size than the phone plug supplied.

The **Replay** program itself employs the same 'module approach' as **DigiDrum** and **DigiSynth**. Functions include, Set-up, Wipe, Sample, Play and File as follows.

Set-up has three sub programs: **Sample Rate** - lets you select the 'recording' quality/time. Using the **SELECT** key you can choose to record your sample at six different levels from 8KHz (poor) to 21KHz (impressive). As the quality of the sound improves the less recording time you have available. For example with 8KHz you get 12 seconds and at 21KHz there are only 3 seconds of recording time, but what a superb 3 seconds they are! **Storage** - sets toggles the disk cassette option and **Calibration** - which is a handy feature using like a row of LEDs to help you select the correct output level of your tape recorder.

Wipe - has exactly the same functions as in **DigiDrum**.

Sample - having pre-selected the 'recording level' under the **Set-up** command this option records the input signal at the current sample rate. When **Sample** is selected, the signal from the tape player is available through the TV. A 'Sample Length' indicator shows the amount of time available for the sample sound. Once the **START** key is pressed, the sample length starts to decrease and your sound is recorded.

Play - as it says, highlight the

option, press **START** and whatever file is loaded into memory is played through the TV speaker. The sounds produced can be altered by going to **Set-up** and changing the **KHz** rate.

File - this, in my opinion, is wrongly placed. Surely the file needs to be loaded first, then played? I can't understand why the **Play** option is placed before the **File** option which doesn't seem logical as you have to move the cursor right round the menu bar. **File** lets you load and save your sample sounds to disk or cassette and in the case of disk covers a Catalog is an additional feature.

Once a file has been loaded or recorded the sound waves appear in a window across the width of the screen giving a visual effect of your sounds. A nice feature here is an editor function which allows you to scroll from the start of the sound sample to the end. Markers can be placed anywhere between the start and end to let you either wipe the parts out you don't want or alternately save only the sections between the markers. If you only use part of the time limit in 'record' you can add on more sounds by moving the editor markers and recording sound from that position. In this way it's possible to edit sounds to your own requirements. As with any program that relies on other equipment to provide the conditions to enable it to operate the quality of sample sounds are dependent somewhat upon the quality of your tape recorder.

In addition to the main program there are some sounds ranging from guitars to Captain Kirk in perfect voice! A separate program is **LISTED** to disk to enable sample sounds to be included in your own programs. This comprises of a couple of machine code routines and all that has to be done is to find out the start and finish address of the sample and away you go.

The package comes in a plastic case reminiscent of a video box with a 12 page manual and even a wooden dowel for the 480/800 cartridge lid which has to stay open to allow the lead to be plugged into the recorder. It is available for all 48K computers. For those who have friends going green with envy whilst you're creating sounds, there's something for them too, a simple space invader game as a taster!

Reply Sound Sampling System will cost you £39.99 for either Disk or Cassette and is available from retailers or **1-BIT SYSTEMS** themselves. The sampler was loaned by **1 BIT SYSTEMS** to whom I am indebted. One thing is for sure, I've no intention of being without the Reply Sound Sampling System for long. I'm off out now to buy one before they all get snapped up.

MAKING MOVIES

John Davison becomes a Movie Director

MOVIE MAKER Electronic Arts/Arielsoft

Here's a program package for people who enjoy using their computer as an aid to creativity. Belonging to the same class of software as *AnimArtist* and *Movie Construction Set*, it gives you the electronic equivalent of a film animation studio, providing everything needed to produce your own animated video movies. The whole production process is covered, from creating background scenery and characters, through recording the action and editing the soundtrack, to the final screening of the finished product.

It comes in a glossy cardboard package containing two double sided disks and an instruction manual. The package opens like a book and the cover is printed with what looks like after-thoughts to the manual.

Movie Maker is complex, so a good instruction manual is essential. The 41 pages of instructions supplied get you proficient fairly quickly, thanks mainly to the tutorial section, however, the programs are driven by menus, keyboard commands and joystick, which can be confusing at times. Knowing what to do when takes a little practice.

Disk 1 contains the main production programs, and an autotape program, which enables you to make a readable disk capable of automatically showing any movie file you store on it. Also, six ready made movies are provided to give you a taste of what can be achieved. Disk 2 contains four partially completed movies, which you have to finish yourself before you can show them. But there's more - you also have the component parts used in making those movies, including sound and musical effects. You can use them to make your own movie without having to draw anything yourself, a fact exploited by the tutorial section of the instruction manual.

Making a Movie

In *Movie Maker* terms, a movie consists of a background against which up to six actors can play their parts, while up to four channels of sound effects and music



enhance their performance. You build it using the four major departments of the studio, these being the Composing Room, Recording Room, Cutting Room, and Screening Room, corresponding to the four major functions of *Movie Maker*. You're helped by your electronic crew, including the Director, Cameraman, Soundman, Stage Manager and Art Department. These, of course, represent sub-functions of the major areas mentioned above.

Composing Room

Your computer generated movie consists of two basic types of artwork, these being backgrounds and shapes. Backgrounds are exactly that - static scenery against which your characters move. Shapes are the basic elements of your animation, being images of your characters drawn in different positions to represent different stages of a given movement sequence. Shown rapidly in succession, they give the impression of animated movement.

The Art Department provides you with 14 functions for drawing backgrounds and shapes in up to four colours from a palette of 128. Line drawing is achieved with a joystick and/or cursor keys with keypad commands used to perform functions such as colour fill, colour change, and duplicate a shape. Other features include Mirror, to assist with symmetrical shapes, Zoom, for magnifying the image for detailed work, and

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Scale, to automatically change the width or height of a drawn shape. You may be entered from the keyboard, a voice feature, or drawing text by hand can be a painted experience. Unfortunately, there are no aids to help you draw circles or boxes, and no "rubber-bandings" of the type found in many computer art programs.

The Director and Cameraman handle functions relating to shape animation and movement, such as sequencing the shapes to create the animation effect, and speed of movement, amongst others. You rehearse the sequence with different settings until you get the effect you want. Then you get the Stage Manager to take you to the Recording Room, where each sequence is illustrated in an actor for recording.

Recording Room

Here, you have what might be termed a six track video recorder, and a four track sound recorder at your command. Each video track can record the movements of one actor, the idea being to build up interactions between several actors one track at a time. While recording an actor, you can see any other actors you've already recorded, so it's relatively easy to synchronize the new actor's

movements with existing action.

Recording capacity is 300 frames (individual images) per track, giving playback time up to about a minute depending on projection speed chosen. If you own a video recorder you can build up a longer movie by transferring several 300 frame sections to video cassette, from which they can be shown without a break.

When you finish recording a track, you can play back the movie including the track you've just recorded. If you don't like the result, you simply re-record all or part of the bad track - action on previously recorded tracks remains intact. The Cameraman can be very useful to you here. He can position the recording at any frame, play the recording forwards or backwards at any speed, and mark a frame so he can rewind straight to it from any point. He can also zoom in for a close-up of the image being recorded.

The Soundman helps you record up to four separate sound tracks, using pre-defined effects and musical sounds played from the keyboard. There's no facility for defining your own sounds - a pity, as the supplied ones are rather crude. As with video tracks, each sound track may be recorded separately, but all play back together in the finished movie.

Cutting and Screening Rooms

It's the Stage Manager's job to ensure your masterpiece is presented in the best manner. Here in the Cutting Room he combats out any flukes or juxtaposes in the animation, and helps you add fine scrolling titles and credits to the beginning and end. Then, having saved the final product to disk, he takes you to the Screening Room to see the fruits of your creativity. Even here there's a measure of control. Through the Director and Cameraman you can vary the speed of projection, and stop the movie at any frame. This can then be printed in colour on a 60-frame printer, if you happen to own one.

Conclusions

Overall, this is an impressive package. It's fun to use (but hard work) and even has practical applications. How about using it to produce eye-catching animated advertisements in shops, motels at school or club meetings, or animated charts for educational or business use? The more you think about it, the greater the possibilities become. If you're interested in animation, why not give Movie Maker a try? I can recommend it. ■

FRactal Images

Peter Coates' article last issue generated a lot of interest and so we present a further series of images submitted by Peter shortly after the last issue was completed.

The images with the original article were mainly from the Julia Set but these, with the author's own imaginative titles, are from the Mandelbrot Set. These are considerably reduced from the originals which were produced on an ink-jet printer to give a much denser image than on a dot-matrix.



Your Nails Need Trimming



Double Descent



Cinnabar Spiral



Baby Mandelbrot with Admittance



Katrya Wheel

BACK ISSUES

PAGE 4 back issues represent an excellent way of increasing the enjoyment of your Atari with articles in magazines, programs to type in and reviews of software in guide form. Almost all of the contents of past issues will be as fresh and relevant as when it appeared - increase your enjoyment now, before it's too late!

Issue 10 - ADVENTURE SPECIAL. An issue with Adventures as its main theme with a super, challenging type in Adventure **HEMLOCK SECRET'S**, winner of our readers' poll for that year. Plus an interview with Scott Adams, a (nearly) complete list of Atari adventures, an Adventure tracker, Diamonds, Spoons, Screen Capture and the usual assortment of reviews.

Issue 11 - A great reading game FLIGHT OF THE SWAN that was one of the winners in our reading competition plus great games, Comics, Search Escape and Short Arts. Also Music Maker, 1024 Printer Handler, Player Missile Graphics in Machine Code, Music Reviews and our regular Adventure column.

Issue 12 - The first coverage of the ST but one to be missed, plenty for the 8-bit. A great machine-language space game **SECTOR 13**, a super utility, Magpie, no-loop track of your tracks and magazine plus The Chase. The second part of our series on Display Lists, build your own Speech Synthesizer, a review of 1985, in-depth Adventure reviews and plenty more.

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Print your own puzzles with Jim Flewker's wordsearch program

If you enjoy puzzles, here's a chance to create your own hidden word puzzles for your family and friends, or even your own, puzzlement. The program does require a printer but will work on any 80 column printer.

The program allows you to enter up to 20 words, each of which may be up to fifteen letters, which it then places in a matrix which is 21 characters square. Words may intersect but will not necessarily do so.

As it places the words, the program prints them in normal fashion to the printer and in their placements within the word square on the screen. Once all the words are placed, a hard copy of the solution will first be printed before the rest of the matrix is filled with random letters to produce the familiar word square.

You then have the choice of printing the final puzzle or, if you are not happy with the arrangement, re-running the puzzle to place the same words differently. You may repeat this process as often as desired.

ADDITIONAL FACILITIES

As well as printing the standard puzzle, the user has other options.

Clues may be provided to guide the searcher in place of the usual list of words. For example, French words could be used in the puzzle and the searcher could be provided with clues in the form of their English meanings. Each clue can be up to three lines of text but if you wish to use longer clues you may change the dimensional length of CLUES.

The difficulty of the puzzle can be controlled at the beginning of the program by selecting whether words can be placed diagonally or backwards. The default allows words to be placed in any direction although always in a straight line.

In addition to these options, there is no reason why you cannot modify the program further by changing certain key variables. More words could be entered or the program could try more ways to place words. The notes on variables and how the program works should assist.

W E U I J N M K

L O D E S W X C

HOW IT WORKS

Substitution is done first (2000) with the main routine between lines 1000 and 1100 with various subroutines preceding the main routine.

Lines 20-30 - file output, remove cursor and send to the main set-up routine etc.

Lines 2000-1000 - where variables are dimensioned and initialized and user options are checked and initialized and user options are provided. No time routine etc.

Lines 1000-2000 - where you input the words for the puzzle which are put together in a large working. Letters are used to demonstrate words working. Letters are used to demonstrate words working. Letters are used to demonstrate words working.

Lines 1100-1150 - give you the chance to input clues and then — draw a frame for the matrix.

Lines 1150-1200 - draw a frame for the matrix.

Lines 1200-1250 - which split off a word and send it to the substitution which places it satisfactorily in the matrix. The substitution in operation is in lines 1000-1100 — and it itself about a letter and a letter of substitution. Briefly, when a letter is starting point has been decided, the matrix is checked to see if the word will fit. If not, the starting point is changed and the process repeats, up to 1000 times if necessary. When enough spaces are found, the letters of the word are placed in the matrix and the word is added to the screen. Then the user goes back to the main routine. When all words are done, the matrix is printed to the printer and the screen etc.

Lines 1250-1300 - which fill in all the blanks in the matrix with substitute garbage. After which — matrix with substitute garbage. After which — matrix with substitute garbage. After which — matrix with substitute garbage.

Lines 1300-1350 - after the choice of printing the puzzle and trying again.

Lines 1350-1400 - read the matrix with blank spaces and go back to line 1000 to begin updating out the words again.

N M Y R W Y G J

```

01 1 000 *****
02 2 000 *****
03 3 000 *****
04 4 000 *****
05 5 000 *****
06 6 000 *****
07 7 000 *****
08 8 000 *****
09 9 000 *****
10 10 000 *****
11 11 000 *****
12 12 000 *****
13 13 000 *****
14 14 000 *****
15 15 000 *****
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92 92 000 *****
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94 94 000 *****
95 95 000 *****
96 96 000 *****
97 97 000 *****
98 98 000 *****
99 99 000 *****
100 100 000 *****

```

THE SUBROUTINES

Line 40 onwards - a brief way of finding which way to move in the matrix. Uses variables R, L, UP, DOWN which have been set in the Direction routine (lines 100-105).

Line 100 onwards - prints an instruction or status line at the top of the screen, but also either clears the screen or scrolls the text depending on what value the variable REAR is set to.

Line 105 onwards - takes numeric values from BLS (BLS, which are ASCII codes and turns them into letters on the screen).

Line 180 onwards - chooses starting points quite randomly but checks them with direction and word length (variable LWS). Called and then recalled until the word is found in.

Line 400 onwards - see above.

Line 500 onwards - direction is changed by adding 90. If DIR is set to 1 then alternative changes by 45 degrees. From this sub-routine are the self-explanatory variables UP, DOWN, R and L.

MAIN VARIABLES

MATRIX - a 2-dimensional array whose dimensions correspond to the size of the wordspace and which holds the ASCII codes of the letters. The dimensions can easily be altered - e.g. width matrix is too wide to be printed. As program the user can modify appearance with a word matrix, this long string holds all the words to be used. (TRAP) - used as a holding string when manipulating words also in input files.

START (LINE 100) - keyword, represented by CR character if you want long words.

BYEEND - used for single words.

REAR - the instruction or status line. Usually 0 characters long.

X - horizontal position in MATRIX and also Y (with the addition of 5) on screen.

DIR - the equivalent for the vertical position.

DIR and **BYE** - starting position of word.

DIR - randoms direction of word placement.

BLK - the value to which DIR can go before it is reset to 1.

DIR - the amount by which DIR is increased after each word.

LIMIT - the number of times the Start will try and place a word before giving up. Empirically decided. LIMIT can easily be increased if need be.

TRAP - contains the addresses to place a word.

LEFT (and **CLLLEFT**) - holds and counts forward the words from left to left can easily be addressed as BLS (TRAP).

CLL - You may also need to adjust **LIMIT** and **REAR** if you plan to use many long words.

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ULTIMA IV

The ultimate review or a story in its own right? Why has John Sweeney been moved to write at such length over just another program?

While out for a gentle stroll, you fall asleep beneath a tree. You are awoken by a strange noise - a magic portal opening and closing, and a small bundle falling through it. On examination the bundle turns out to be two books - The History of Britannia and The Book of Mystic Wisdom (although you only discover the latter by translating the runes on the cover!) - wrapped in a cloth. The bundle also contains a small *Avatar* and the cloth turns out to be a beautifully coloured map of The Lands of Britannia (about 45 acres square). All of these items plus a quick reference card, are actually in your games pack, each of the books being very well presented, and giving you approximately 100 pages of interesting reading.

Following the sound of distant music you eventually arrive at a gypsy's caravan. She appears to have known of your coming, and asks you a number of questions such as 'Thou art none to *protect thy Lord at any cost, yet thou knowest he has committed a crime. Atharvius ask thee of the affair, dost thou A) break thine oath by honestly speaking, or B) uphold Honor by silently keeping thine oath?' Each of the questions places you in a moral dilemma and forces you to choose between two virtues. After seven questions the gypsy says, 'So be it. Thy path is chosen', and you are transported to a strange land while a voice whispers in your ear, 'with the crown of thy sovereignty'. The game now starts.*

The screen changes to four windows. The whole of the left of the screen is occupied by a large square showing a bird's eye view of you in the centre, surrounded by a variety of terrain. The map actually covers an area of 256 by 256 squares, of which you can see 11 by 11 - plenty of scope for exploration! The right of the screen has a window at the top showing the status of your party, a window at the bottom describing what is going on and allowing you to

enter commands, and a single line window between these showing how much food and gold you have.

Examining your statistics (both those which are always visible, and those you can scroll through by repeating Statistics - by pressing Z), you ascertain that you are a fighter with Chain Mail Armour and an Axe, 200 Food, 200 Gold, limited Strength, Intelligence and Dexterity, and 100 Hit Points. You also appear to have a small supply of Glorax and Garlic! You use the four arrow keys to explore your surroundings. As you do so the terrain scrolls smoothly around you so that you remain in the centre of the screen. You appear to be on a small island with mountains to the north and something interesting on another island to the south. Unfortunately you don't appear to have any means of crossing the intervening water at the moment. There is however something of interest on your own island - a small town. You move your character onto this and press E for Enter. The scene changes. You are now in the middle of an 11 by 11 view of a small town (which actually measures 32 by 32). The town is called Holm. Walking up to a nearby guard, you talk to him (T). The bottom right window records your conversation: YOU MEET A STERN GUARD - NAME (you say) 'I am a guard' JOB 'I guard the gates and these passages' GATES 'The gates of Holm' PASSAGES 'These passages are restricted'.

Well that sounds interesting - there do indeed appear to be some passages behind the guard and his colleagues. Unfortunately, unlike various other characters you can see moving around the town, the guards appear to be fixed in place. Remembering your experiences in Ultima III you decide it would probably be unwise to attack the guards - they tend to be a pretty tough lot! Besides aren't you supposed to be one of the good guys - an *Avatar* or something?

Maybe you will find some other way into the passages later. You wander on into town and explore a small patch of darkness between two buildings, it turns out to be a small wood, but there is nobody there. As you move around, the screen adjusts so that you can only see what is in line of sight - walls, buildings and woods obscure your view. You have a chat with a fighter: YOU MEET A THIN FIGHTER - NAME 'My name is Tinned' JOB 'I fight with valor' VALOR 'There is no holier spirit of general than where defeated soldier lie - are they brave?' Ahhh... should you answer Yes or No? Does it matter? You experiment a bit. NO 'Growth'? You ask him about Valor again and say YES 'Furious helps the brave' BRAVE 'We brave for those in much to share' HEALTH 'Godde's be brave'.

You appear to be on a small island ...

You leave him and wander around the town. There is an inn, but the innkeeper isn't very talkative - only seems interested in selling you a bed for the night. Exploring the Inn you find three bedrooms, but two of them are locked and occupied. You chat with Max the Housekeeper, but he doesn't seem to know much. You buy some ale at the Pub and when you tip the barkeeper he asks 'What'd you like to know friend?', but you don't really know yet! There is also an Armourer, a Weapons Shop, and a House of Healing. By talking to the various people wandering around the town you learn of various artifacts which might be useful to obtain, and you gain a number of potentially useful items of information! You eventually decide to leave for the moment.

Once outside the town you wonder what to do next. As you are studying your History of Britannia, a small Gaze opens beside you on the island! You quickly enter it. The screen flashes to indicate magical activity and you find yourself on another island! Exploring the town here (Stann Bars) you learn of more artifacts, and gain more little snippets of information. Leaving the town you see the Gate opening again and quickly enter. This time you find yourself transported to a small clearing in the middle of a vast forest. Visibility is limited to a 3 by 3 square in the middle of the screen!

You set off south and east. Sometimes your attempts to move result in SLOW PROGRESS. You pass through some brushland, more forests, and finally reach a plain. Crossing this you enter some hilly ground, more SLOW PROGRESS. You finally reach impassible(?) mountains and start the long trek around them. Suddenly a small figure appears at the edge of the screen - looks a bit like a teddy bear? Every time you move it moves. It seems to be coming your way. Oh dear, now a small figure waving a sword has appeared - he is coming your way too!

... you find yourself transported to a small clearing ...

As the teddy bear reaches you the screen changes to show your current position in close up. Your party, just you at the moment, appears at the bottom of the screen. The enemy, two of them, appear at the top. You move towards them. Once you are beside them you press A for attack and use an arrow key to indicate the direction of attack. The bottom right window describes the scene: MISSED. They attack. Your character's status line flashes and his Hit Points go down to 286, then to 275. Attack again: ORG BARELY WOUNDED (Oh that's what they are!). They attack again. You attack again. Eventually one, critically wounded, flees and the other finally succumbs to your axe blows: ORG KILLED. EXPERIENCE + 6. VICTORY. The scene returns to normal but there is now a chest beside you. You step on it and press G for Get. The screen flashes again: ACID TRAP - your Hit Points fall again, but you have gained 34 Gold! The figure with the sword attacks you while you attempt to escape through the hills. Again the scene changes to close up for the fight, but, because you were on different terrain, the battle ground is different. Rocky outcrops near the centre of the screen provide good cover so that only one of the two Rogues can attack you at a time. Unfortunately, you don't manage to kill him very quickly, and your Gold starts reducing! The devious little thief appears capable of robbing you even while fighting you! You finally finish these two off. Get another chest and head off East again.

Finally rounding the last of the mountains you come to a river. You spy a bridge across it and head towards it. The ground around the river has a slightly different appearance to normal grassland - the dots are bigger and more coloured. As you cross this new terrain there is a sudden flash, and the G on your status line which indicated your character's Good health has changed to a P. P for Poisoned! This must be the marsh with the poisonous gases of which the History of Britannia warned you! With each step now your Hit Points decrease. You quickly search the Book of Mystic Wisdom and find a Cure spell. Reading the description carefully you determine that a Cure can be cast by mixing Ginseng and Garlic. Hey, that's what you have. M for Mix. C for Cast. CURR FAILED. M.P. TOO LOW. M.P.? Ah, yes, Magic Points - determined by your character type and his or her intelligence. Check the book again. How many should a Fighter have? None! - Fighters can't use magic! Hit Points getting dangerously low, best try and find a town with a healer. Unfortunately, since you haven't the slightest idea where you are, you fail. Your Hit Points reach Zero. ALL IS DARK, BUT WAIT, WHERE AM I AM I DEAD? AFTERLIFE! I FEEL MOTION. The scene changes. You are in Lord British's throne room. Lord British rises and says, 'At long last thou hast come. We have waited such a long time'. He sits and says, 'A new age is upon Britannia. The great evil lords are gone (see Ultima I, II, and III) but our people lack direction and purpose in their lives. A champion of virtue is called for. Thou may be this champion, but only thou shalt tell. I will aid thee in any way that I can. How may I help thee?'

This looks like your opportunity ...

This looks like your opportunity to learn a bit. What should you do? Try HELP. 'Travel' see the open lands above. There are many lovely people in the diverse towns whom it would be nice to ask to join thee. Build thy party with eight travellers for only a few leaders can use the Quest. Quest? Ah, yes, the game is called Quest of the Avatar, wonder if Lord British knows what the Quest is, or what an Avatar is? QUEST 'The Quest of the Avatar is to know and become the embodiment of the eight virtues of

problem. It is those that all who take on this quest must prove themselves by conquering the Abyss and winning the *Cadaver of Ultimate Wisdom*.¹ ADDRESS 'The Great Stygian Abyss is the darkest pocket of evil remaining in Britannia. It is said that in the deepest recesses of the Abyss is the Chamber of the Cadaver. It is also said that only one of higher virtue may enter the chamber, one such as an Avatar' AVATAR 'To be an Avatar is to be the embodiment of the eight virtues. It is to live a life constantly and forever in the quest to better oneself and the world in which one lives' VIRTUE 'The eight virtues of the Avatar are Honesty, Compassion, Valor, Justice, Sacrifice, Honor, Spirituality, and Humility.'

What a knowledgeable fellow this Lord British is!

So, that is how your first half hour of Ultima IV might go. The next couple of hundred hours will be spent exploring the many towns, castles, and unmappped villages that are scattered throughout the lands, talking to the well over 200 different people in them, mapping the uncharted seas that fill vast areas of

The next couple of hundred hours will be spent exploring ...

the map (assuming you can get hold of a ship), discovering the existence of and tracking down numerous artifacts without which you cannot win, searching the mountains for secret entrances to dungeons, mapping the depths of the numerous dungeons (this involves a certain amount of magic, and an awful lot of fighting!), persuading seven other characters to join you, finding out how to achieve partial resurrection in a particular virtue, and then achieving it in all eight, and last, but definitely not least, leaving the Abyss.

This has to be one of the best computer games of all time. Ultima (I) was a nice little game. Ultima (II) was excellent. When I played Ultima (III) I thought it was superb. The authors have used all their experience from these earlier games to produce a game which is beyond all my expectations. Those of you who have played the earlier games and are looking forward to Ultima IV will not be disappointed. They have pushed back the boundaries in countless ways to make this one of the all time greats.

A friend of mine stayed with me recently. He is a fanatical games player. He owns a BBC with many games. I showed him Ultima IV. He stayed an extra night. He went out to buy an Atari the next day. He says it's the best computer game he has ever played. I think I agree with him.

Anyone who has experienced Dungeons and Dragons in any of its many forms will have recognised from the description of the start of a sample game that this is indeed a computerised version of D&D. It is an extremely well thought out implementation. Lots of thought has gone into making it very playable and enjoyable. It is driven by single key

... a game which is beyond all my expectations.

commands from the keyboard, the joystick is not used. Some commands require further input, for example, when talking to people you use single words picked from their conversation to probe for more information, also if you, say, 'Ready a weapon' you will be asked which member of your party wishes to Ready (reply I through 8) and the top right window will immediately fill with a list of all your spare weapons, each identified by a single letter for you to type in (a great improvement on Ultima III where you had to remember what weapons you had and look up the appropriate letter on a reference card). There are eight different character classes: Mage, Druid, Paladin, Shepherd, Fighter, Tinker, Bard and Ranger, all with different abilities and characteristics. Once you understand what is going on you can actually answer the gypsy's questions in such a way as to become whichever one you want, but don't waste time with that initially, just take what you get. Beware, a party can only have one of each class, so don't waste time trying to persuade anyone of your own class to join you!

Terrain is varied, and affects both movement and combat. It is also varied out at sea. Once you have acquired a ship you will find open sea, deeps, rivers, shoals, bridges, whirlpools and whirlwinds to negotiate, not to mention the fact that the wind always seems to be blowing the wrong way and that the seas are teeming with monsters.

The combat is excellent. You can arm your party with numerous weapons: axes, maces and swords for close up, slings, bows and crossbows

for shooting the length of the screen, halberd for hitting the enemy over the heads of your comrades or over obstructions such as the side of a ship, plus numerous magical weapons which are rather harder to come by but will worth acquiring! Within combat the terrain is varied, especially in dungeons, where there are countless rooms each with its own layout including such things as streams, lava, energy fields, walls and bridges, as well as secret doors, treasure chests and traps of all sorts. In the overworld and in dungeon corridors you are attacked by whatever chances your way, the more experienced you are the nastier it is likely to be, from orcs and skeletons up to balrons, dragons and snakes. The size of the attacking party will depend on the size of your party - there will be usually be more of them than there are of your! Dungeons rooms on the other hand are pre-defined. Each one is a carefully designed set piece, with particular monsters in particular positions - the deeper the nastier - don't venture too deep too soon!

Once you have engaged in combat, or entered a room, the members of your party appear separately across the bottom of the screen. Each of them gets a chance to do one thing, then the enemy pieces get one turn each, then each of yours and so on. The range of actions is quite wide: a character may move one square, change weapons, attack with a weapon, cast a spell (provided you have inted it before entering into combat), or pass. So each fight, once you have a party of more than a few characters, is like a miniature board game, where you and the computer are moving your pieces round a board and fighting for the best position. The enemy can have powerful

A friend of mine ... went out to buy an Atari the next day.

magic on their side. One of their favourite combinations is a group of rangers or balrons, protected by walls, energy fields or their allies, throwing multiple sleep spells at your party. If any of your party get SLEPT then they are liable to be beaten to death by hordes of demons and phantasms before they can be wakened. In order to survive you will need to learn how to use magic yourself.

Magic is well implemented. You are provided with the Book of Mystic Wisdom. This contains details of 28 spells ranging from simple Light and Cure Spells to the much more difficult Terror (disorienting against most enemies) and Resurrect. Most of the characters can start using some of the simple spells right from the beginning of the game. Not so the more difficult ones, for a number of reasons. First, the Book is incomplete and inaccurate in its description of the manners of reagents needed to prepare for the casting of some of the spells. Second, only six of the eight reagents are sold in Herb Shops, the other two, Nightshade and Mandrake Root are extremely difficult to come by (even if I told you exactly where they are you probably still couldn't find them!) and are of course required for the best spells. And even if you should eventually track down the formulae and the ingredients, you might still fail if you did not have a sufficiently powerful magician in your party. There are ways to improve your characters, so eventually you should be able to cast any spell you wish.

The Lands of Britannia are large. You will need to travel them many times, and make careful notes. There are many reasons you will need to revisit towns, villages, and castles. Apart from the obvious one, that you haven't discovered all of a place's secrets (and they have many), you will also find that certain weapons, for example, are only available in certain towns, that not all towns have Herb Shops or Food Stores, and that prices for goods vary from place to place. You will also find that a person you talk to will refer you to a character in a different town. Armed with this knowledge you can revisit someone you have talked to before, perhaps him with new keywords you have discovered and gain new information. These little subsidiary quests are not always easy, as some locations are almost completely inaccessible, and also the object of your search may well be very cleverly hidden or disguised.

There are numerous ways to travel on foot, horseback or ship, by Moon Gate and by Magic. And there are rumours of a lighter-than-air device, according to the History! There are also rumours of Thieves Guilds, somewhere out on the uncharted seas, well worth a visit, as those of you who have played previous Ultimas will be aware. They are a source of items such as keys and magic gems which enable you to get

an overview of the surrounding land or dungeon area (32 by 32 (22 by 22 in a dungeon) instead of the usual 11 by 11). A visit to the Lyceum is also thoroughly recommended as early in the game as possible. Dungeon corridors are similar to those in Ultima III, you get a view of what you can see down the corridor, instead of the usual view from above, but they are much more sophisticated than those of Ultima III. Each Ultima III dungeon is made of eight square layers directly above each other. In Ultima IV there is no such uniformity. Dungeons ramble in all directions, Up and Down spells rarely work (and even more rarely work usefully!), there are countless dead ends, illusions, and one way ladders. The solving of a single dungeon in Ultima IV has more in it than a lot of games on the market.

... one of your many objectives is to become a partial avatar in all eight virtues.

One interesting facet of this amazing game is the fact that one of your many objectives is to become a partial avatar in all eight virtues. This means that you are a Good Character. You must think twice before visiting treasure chests from castles, or shooting fleeing enemies in the back. You will have to learn lots of little ways of proving to the game that you are a good guy. Initially you will find some of the philosophy thrown at you by various of the inhabitants to be a little confusing. Hopefully it will all become clear as the game slowly unfolds. If it doesn't you are in trouble as you need to unravel quite a lot of class hidden terrain in order to win the game!

Finally, once you have gathered all your friends, armed them all well, proved what a good guy you are, and acquired not only numerous artifacts but also vast knowledge, you MAY be ready for the Abyss. Unlike the other dungeons, this one's entrance is well guarded and unmarked; should you actually succeed in reaching it and knowing it you will find that the usual H for Hater is completely inadequate. If you ever manage to get inside it, you will find that it makes all the other dungeons look like child's play. And if you should actually happen to have with you all the knowledge and artifacts necessary to reach the entrance to the Chamber

of the Codes, not to mention being able to survive long enough to map and progress through all eight levels of the Abyss - and that means passing through over forty rooms full of monsters and traps - even should you get there, there are some very nasty twists left to prevent you achieving that Avatarhood. But I'm not going to give you any clues on that yet!

The documentation is superb, except for a couple of details. It never mentions the fact that the space bar can be used to PAUSE (note that this affects things like movement of enemies and restoration of Magic Points, but NOT the motion on the winds) or to make the game move on during certain parts of conversations, during the initial preamble with the gypsy, and to get rid of the Title Page after you have beaten the game. Nor does it tell you what to do if the phone rings during a crucial battle. Z is actually a valid PAUSE command at any time that you can use it. If you don't pause the game with Z then it will assume you wish to PAUSE after waiting 18 seconds (12 seconds if you are in combat). The only place where you must concentrate, since too long a pause can be disastrous, is during meditation (just hope the phone doesn't ring then!). Also it is not clear whether or not you can have two long-lasting spells in effect at once. The P for Protection, J for Jinx, and Q for Quickeners all use the same space in the middle of the centre right window. Each of these can last for many turns. By casting a new one you erase the letter indicating the continued effect of the previous one, but have you actually cancelled it?

There is a minor bug caused by riding a horse into Castle Britannia. If you dismount to climb the stairs, on your return to the ground floor you will find your horse has disappeared!

Finally -- you MAY be ready for the Abyss.

One improvement on previous Ultimas, which is unadmitted, is the fact that the save facility (Q for Quit and Save) is a proper Save in the usual adventure style. In Ultima III if you entered a town or dungeon an automatic save was performed by the game whether you liked it or not, and should one of your characters die he was immediately marked as dead so that you couldn't restore to get him back. In Ultima IV you can suffer major catastrophes without concern.

continued on page 9

First Steps

by Mark Hutchinson

I would firstly like to thank all the people who contacted me about the ANALOG issues, especially Chris Kemp. I have not forgotten the pinball, Matthew. I will try to send you some files soon.

ATARIWRITER

A few months back my old 400 decided to lie down and die. I promptly bought an 800XL and continued pounding keys. For some reason the ATARIWRITER cartridge I won from PAGE 6 (thank you readers!) would not work with the XL. The first few lines printed out, but after that would come line feeds corresponding to the page feed. I was able to borrow another XL, but the same thing occurred. This was most disconcerting and I can only guess at the cartridge being an original and using I/O port B which is used by something else on the XL.

Recently I have been able to lay my hands on ATARIWRITER PLUS. All the printer problems seem to have disappeared. I mention this problem because I am sure that many will have changed to the XL during the clearance sale. If so, make sure you see the printer working first before you buy the cartridge!

I have had a go at the 1629 printer and, for the money, I found it very good. I consider it a printer crying out for programs. By the time you read this, if I can borrow it again, I shall have tried out PRINT SHOP with it. I also obtained a screen dump program but have not had the time to try it out. If you are interested please contact me.

JOYSTICK ROUTINES

This month I have included a simple program to show a joystick in action, some of you may recognise it. The program will display the positions of the joystick and the numbers returned from the memory location of STICK(0) - location 610. To keep it simple, I have used conditional statements (IF/THEN) to coincide with the values returned. As you can see, although it is easy to read the program, it takes up a lot of lines. In issue 10 I gave a listing that would reduce most of the lines using Boolean algebra. Have a look over that listing again, it was used to good effect by CHR Workshop in issue 22. This time we will have a look at how to do this using a simple array to store the X and Y offset - what



has to be added to X or Y for the next position.

As the joystick returns a value of up to 15, I have set up an array of 30(-15 for the X offset and 15 for the Y offset). The offset values are read into the array. When the program gets a value (P) from the joystick it looks at the corresponding point (P) in the array for the X offset and for the Y offset (P+15). These are then added to the current value of X and Y and a new position is plotted. The program then goes back to the beginning.

I have used a TRAP to avoid programming for wrap around (making the dot disappear at one side and appear at the other). When an error occurs, the TRAP sends the program to line 1000. Here the TRAP is cleared and the program is sent back to the original X and Y positions. Note that the TRAP has to be reset. I remembered Steve Wayne's letter and loaded the listing with REM's (they can all be left out).

COMING UP

In a future column I want to look at all those nibbles the experienced users know about but never pass on to beginners, e.g. CONTROL-A. However, I will need some help from the 'old-time' readers of this magazine. Knowing these things is one thing, remembering them when writing this column is another! I want you to send me as many as YOU can remember. You may think that you are helping me, but you are really helping all those people who just bought a new ATARI - remember the day when that was YOU? If I do not receive any then I will write about something else!

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A SOUND SAMPLER

To Jim Demall who is looking for a sound sampler, try 3-BIT SYSTEMS. Their demo's are great. Hopefully PAGE 6 will have a review of this program in this or the next edition.

HELP! EXPERIENCED USERS

Shortly I shall be compiling as many ATARI tips as possible. For this I shall need your help. If you know such things as using CONTROL-1 or switching on the cassette master to listen to tapes then please send the details to me as soon as possible. Your input to me will help all those new readers learn about things that we take for granted and because they are taken for granted, they are hard to find, which is why I need your help.

Write to Mark at BAUG Software, P.O. Box 14, Billesley, BT10 4TB

The Midlands ATARI Center 207-201 Broad Street



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Independent User Group

Contact

1619 PRINTER WANTED: We need a cheap 1619 printer to test out some of the programs sent in for publication. Anyone got one to sell? Contact Lee Klingman at PW1619 at 0785 213626.

RAMDISK HIR: Now available to users. Operating on 5280 118KBT at 500-500 all the time except 9 a.m. to 5 p.m. on weekdays. The board operates on an immediate answer system. Symp - M. Group

MEGA SALE: 800XL never used, bought as a package for the disk drive. £70 o.n.o. Replay Sound Samples, complete package including software. £70. Barry Armstrong, 230 Penderance Lane, Chadderton, Oldham OL9 5QB. Tel. 061 652 4781 after 4 p.m.

ANALOG WANTED: Has anyone got a spare copy of issue 11 of ANALOG magazine. I have an issue 14 ANALOG and so is Dec 1985 Atari User going spare. Please write to Raymond Castle, 128, Newport Road, Covent, 1st of Wright, PO14 7PS.

HITCHHIKERS GUIDE: I am totally stuck with the manual on the disk when the fish is. What do I do? I have many Infocams and can give hints on any Channel 5 adventure or Adventure International. Will someone please write and swap hints. Andrew Thompson, 115, Blenheim Way, St. Dash, Cheshire, Gwent, 5, Wales, NP14 7NP

ANALOG WANTED: Issue 29, April 1985. Good price paid. Please Colin Saunders on 01 421 2375.

CONTACT FROM TURKEY: I would like to contact any Atari users from any country. I have a 130XL 800XL, 1980 disk drive, 1619 recorder, 1620 printer and 1627 printer. Expert in BASIC and know machine code at advanced level. Anybody willing to discuss or swap hints and techniques about programming would be welcome. Ali Alan, P.O. Box 51, Magosa, Mersin-16, Turkey.

BIT FOR SALE: Atari 800 48k, 1619 cassette, Indes GT (brand new), 1620 XL with Indes GT Soundboard, computer housing, 1644 485, GT, 1010, all power supplies. BASIC cartridge, manuals. All for only £280. Please 0166 719953 and ask for Mike.

FOR SALE: Atari 800XL, 1619 Discorder, joystick, 8 programmed apps, 8 blank apps, Computer's Atari Collection Vol 1, Atari Basic book. All in brand new condition. £70. A.P. Cagrove, 19, Marney Walk, Tringhampton, Devon PL9 2NX. Tel. 0152 882341 anytime.

ATARI BIRTHS: Please see 1 buy, buy, borrow a copy of Atari Births? Package paid one. Please Mr B. Field 0634 232945.

ATARI CLEAR-OUT: Main items, 800XL, 130XL, Commodore monitor, 1950 disk drive, joystick, books, blank disk/cassettes, ANTIC, ANALOG, PAGE 8, ATARI USER, other magazines, accessories. Everything in mint condition. Something for everybody. Bargain prices. Call Matthew, Newhaven 519671, evenings.

FOR SALE: Cleanline M/C monitor for the Atari 400/800 (£85). Wordmaster Scotch Synthesizer, used Inc. P.A.V. £115. Speech Recognition system £25. Atari Trackball £11. Macintosh Centronics Interface, £39. R. Haas, 30, Spenceville Close, Pilsford, Lewiston, Suffolk, NR33 7DL. Tel. 0932 89006.

ATARI ST INTERNALS: As reviewed in issue 21. Unwanted present from the States. Will sell for £14 or swap for the right books on Atari 8 bit machines. Please 021 388 7802.

FOR SALE: Epson FX80 - printer, cable and Atari 850 interface. 12 months old and in mint condition. £270. May split. Please phone or write to Mike Lynch, 24, Oakdale Road, Anfield, Liverpool L4 2BE. Tel. 091 264 6431.

PAGE 8 BACK ISSUES: Unavailable copies of PAGE 8 for sale. Issues 7, 8, 9, 11, 14 and 19 at £1.00 each inc p.p.s. Please phone after 5 p.m. 0245 75752.

PEN PALS WANTED: I have a 800XL (48K), 1620 printer, 1619 cassette and two joysticks. Here in Belgium. I don't have much success in making contact with other Atari users. Please write to Johan Monaghen, Schiedamschen 40, 2070 Puzos, Prov. Antwerpen, Belgium.

PEN PAL WANTED: Especially in the U.S.A. or in the U.K. or anywhere in the world. Must be an Atari and converse user. Wanted to swap hints etc. Also does anyone have how to get underground in Zorro? Contact Malcolm Linds, 98, Chesham Road, Sandown, Ramat, RM11 8JA, England.

MAGAZINES FOR SALE: ANALOG, ANTIC, PAGE 8, ROSSITER, COMPUTER GAMES, 1980 800XL15 and books on Atari. Please send a.l.c. to Mr B. Field, The Clavers, Wells Lane, Has, M. Rochester, Kent, NE1 9ET. Or list.

CENTRONICS 100 PRINTER FOR SALE: Accepts all Atari 825 printer codes as per printer option 2 from Microviter. Takes roll, single sheet and tractor fed paper. Spare ribbon, handbook and Microviter/Touch Tablet dump included. Requires Centronics interface (such as Atari 850 or similar). £110 o.n.o. Please Deepak 0923 271729 (Woking).

MAGAZINE SWAP: Will swap public domain software for magazines. L. PAGE 8, ANTIC, ANALOG etc. Send a n.c. for details to Programme Dept. 24, Chesham Street, London, SW9 6DS.

800XL COMPUTER WANTED: Has anyone found an Infocam 1619 keyboard to an 800XL? Contact David Wain, 44, Newcombe Drive, Leicester, LE5 2AG.

BELGIAN PEN PAL: My name is Peter Haebler and I live in Mechelen, Belgium. Learn an Atari 800XL and a 8050 cassette recorder. I am looking for pen-pals around the world to swap hints and ideas with. Please write to Peter Haebler, Hombeeksteenvoerweg 790, 2608 Mechelen, Belgium.

COMPLETE ATARI SYSTEM: Atari 130XE computer, 1950 disk drive (with US Double Buffer), 1619 printer, 1619 cassette, 8020 printer/plotter, Datam modern interface, many items of disk/ROM software. All hardware with packing and full instructions. £280 o.n.o. (will split for good offers). Call Phil Redman 01 529 5616 anytime, 01 289 2383 evenings.

HELPS: Stuck on Pay Off, Lockers, Robin and Arson of Death Part 1. Can swap help on Time Machines, Adventureland, The Golden Broom, The Little Indians. Write to Marc Jones, 5, Devonport Road, Horwell, Warral, LE9 1X1.

WASH HAMS: I have an ST which I wish to run BASIC on. Can anyone help? Listings in C (or BASIC) okay. Also does anyone want to swap 800XL (1980, 850, 1020, 1010 and software for a printer to connect to the ST)? I would like a NLQ dot matrix printer, preferably an Epson or alternatively set all for £500 (including numerous books). Contact GIBRG on SYTHS, V.J. Wood, 800008, RAF Wyton, Huntingdon, Cambs.

FOR SALE: Spare 800XL (£80). Spare 800XL (£75). Also 48k expansion for 800XL (£25). Letter Quality 8007 printer (£80). Does anybody want a £40 1985 datacard for the spare? £3. Tel. Wrexhampton 0942 612843.

1620 PRINTER: Any programs/updates for the 1620 wanted. Also 800XL for sale. Offers please to Peter Cunningham, 11, Berrys Avenue, Farnfield, Chester, CH16 6HS. Phone 0978 780272.

ANALOG & DISK FOR SALE: ANALOG magazine and disk for May and June 1985, unopened, £5 each. Jonathan Smith, 4, Hall Close, Old Fox, Leicester, LE2 9LZ. Tel. 0533 781180.

"No! You can't have a modem - we'll need a second mortgage to be able to pay the phone bills!" Such was the response from The Lady of Infinite Wisdom the first time I hinted it might be fun to explore the brave new world of telecommunications.

"And anyway", she added, "I bet the modem costs a fortune. We've got enough computer stuff about the place as it is".

I had to agree with the drift of this argument, and put the idea out of my mind.

Unfortunately, at the next meeting of the local Atari computer club the Treasurer happened to mention he'd got a telecommunications package for the Atari. Being a kind soul he offered to lend it to me for a couple of weeks. The package consisted of a WS2000 modem, the Datatari serial interface, and Multi-Viewterm communications software, all supplied by Miracle Technology. In short, everything I needed to 'go online' and explore the exciting new world of telecommunications.

It was with some trepidation that I carried the forbidden items into the house after the meeting that night. The Lady noticed the silly smirk I must have been wearing.

"You've got a modem, haven't you?", The Lady said with incisive intuition.

"Er, yes, but only for a few days", I stammered. "Just to learn who it belongs to someone at the club. I'll only use it for local communications, so the phone bill won't suffer", I lied, hoping The Lady wouldn't see through me.

"It won't suffer, because you'll be paying for each call as you make it", she said, sweetly, handing me a jar with a coin slot conveniently cut in the lid.

So we came to an amiable agreement, and the modem was given a temporary visitor's visa to the household. There followed a short period of intense concentration while I attempted to find out just what it was I had borrowed.

THE WS2000 MODEM

This is a small, neat, black plastic box measuring about 8in. by 8in. by 2.75in. It looked very smart sitting on top of the disk drive. The front panel carries three rotary switches operated by stylish black knobs. These control Online/Local Test modes, Viewtext receive/bulletin board and other modes, and finally whether CCITT (European) or Bell (USA) standards are used, and the data transmission rates that go with them. For use in the U.K. the Bell standard settings have been inhibited by the manufacturer. The white and red lettering round the switches is clear and easy to read. On the left of the front panel is a vertical row of 5 LEDs, which light up to show the status of the modem at any time. It's not always obvious what the front panel settings should be for a given communications session making careful study of the manual a must.

The back panel carries four sockets, a fixed mains cable, a fixed line cable and plug to connect to the BT wall socket, and a mains on/off switch. The sockets are used as follows: Accessory Port for future expansion,

Telecommunications is still a mysterious area to many owners. Is it worth it? What equipment do you need? In this two part article John Davison reviews the most popular package and gives a first hand account of his experiences.

GOING ONLINE

Part 1

by John S. Davison

eg. for acoustic coupler and battery backup devices; Telephone Socket to plug in your telephone; User Port for remote control of the modem from a computer or other control device; and an RS232 Port, which is the normal way of connecting the modem to an Atari. The two of interest here are the Telephone and RS232 sockets.

The WS2000 supports just about any transmission mode and speed you're likely to need in the 'non-professional' area. It supplies 800 baud full duplex, 600 and 1200 baud half duplex for bulletin board and direct use to user connection, and 1200/75 and 75/1200 baud full duplex for use as terminal or host end of a Viewtext session. Miracle Technology can provide auto-dial and auto-answer boards for this modem, but neither were fitted to the one on loan.

THE DATATARI INTERFACE

This appears to be a cable with a standard Atari serial I/O plug on one end, and an RS232 plug matching the modem socket on the other. Using this interface does away with the need for the hard-to-find Atari 890 interface. Anyway, the 890 doesn't support split 1200/75 baud transmission rates required by Viewtext systems in the U.K., so in this respect the Datatari is a better buy than the 890 for telecommunications use.

MULTI-VIEWTERM SOFTWARE

This program was written by Matthew Jones, a regular contributor to PAGE 6. It's almost completely menu driven, which means it's easy to use, especially for the beginner. It has two main modes of operation, offline and online.

In offline mode it allows you to configure the software for the communication session you're about to

establish, setting baud rate, parity, whether full or half duplex, Teletype or Viewtext mode, and whether line feeds are to be automatically generated. When you've set up a configuration you can save it to cassette or disk for use at a later date. This means you can keep a library of the configurations of all your favourite bulletin boards and configure your system to use any one of them simply by loading the appropriate file in. This could save you a lot of time if you use many boards, as people usually do.

Incidentally, don't worry about the jargon too much, you'll soon pick it up. Most of what you need is explained in the instruction manuals that come with this package.

Offline mode also lets you save incoming messages from a buffer in RAM onto cassette or disk, or to load existing files into the buffer for viewing, transmitting, or printing. The menu also lets you list the directory of a disk, delete files, and protect or unprotect files.

A further offline facility allows you to set up user defined keys for use in online mode. The most common use for these is for storing frequently used commands, or your name and passwords, which can then be input with a single keystroke. Useful, as saving time saves you money.

Online, or terminal mode is the one you use for the actual communication session. In this mode, your computer becomes a terminal with the characteristics you defined when you set up the configuration. You can transmit data from the keyboard or the buffer to the remote computer, and receive data for display on your screen from the remote computer. Optionally, you can capture data received by having it stored in the RAM buffer for manipulation as described above.

When in Viewtext mode you also have several preset function keys. These transmit frequently used PRESTEL commands, such as go to main index, go to previous page, leave PRESTEL, etc. Other option keys are available for things such as turning the buffer on and off, and setting the screen background colour. These are available in Teletype mode also.

Connecting Up

Preliminary investigation revealed that the modem had to be plugged into one of the new type BT wall sockets. The only socket in the house was the one for the extension phone in the bedroom. Unfortunately, the computer was about 20 feet away in another room, wired into a computer desk. For the sake of marital harmony, rather than move the computer desk into the bedroom, I bought a phone extension cable from a local electrical store. Cost - £3.98.

Connecting everything up was easy. I unplugged the phone, inserted the new extension cable in its place, then plugged the modem line cable into the other end of it. The phone then plugged into the back of the modem. Simple - a two minute job. The next job involved connecting the modem into the 1302E's I/O data chain. One end of the Datari interface cable plugged into the free serial port on the back of the disk drive, and the other end went into the back of the modem. Again, dead simple. Finally the modem was plugged into the mains, and the hardware was ready for action - total setup time was less than 5 minutes.

Operating the System

The next step was to understand the software and operational aspects of the modem. The W32000 modem and the Multi-Viewtext software each have their own slim instruction manuals. The 17 page modem manual makes liberal use of pictures as well as words. The front panel of the modem is rather intimidating, having many different settings possible on the rotary switches. Use of pictures to show you how they should be set is a much better idea than trying to explain in words. The manual is laid out logically, with separate sections covering initial setup and testing, online use to communicate with Viewtext type facilities (like PRESTEL and Microware), bulletin boards, and direct contact with another user. There is also a useful section on fault finding, if things don't work as expected, but this is probably a little too technical for some users, especially beginners.

The 20 page Multi-Viewtext manual is fairly straightforward, giving a brief introduction to telecommunications, and then a brief description of each function of the software. There are no commands to remember, thank goodness, as virtually everything is available by menu selection or through function keys. The manual includes a cut-out template you can position above the numeric keys to remind you what they do when used as function keys, a nice touch.

One area it didn't cover was how to download software from a bulletin board. It covered the Viewtext side, but as Microware doesn't have an Atari section it would have been better to include instructions on how to do this in Teletype mode, as there are a number of boards operating in this mode which do have Atari software available for downloading.

So, after spending a while reading and re-reading the two manuals, doing the basic modem tests, and familiarising myself with the software menus, the Big Moment had arrived - time to contact a bulletin board!

Using the Package

The next few days (or rather nights - cheap rate phone calls) saw me contributing significantly to BT's 1986 profits, as I grappled with bulletin boards good and bad. The story of what happened makes an article in itself, so I'll save the gory details for a later issue of Page 6. Let's go straight on to my impression of the products used.

In use, the package of products worked well, and appeared to do everything claimed for them. I'd never used a bulletin board or PRESTEL before, but this package made the whole operation fairly painless. It costs about £185 for the complete system, although the items may be bought separately, if required, about £125 for the modem alone, and about £90 for the Datari interface together with the Multi-Viewtext software. Normally, though, you'd probably buy the whole lot together as a complete telecommunications system. This has to be one of the best ways for an Atari user to get online, if this is your interest.

The W32000 modem in particular struck me as offering first rate facilities at a reasonable price. With the add-on facilities promised, and comprehensive interfacing and control features on the back panel, it

UPDATE



THE CHASE (ISSUE 19): The listing as printed will not run on the 480 or 500. After many head scratching hours the solution turned out to be amazingly simple. Just add a semi colon to the end of line 940! The only remaining puzzle is why, when the XL/XE machines don't need it?

FRACTALS (ISSUE 11): The book mentioned at the beginning of the article 'Frontiers of Chaos' is edited by Feigen and Richter and not by Mandelbrot as stated.

QUICK DISASSEMBLER (ISSUE 11): There is a mistake on line 730 which should read as follows:

730 IF ADDR = 0 THEN ADDR = 8000 - LADDR

has the capability of being developed into quite a complex system in its own right.

My main criticism is aimed at the software, and concerns its downloading capabilities. As already mentioned, the manual gave little away in this area. Many of the boards contacted seemed to require the use of a special protocol, known as XMODEM protocol, for downloading software. Multi-Viwercom does not appear to have this. (An upgraded version is now available. \$6.) Also, the buffer used for capturing incoming data only seems to be about 12K in size. If you exceed this, it simply overflows and you lose the excess data. You do get a warning of this, though. So how do you download a program larger than 12K? I guess you can't at present.

As I've not used any other system it's difficult to judge its worth relevant to other products on the market. All I can say is, it worked, showed no obvious signs of bugs, and was easy to use. The beginner couldn't really ask for more. Experienced users might think otherwise, though.

I'm now trying to work out how I can change the visitor's view The Lady granted to the package to something more permanent. Full satisfaction, perhaps? That could take some time, as The Lady knows what the true online costs are likely to be. That (or already has an awful lot of costs in it. This aspect will be covered in Part 2 of the article, which looks at the joys and pitfalls of 'going online'. ■

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CROSSWORD RESULTS

What is the best way to win a prize in a competition? None! It seems that our crossword last issue was much harder than we thought and we received only a few entries by the closing date so prizes were awarded to everyone who entered with priority going to those who sent the correct entry.

Those who got it right were John Cousins from Newcastle, C. Lane from Hull, Jason Quigley from Dublin, Colin Thompson from Liverpool and Paul Nixon from Sheffield. The runners up were G. Dalton, T. Alexander and Gary Francis! - they may have got it wrong but at least they entered!

Appropriate prizes have been forwarded to all. We do not have space to print the correct answers but anyone interested can send a s.a.s. for the solution.

As a point of interest, the Holzer score won a great prize in a competition run by a climbing magazine simply by entering. They had 180 prizes on offer and had quite a few left over because they had less entries. And their circulation was above 90,000! There's a lesson for you.

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