

**XL, XE
ST**

PAGE 6

ATARI USERS MAGAZINE

September/October
1987

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ON PAGE 97

PAGE 6

ATARI USERS MAGAZINE

Issue 29
September/October 1987

'The Magazine for the Dedicated Atari User'

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Create your own stories
by Alan Knapp
- MDDBASE**
A full feature 8-bit database
by Michael Jackson
- INSTANT CHARACTER SETS**
by Les Hensarth
- CLIFFHANGER**
by Mark Lawrence
- AUTOMAKE**

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by Gerry Francis
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ANIMATED 3-D MODELLING Remember Solid Modelling? Now Philip Robinson has a routine for 3-D animation

LITTER CASTLE - a great learning game

Lots of reviews that wouldn't fit in this issue and lots of new news

Copy date is 19th September. Publication date 29th October.

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PAGE 6 is a user's magazine which relies entirely on readers' support in submitting articles and programs. The aim is to explore ATARI computing through the exchange of information and knowledge. We will pay for articles and program/active proposals 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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PAGE 6

ATARI USERS MAGAZINE

Issue 29 Sept/Oct 1987

'The Magazine for the Dedicated Atari User'

THE CREDITS

All 'official' credits are on page 5, there are the acknowledgements.

Lee Ellingham did the editing

Shona Perry looked after the ads

The Regular Contributors are ...

Garry Francis
Mark Hutchinson
Neville Jones
John Davison
John Davison Jr
John Sweeney

Welcome to our 3-400 reviews
Paul Miles

Cover illustration by Gerald Newman

All other contributors for this issue are credited alongside their articles or programs. Thanks to everybody.

Thanks also to the following for helping with the long nights in preparing this issue: Pam Skirrow, Peter Whelan, Jane, Eric, Gordon, Clamond, Cheryl Moss, Fayal, Scott, Boyd, Suzanne, Vips and many more.

Serious? You feel that this computing is supposed to be as well as it is?

The next issue of PAGE 6 could feature YOUR article or program.

PAGE 6 is put together almost entirely with Atari equipment and software. Hardware used: 1950 S, 1950 disk drive, 48K disk drive, 800-Series, 1050 monitor, 1050I monitor, printer, 1050 II monitor, Atari 540K hard disk drive, Atari 820II printer, Microchannel Buffer, Software and Approvals, Photo Discs, Twin Talk, Atari and several custom-written utilities on the 512K 800-Series PC, Intermec, Standard and Atari Direct Analyzers on the AT. Copy is prepared on a IBMPC using Dependable and various custom written programs and then transferred to the 512 via Data-Krom and PC Intermec. This then gets checked and the discs proofed and then Direct Publisher. Proofed copy is output from the AT in a format I receive routinely and then put into a Minisys Laserjet printer.

YOU CAN GET PAGE 6 ON DISK

- SEE PAGE 69



Editorial



With this issue we (hopefully) welcome thousands of new readers. If this is your first PAGE 6, welcome! I hope that you get as much enjoyment from the magazine and your Atari as I have done over the past five years. You may think that you have picked up a new Atari magazine but you are in fact reading the longest established Atari magazine in the UK, you have already missed 28 issues! This issue is, however, our first on the new stands so, if our existing readers will bear with us for a while, I would like to tell you what PAGE 6 is all about.

I started the magazine long ago in the days when the only support Atari got was from a couple of newly founded American magazines and I have tried to make it a magazine that users who really care about their Atari computers can enjoy. I brought one of the first Atari 800's brought into the UK and many of our regular contributors have been using Atari computers for a long time. The one thing that, I hope, sets us apart is that everybody who contributes to the magazine is a believer in Atari. You won't find any journalists, or staff writers or freelance writers or a publisher in whom the magazine is just another outlet, just fellow enthusiasts who have been encouraged to share their thoughts and discoveries with you. We don't invite anybody else, it's just that the magazine is put together by people who have been in love with Atari for many years and I believe that PAGE 6 reflects the very best on the Atari scene.

Many contributors started out, just like you, by reading the magazine but have now turned into accomplished writers who can turn our objective reviews, interesting articles and some incredible programs. You will notice that our reviews tend to be long, because our reviewers know their Atari's and I encourage them to study programs in depth before writing their reviews. Our program listings are often even longer! PAGE 6 has published some of the more complex, interesting and well-written programs for the Atari and will continue to do so. Don't be afraid to type them in, or send for the disk that accompanies each issue if you really don't have the time.

I am sure that you want to get in and read the magazine so I won't keep you long. I have always believed that

PAGE 6 belongs to its readers and I hope that you too can feel that it is your magazine. Several of our contributors encourage you to write to them and I hope that you will take up their invitation and also let me know what you want to see in the magazine. You might even like to contribute programs and articles. They will be more than welcome!

TYPE IN TYPO!

If you want to type in any programs from PAGE 6, please type in TYPO 3 first. It is included in every issue and is one of the three error checking programs ever published. Each line is checked as it is typed in and you will find it invaluable. Some of those long listings may seem daunting but many of our 'old' readers have been typing them in for years without any problem. You can too, and typing in listings is one of the best ways to absorb those programming techniques that others have discovered.

WHY PAGE 6?

You may already know, but if it is a puzzle let me explain. When I first tried to find a name for the magazine I wanted something that would be identified with the Atari machine (Atari wouldn't let me call it Atari User!) so I thought of all the various 'bits and pieces' that made up the machine. The Operating System is divided up into 'pages' for easy identification of various routines and one of those pages was deliberately set aside for users to input their own routines. This page was page 6 and so the idea of the magazine was to encourage users to submit their own routines and programs for publication, it seemed like a good name for the magazine! So PAGE 6 was born. I added Atari Users Magazine for identification and took it from there.

People still get puzzled but it soon trips off the tongue as several thousand readers who have discovered to wit the years will know!

Enjoy this issue. There are some great programs and articles, some reviews, some fun, but all written by dedicated Atari Users. Just like you.

Lee Ellingham

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One of the most powerful features of the AT 800 XL and 1300XL/1300E ARCADE is the "DESKTOP" - this system allows the user to have a range of utilities in memory while running commercial software, when you access the 1300XL/1300E system the commercial software will be temporarily frozen. The Controller Card is a commercial hardware modification that when installed into your Atari 800XL/1300E will give you the most advanced Desktop Management System available today

DESKTOP MASTER DISK

Supports Printer, Discard, and the SH-D. This program allows the user to manage game files, pages to graphic application packages, 1024 transfer graphics mode including graphics modes. Full disk support, built-in vehicle control, includes a unique SH-D system which is an ultra high definition image oriented compatible to all protocols for Epsom and compatible printers. . . .

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A Desktop resident multi-boot menu, by simply pressing the HELP key you exit the main program to the menu. . . .

Disk I/O Analyser

A unique and very powerful disk debugging tool which prints out all the relevant information concerning the interaction between the disk drive and computer as the disk software is loading or reading/writing data. . . .

The Control Panel

This utility enables you to alter a wide range of system parameters such as Auto save, I/O noise, inverse/flash, key lock, fast screen refresh and keyboard rate, primary system colours, the system boot rate and the system character set (14 alternative character sets to choose from). . . .

400/800 Operating System Saver

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DON'T TOUCH THE CIGAR LIGHTER!



Here are two guys who are really nailed that Timothy Dalton got the part of James Bond! Still they have got the consolation of having a nice computer game called *The Living Daylights* and, besides, who wants to have their Aston Martin changed in the car park of Pinewood Studios?

The two guys in question are Dominic Wheatley and Mark Stambach of Domack who, after the incredible coup of getting *Trivial Pursuit* to the Atari and other computers have now tied up the rights to the latest Bond movie. The game is already out on the Atari and could already be topping the charts.

An XLENT Anniversary

Software company XLENT Software (UK) Ltd. celebrates its first birthday having been conceived at the Personal Computer World Show in 1986 and incorporated in October of that year. XLENT, as an American company, had become well known to Atari users for many years of producing utility software that combines the graphics power of the Atari machines with the printed page and although their products had been available previously in the UK they wanted a more permanent representation here to enable Atari users to benefit from "home produced" software.

Two American directors of the company, Linda Kubota-Baron and Barbara Cardron (who says they are no women interested in computing) had discussions with Mike Reynolds-Jones and Peter Fellows of Software Express and the XLENT UK company was born. So far six products have been launched in the UK, four - *Typesetter Elite*, *MegaFont II* for the 8-bit machines. These could of course also be some exciting print related software from the UK. Mike Reynolds-Jones is certain that Atari owners in this country have the ability to write top class programs.

printer owners at last have something exciting in *Two Point*, a utility for printing documents in a choice of several different fonts on their machines.

Mike Reynolds-Jones says that the company are actively looking for more applications written in the UK, for marketing both here and in the States, provided that they are in the graphics/print related software line with which the company have established an excellent reputation. Future releases planned include the FM interface which will allow *Print Master* files to be combined with *Typesetter Elite* and also a *ClipArt* disk for *Typesetter Elite*. There will also be a related Utilities disk and *Typesetter Page Design* plus *MegaFont II* for the 8-bit machines. There could of course also be some exciting print related software from the UK. Mike Reynolds-Jones is certain that Atari owners in this country have the ability to write top class programs.

A year passes quite quickly in the computer field. Many don't survive that long but XLENT are still going strong and intend to get even stronger in the coming year.

XLENT SOFTWARE (UK) Ltd. can be found at 116, Alan Rock Road, Alan Rock, Birmingham, B8 5HX

HEWSON LOOK TO ATARI

Another established software house is waiting to turn its attention to the Atari. Already established on other machines with smash hits such as *Uddium* and *Firelord*, Hewson is now looking for programmers on both the ST and Atari 8-bit.

Games designers and writers are invited to get in touch with Mark Whiffen at Hewson with their work. What are they looking for? Games! Simple games, sophisticated games, long games, short games, quick games and quirky games! They don't mind what. Shoot 'em ups, arcade adventures, sports games and combat games will all be considered so if you have one up your sleeve why not get in touch. Maybe another British software company will then start supporting the Atari.

You can contact Mark Whiffen at Hewson Consultants Ltd., 988 Midway Trading Estate, Milton, Abingdon, Oxon.

MEANWHILE ...

That Mike Reynolds-Jones is a busy man! Software Express, already established as the premier Atari dealer in the Midlands, recently took over the Computer World shop in Broad Street, Birmingham. Now Atari owners visiting Birmingham for only a short time have the chance to visit a branch of Software Express just a short distance from the city centre. The full range of Atari products and software - and even the WCS - is on sale at Broad Street but the company will also be continuing full support of the Atari at their existing premises in Alan Rock Road.

Taking over Broad Street is something of a home-coming for Mike as that is where he first joined the ranks of Atari retailers after their buying one of those old 800's and, like many of us, getting hooked!

LEWD SEX ROMP AUTHOR CHOOSES ROBOT PARTNER

That's not our headline, it's what Infocom say about their latest release for the Atari XL/XE!

After writing *Leather Goddesses of Phobos*, Steve Merriam has got back together with Floyd, the robot from *Panorama* in Infocom's latest called *Starfall*. The game follows on nicely from *Panorama* and you have been promoted from Ensign Seventh Class to Lieutenant First Class (didn't you do well) ... on the paperwork task force!

Another boring day sees you travelling to a nearby space station to pick up a supply of trivia facts when you find out that your companion on the journey is the mischievous, playful,



Floyd! When you arrive at the space station, however, all is not routine. The place is divided apart from a few wrinkles and then even Floyd starts behaving strangely ...

Another Infocom, with all the usual bits in the box, which will set you back £28.99 for your XL or XE.

SOFTWARE SHORTS

U.S. Gold have now released the renowned Print Shop and associated utilities from Broderbund in its original Atari 8-bit form. Print Shop and The Print Shop Companion have already been reviewed in PAGE 6 and the message is, if you have a printer, get it! The programs work on most printers but not the 1020 or its variants!

From S&L via U.S. Gold comes the sequel to the acclaimed civil war simulation *Garryburg*, *Robert Charge at Chickamauga* which promised here in the year it War in the South Pacific which simulates three historic battles from World War II.

Digital Integration are shortly releasing a new combat simulator for the Atari 8-bit and ST. P-05 COMBAT PILOT is, they claim, the most advanced and authentic simulation of General Dynamics F-16. If it really is that good it will be well worth a look from the many Atari flight fanatics. Digital Integration are serious about this flight simulation stuff for they set a complete specification of the P-16 issued by the U.S. Air Force along with the press release!

From Infocom comes *The Looking Horror* where you explore a world that tests your most hideous visions. Frightful enough to descend into the basement of the George Underwood - Edwards Institute you discover something really horrific. And I can tell you there is something pretty horrible inside the box of this one! On the XL/XE at £24.99 and on the ST for £28.99.

Not software as such, but an essential aid, is the range of Suncom joysticks now being marketed in the U.K. by Microprocessor Software. Suncom have a large range of controllers, only a few of which have previously been available in the U.K. Now you will be able to choose from them all with the first showing of the entire range at the coming PCW Show.

ATARI GO FOR THE FASTEST



I want you! I have got an Atari Olympics badge but I really do want David Brodie's BMW works Saabon Turbo which Atari sponsored in this year's British Saloon Car Championship Grand Prix at Silverstone in July. The sponsorship formed part of wider celebrations at Silverstone where Atari sponsored many of the leading personalities in the computer retailing industry (but not the Editor of PAGE 6!) in a

presentation of its advertising and promotional plans for 1985.

It is good to see Atari once more grabbing the headlines in promoting the company, let's hope there is more to come. How about some help in swapping up my Mitsubishi Sigma Estate? I don't mind having it set painted all over the front! No? Okay, I'll settle for a ride round Silverstone with David Brodie in his next practice!

NEWS

WIN!

£1000 worth of prizes

To celebrate our first issue on the newsstands we have a free to enter competition with some cracking prizes courtesy of Frontier Software and XLENT Software (U.K.) Ltd. The competition is open to everybody whether you are a first time reader or have been with us since issue 1. So, find a pen, fire up the brain and have a go.

THE PRIZES



First prize is a 20Mb Hard Disk Drive from Supra for either your Atari XL/XE or ST (just tell us which system you have).

THE COMPETITION

Nice and easy! Just give us the numbers. Couldn't be easier, but think about it!

1. How many Mb on the biggest Supra?
2. What box can you find Frontier Software at?
3. How many already from XLENT?
4. What number would you find XLENT people at?
5. How many pages in page 6? (Think about it!)

All right, it can't be that easy can it? So, as a do-breaker, write us a slogan. Both XLENT and SUPRA are a play on words so we want you to use both to describe Atari in some way using not more than 20 words.

HOW TO ENTER

Write your name and address on a postcard (preferably) or on a plain sheet of paper and alongside write the numbers of the questions above with your answers alongside. Stick your slogan at the bottom and in the bottom left hand corner write XL/XE or ST to indicate what system you have. Don't write anything else. Send it to **THE SUPRA COMPETITION, PAGE 6, P.O. BOX 54, STAFFORD, ST16 1DR**. Closing date is 15th October 1987.



Ten runners up prizes come from XLENT Software (U.K.) Ltd. There are five copies of the 1st XLENT Word Processor for 8-bit owners and for ST owners, two copies of Megafont ST, two copies of Write 90 and one Typesetter Elite.



Rules

1. The winners will be chosen by the Editor from the entries received on or before 15th October 1987
2. Only one entry per reader is allowed.
3. No substitution of prizes for cash or other items will be allowed.
4. The Editors decision will be final. Don't argue!

Readers Write

USER GROUP THANKS

Dear Page 6,

I am writing for your help to ask whether you could tell me if there is an Atari User Group in the Stoke-on-Trent area? I have been so disappointed with the support for my 800 but when, by accident, coming across Tefford Atari User Group holding a display in Tefford centre I was amazed at the demos and also the commercial software that they had on show. If there is no group in the Stoke area how about local users getting in touch to see if we can organise our own club? Also would any other User Groups give us some advice on starting our own club?

I can't put into words my thanks to the Tefford User Group for getting me a new appetite for my Atari and especially Jason Lunn of Brookside, Tefford. If anyone is in the Tefford area, I am sure they will find a warm welcome from the Tefford User Group. They meet at The Madley Community Centre, Tefford every Saturday at 7 p.m.

Karin Sherwin, 1, Redmillers Grove, Burslem Road, Stoke-on-Trent, Staffs

If you live in Stoke get in touch with Karin. The User Group scene in this country is nowhere near as strong as in the States where they hold regular 'Share Fairs' all over the country for the local community often with thousands of Atari users attending. This doesn't happen here although there is no reason why it shouldn't given the enthusiasm and reputation.

The Tefford group is the first that I know of to organise a public display of Atari products and software open for use (hundreds) of thousands of people and school-leaver congratulations must go to them for the effort (even though they didn't realise me to send one letter or them!). It can be done but it needs a lot of effort and dedication. Let's hope that we see more in different parts of the country. I am sure Atari would be interested if approached with suitable propositions.

XE/ST TRANSFER

Dear Page 6,

Could you please let us have some information about how to transfer data files and screen files between the XE and ST?

M.J. Horwell, Cornwall

It is quite possible to link up the 8-bit Atari computers to the ST via a soft modem cable. One problem though is that you need an RS232 interface for your Atari and if you haven't got one it might be expensive. I regularly and successfully transfer text files back and forth between the AT&T and an ST using an 820 interface and a soft modem cable. Some form of communications software is needed on each machine (I use Kermit) but ST/TRANSFER has a built in facility to receive files from Atari/transfer. It works quite well provided you have an 820 interface and remember to load up the RS232 transfer file. With communications and an 820 you can transfer data to the ST at 9600 baud but if you

want to send it the other way you seem to be limited to 2400 baud as the AT&T can't keep up.

If you have a contribution that we hope to publish with a couple of problems are sorted out. If comprised of a couple of short programs for each machine and a simple cable which you can build for a few pounds. As it uses the joystick ports of the 8-bit machine and the Shift socket on the ST no expensive interface is required. Look out for it.

SUPPORT YOUR LOCAL DEALER

Dear Page 6,

I read with interest your reply to N.J. Leonard on the subject of Atari dealers. In November last year, with only 6 days of its guarantee remaining, my Atari monochrome monitor passed away. Although I had no record of the sale, my local Atari dealer, York Computer Centre, replaced the monitor on the spot. I can only confirm your remarks, that a few extra pounds spent with your local Atari dealer are worth every penny.

Your readers may be interested to note that I have had problems in buying a Sony monitor at 'discount' prices. To cut a long story short I purchased a Sony KV-16CP1 monitor from a discount dealer at the PCW Show and after three days it refused to work. The company I bought it from offered to repair it only if I paid the carriage. I refused to pay and they refused to repair it. I took it to my local Sony Service Centre to be repaired under guarantee only to be told that the guarantee was not valid as it had been imported from an overseas dealer!

I can only re-iterate your comments. Whenever possible it always pays to buy through a reputable dealer and

remember that by supporting your local dealer you are supporting your Atari neighbourhood.

N. Croxer, Malton, N. Yorks

SHORTS --

Here's a selection of questions from recent letters.

How do you get past the Personal Computer Gate if Teal is Microsoft's Guide To The Galaxy?

Ray? You read Gerry Fournet's column in issue 21!

Could you tell me if there is a BBC emulator for the ST as I heard about one a long time ago?

There was a BBC emulator at the Personal Computer World show in 1983 but it seems to have disappeared without trace. Anyone know what happened? Could it have been a problem with discs not being the ideal?

NEW AGE

Dear Page 6,

Congratulations on Issue 21's GAMMAGE program, it really is very good but have you listened to the 'waiting' notes before your first issue? New Age music if ever I heard any!

Please congratulate Dave Hadden for me and ask him to write more of this hypnotic stuff. He should try listening to something like 'No Pussyfooting' by Robert Fripp and Brian Auger or see what I mean! Ooo.

'JD' Collins, London.

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Got anything interesting to talk about? Or some questions to ask? Or some tips to pass on? Write to Readers Write, PAGE 6, P.O. Box 34, Stafford ST16 1DR

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SUPRA'S HARD DISK

for XL/XE

You can't really have a Hard Disk on an 8-bit system, can you?
Yes you can!

What is the ultimate luxury addition to your Atari 8-bit system? How about a Hard Disk Drive? Most of you are probably aware of hard disks for the ST and "business" computers but may not have realized that you can in fact add a hard disk to your existing Atari XL or XE system. The only drawback is the horrendous cost but, if you have already invested a lot of money and time in your system it may well be worth it. There are a lot of serious Atari 8-bit owners who have upgraded their systems to the limit, so why not a little further?

ENTER SUPRA

The only hard drive available, at least in this country, is the Supra 20Mbit Hard Disk drive which is imported by Promax Software and sells for £199.95. It is small, quiet, easy to use and has a prodigious appetite for programs! 20 Mbit means that you can have the equivalent of over 200 single density floppy disks on one drive!

Let's suppose you have persuaded the bank manager that you can afford one of these beasts. It will arrive in a fairly small box, well packed in foam, and inside you will find the drive, a power supply, a copy of MYDOS, plus instructions and an interface to connect it up to your XL or XE. If you have an XE you will need to use the extra board supplied to enable you to be able to still use the cartridge port on the computer. This board is the only disappointment, being a basic circuit board which makes the system look ugly. It really should be cased at this price. The drive itself will surprise you as it is a lot smaller than a 1050! It measures 280mm x 137mm x 73mm and looks really neat in a solid metal casing similar in colour to the 1300E.

Setting up is easy. Find somewhere safe for the drive (they don't like to be knocked about in use), plug the interface to the computer and to the drive, connect up the power to the drive and away you go. Initially you will have to boot up with a copy of MYDOS on Drive 1, but thereafter you can erase that to the Hard Drive and you will never need a DOS disk again! The interface, by the way, has a built in printer interface so you could save a bit of money if you add a printer to the system. You will only need to find a ribbon cable which you can pick up for around £2.

STARTING TO USE IT

If the drive is not already formatted you will need to do this but full instructions are given in the manual. The review



drive came ready formatted, so I did not try this out, but experience on a Hard Drive for the ST suggests that there should be no problem. As 20Mbit is a lot of space, the drive is divided into five logical drives. They are all of course on the same disk but are treated as totally separate drives by software. The standard division (which cannot be altered) is drives 1 and 2 configured to the same size as a normal 1050 and drives 3 & 4 configured to each hold 4.2Mbit. The latter two drives each have 36,800 sectors but these are true double density sectors of 256 bytes. Drive 1 is used to copy your DOS files to, and once done can be used to boot up the system. Any of the drives can then be accessed and used as you would normally use a floppy drive. The major difference is of course speed and the amount of storage. One warning about using drive 1, it is to be very, very careful about putting an AUTOREUN.SYS file on it. I tried it and as the program was one that you could not exit from there was no way to get to DOS and therefore load any other program!

SOME TESTS

So how fast is it? I did not try any really fancy benchmarks, even less did a few comparisons of a nature likely to be useful. Firstly I tried loading files of various sizes. A BASIC program occupying 144 sectors on a normal single density floppy loaded in 18 seconds from the floppy and just 2 seconds from the Supra! As the files get bigger, so the time saved is greater. A 242 sector binary load file took 30 seconds from a floppy and 3.3 seconds from the hard disk. Some differential Accessity reading and writing data to disk did not show the same type of time difference but was nonetheless impressive (see Table 1). Incidentally NOTE and POINT can be used in the same way as a normal drive to access any sector on any logical drive.

review by Les Ellingham

TABLE 1

Timings for writing/reading a four letter string ("TEXT") to disk (times in seconds).

| Number of times | | Supra | Floppy Timely on | Floppy Verify off |
|-----------------|-------|-------|---------------------|----------------------|
| 1000 | Write | 6 | 21 | 13 |
| | Read | 9 | 12 | 12 |
| 10000 | Write | 65 | 211 | 126 |
| | Read | 8 | 130 | 138 |

DOS

DOS 2.1 cannot access the number of sectors available on the Supra drive so a copy of MYDOS is supplied. This also has the ability to handle sub-directories which is essential for the number of files you will be able to fit on the drive. While MYDOS is perfectly usable, Premier recommend that you use SuperDisk. The only reason it is not supplied is a problem with Supra licensing the program.

CONCLUSIONS

The Supra works like a dream with the 8-bits and could be a godsend to anyone with a large collection of frequently used programs. The only problems I could think about are that it may not be possible to transfer many commercial programs to the Hard Drive (ST owners have this problem too) and you could find problems in backing up the drive. As far as I know there is no software available to back up the 8-bit Supra drive and while you can back up each program individually, it is extremely time consuming. A major problem could occur if you have any database software that sets up a database occupying more room than a normal floppy. You can still use it but won't have a back up!

Would I buy one? Well, it is an awful lot of money but it is a superb piece of equipment to use. No more searching for DOS disks, no finding the right disk for your program and some really fast access for programming, especially if you write long machine code routines. As I said at the beginning, if you are sufficiently committed to, and happy with, your 8 bit Atari, it is the ultimate addition. If you can find the money, I would not hesitate to recommend it. Once you have got over the shock, you'll love it!

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No. 18

RICK HANSON

by Garry Francis,
Sydney, Australia

THE REVIEW

Rick Hanson is a new Adventure published by Rubico Software. It consists of a single-sided disk and the current little 12-page instruction booklet that you over-did not. This is packed in a plain black box - strictly low budget, but practical. Also thrown in is a letter offering a Rubico encounter (at a price, of course) and an Adventure's Note Book. This last item is a bit of a mystery, for it is simply a little book of 12 blank pages! It's obviously meant for taking notes, but really, who's going to use it? I appreciate the gesture, but why not use little players provide his or her own note paper and use the plot of the game?

The instruction booklet provides a wealth of information. For starters, we learn that *Rick Hanson* is an alternate game which supposedly forms the first part of a *Rick Hanson* trilogy. To the best of my knowledge, game 2 and 3 have not been released for the Atari at the time of writing. If they have, you should be able to find them under the titles of *Prince Theron* and *Myston* respectively.

Rick Hanson was originally a cassette-based BBC/Electron game written by Robert and Nigel's Lacey. The Atari translation was done by Nick Grippoli, author of *The Slave*. Oh, ah! Is this a bad omen? Probably who's read my review of *The Slave* in Page 6 issue 28 will know that I was not exactly impressed by that particular effort. Would *Rick Hanson* prove to be the same? Read on below. *Adventurers* and find out...

LIKE JAMES BOND

Rick Hanson is a Special Agent somewhere like James Bond. He presumably has the same license to kill. In this game, he is given the mission of investigating General Glasnost. We are not told anything about General Glasnost or why he should be killed except that he is evil and needs to be eliminated "to save the world from the final holocaust". Sounds a bit melodramatic doesn't it?

Once the game is loaded and you've been through the intro, you are presented with a rich and atmospheric room description. All room descriptions are excellent, although I would often argue about the contrary reasons. This is a personal point, but a sentence is easier to read when a descriptive phrase is placed near the noun it is describing. *Rick Hanson* tends to put them at the opposite ends of the sentence. The only descriptive error I noticed was where the mirror road came to an end. The description said it joined a dirt trail to the west, but it should have been to the east.

The spelling is consistent throughout and the punctuation is also reasonably good. There is no excess use of commas because of the warped sentence structure, but again, this is a minor point. The only real spelling and/or punctuation errors

Garry Francis always writes in-depth reviews. This time he excels himself with a full review and playing strategies for Rubico's first Atari adventure

that stuck out were an excess pair of quotes (in the booklet) and a couple of places where spaces had been omitted after commas or added between words.

Beneath the room description is the prompt. If this is a whole phrase like "What now, Hanson?" gives the underlying force of changing from turn to turn.

The parser is supposed to understand full sentences and simple statements, but I had a lot of trouble getting it to understand anything too complicated. You're better off sticking to simple, but certainly, wherever possible. The parser analyzes your command and sets on certain key words. These key words are printed after typing your command, so that you can always see exactly what is being acted upon. For example, if you typed GET THE OLD BOOK, the parser may echo GET BOOK. This tells you that the parser did not understand THE or OLD and hence these have been ignored. This is a novel feature which I haven't seen used before, but it does have a couple of disadvantages. Firstly, it highlights the parser's shortcomings and secondly, it wastes space on the screen by echoing what you already know. In the extreme case, you could have a command essentially echoed three times - once when you type it, once when the parser echoes it and only when the program's response repeats it in a more descriptive sort of way.

STICK TO SIMPLE COMMANDS

If you stick to simple commands as suggested above, the parser is good, but it does have trouble with some input. Here's a few humorous examples. When I said EXAMINE PLATFORM ONE, it described my handkerchief. When I tried to PULL HANDLE on the one-armed bandit, it said "I don't see a winky jack". When I tried to TIE ROPE TO ME, it responded "You don't have a mirror".

One major problem is when the first word of a command is not understood. It will ignore this word and try to treat the second word as the verb. If this isn't a verb (and it shouldn't be), then you're in trouble. For example, if you try to KISS SINGER (in the tavern), it responds "I don't know how to SINGERS". What it really means is that it doesn't know how to kiss.

The response to the inventory command is atrocious. For example, typing INV at the beginning of the game tells you

the "You're carrying your handkerchief, and...". Oh my goodness. And after all my praise for the program's good presentation, the inventory command often gives you a whole string of commas with nothing between them and there's never anything after "and".

Despite my comments on the parser, my only real gripe with *Rich Hansen* is that the disk is accessed after every single command! This must lead to lots of wear and tear on both the disk and the disk drive. Fortunately, the disk does not seem to be copy-protected, so you can at least use a backup. But PLEASE don't give copies to your friends or Hobbes will surely stop supporting the Atari.

THE PUZZLES

The game's puzzles are generally fairly simple and straightforward, hence I suspect it would be a good Adventure for a beginner. If you have any problems, then there is a comprehensive set of hints at the back of the instruction booklet. This is a nice touch, but they should be coded in some way so that you can't see hints or answers that you'd not need to see.

The geography of the game is huge. With 250 rooms, this puts it in the same category as Level 9. In fact, the overall feel of the game is very similar to early Level 9 games (except that the parser is much better) and this leads me to the same complaint that I have with Level 9. The game is far too big in comparison to the number of objects and puzzles. I don't mind the mapping, but it's very frustrating to do so much aimless travelling between critical locations without anything interesting happening. I'd rather play a smaller game of 50 to 100 locations with a larger vocabulary and more puzzles.

In summary, my congratulations must go to Robbes and all concerned in the development of this game. Despite my nit-picking, I found *Rich Hansen* to be a thoroughly enjoyable game — and that's what counts in the long run. It is excellent value for money, particularly if you're a beginner. I'm now eagerly looking forward to parts 2 and 3. And how about *Richard Lewis*? Let's hope they all come along soon.

GAME PLAYING STRATEGIES

The following section contains hints and overall game playing strategies to make life easier for those who've already bought *Rich Hansen* and may be having troubles. **Do not read any further unless you're willing to make the game easier than the makers intended.** If you are looking for hints, read the following VERY CAREFULLY. There are some very subtle (and some not so subtle) clues imbedded within the text.

The Adventure begins in the entrance hall of a small, deserted railway station. Make sure you take an inventory before you begin, then explore the area around the railway station, the bridge and the platform. You should discover a few objects including the inevitable self-destructing tape recorder. (Remember the opening sequence in each episode of *Mission Impossible*?) Play the tape to get your instructions and, more importantly, to find out what to do in the next portion of the game. Don't forget to get rid of the tape recorder once the tape is finished or you'll self-destruct along with it! Everything else you discover should be taken with you. Virtually everything has a use (although some are just red

havings) and you'll need every object you can get your hands on near the end of the game.

During this initial exploration, you'll probably discover that the railway station is not as deserted as the description implies. If you go in one particular direction, you'll get shot completely unexpectedly and without warning. This is unfair! I call this the "badluck death syndrome". It occurs several times throughout the game, so make sure you save the game frequently. You have been warned!

You will also meet a mysterious character wearing a mask, trench coat and glasses. Once encountered, he'll follow you everywhere. After 30 moves, he will draw a pistol and shoot you. You can't kill him, but you can lose him. Remember that you're at a railway station. Maybe it's possible to get on a train. Ah, but how? It's all a matter of being in the right place at the right time. Once you've worked it out, you'll also find that this is the bridge in the next part of the game.

There is an interesting assembly here. If you're playing the game after a cold start (i.e. after you've just booted the game), then the first train arrives after the 14th move. However, if you're playing after a warm start (i.e. a restart after typing QUIT or getting killed), then the first train arrives after the 10th move! Interesting. In any case, there's no way you can get everything you want in that short time.

Fortunately, another train comes along every 23 moves, so the secret to solving this puzzle is to start a new game and go straight to the location where you will board the train. Wait until the first train arrives (after the 10th or 14th move), then go off and collect all the items you need. If you time things carefully, you'll be back in time to catch the next train. Coincidentally (or by design?), if you collect only the essential items (and you won't know which are essential until you've finished the game), this takes exactly 23 moves and you'll secure right on time for the arrival of the second train. The only problem now is working out how to get on, but given a little thought and experimentation, I'm sure you'll jump to the right conclusion — especially if you're on your guard.

This marks the end of the first part of the game. Once you've left the railway station, there is no return, so you may wish to save the game before actually boarding the train. The next game may also come in handy over the next few moves, for there are a linear series of puzzles where you must guess what to do within one move or die. I have quoted the text. Fortunately, these ones aren't too hard.

You should soon find yourself in a picturesque little village. Don't worry about the random appearances of the village and the dog. They're just there for atmosphere. Explore the whole of the village from the entrance of the long dark alley in the woods to the windows of the village in the north, but don't worry too much about the church just yet. After you've got everything you want in the village, you can head for the tavern at the western end of the long dark alley. Now's the time to follow the instructions given by the tape recording, but be careful wandering about the tavern. Some of the guests get a little hostile if you invade their privacy.

You could take this opportunity to clean yourself up a bit (have you looked at yourself in the mirror?), then settle down for the night. You'll wake refreshed to find a coded letter from one of your contacts. All you've got to do is decipher it. On the surface, it looks like a simple cipher whereby each letter of the alphabet is merely replaced by another letter. Spaces between words aren't affected. (I think this is called a transposition cipher.) The hard part is to find which letter is represented by

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each of the coded letters. There are probably a number of ways of cracking the cipher (including computers), but I simply made the assumption that the word "THE" would appear somewhere in the message and worked from there. Sure enough, "THE" appeared three times and this enabled me to decode the whole message in about five minutes flat.

In retrospect, I realise that you could probably also crack the code based on the frequency of the letters used. Knowing that "E" is the most commonly used letter in the English language, you should be able to break the code within a few attempts. Four letters share equal dominance in this particular message and, sure enough, one of them is "E".

Finally, you could use the method described in the hints at the back of the instruction booklet. The key to this method is your own number, but even knowing that, the solution is a bit obscure.

Now that you've got your new instructions, it's time to head for the church and the bookshop. Alas! Another voided message. This one can be deciphered the same way, but in this case, if using the method in the hints, the numeric key is found in the title of the book. Once deciphered, you should know your next objective.

Head north and you've left the village behind, then continue along the terrace, read and you find an exit to the west. Follow this and explore the area around the river, but don't try crossing it just yet as you'll find yourself in a watery grave. You can use the bridge, of course. This leads to the pretty little woodland setting which should be explored and you've found everything of interest. You can safely ignore the fallen tree and the woodland creatures. Once again, they are just the atmosphere.

Return to the terrace road, then head back to the garage.

You should now have everything you need to solve the puzzle here. If you follow the seemingly contradictory concept of putting your weight on lying-down on the job, you will ultimately end up with one very important item. You'll get quite a bang out of this at a later stage. Best of luck with the trophy job!

Here's an interesting aside. When you've finished the game, you'll probably want to check out the hints in the back of the instruction booklet. (You wouldn't dream of looking at them before you've finished, would you?) You will notice that the first 40 questions seem to be fairly complete and in roughly chronological order except for the omission of any hints relating to the garage area. These are tucked on at the bottom, almost as though they were an afterthought. You will also notice that there are a disproportionate amount of questions relating to the garage compared to the rest of the game. The same observation can be made about the hints and answers. In retrospect, I see that the puzzles around the garage had a different style and were generally much harder to solve than anywhere else in the game. In fact, I think this was the only point where I had to use the hints and I thought the answer to my particular problem was unique. Can we imply from all this that the geography and the puzzles around the garage were added for the Atari version? It certainly looks that way. Does anyone know for sure? How anyone played the BBC Electron version? If so, please let me know.

Anyway, once you've finished in the garage, head back to the terrace road and follow it as far as it goes. Then keep going until you reach the driveway maintenance where you'll find a couple more important items. Head back to the river and if you've not too tired, you can now drive into the next part of the game. Save the game before you do, as there's no way you can

return to this area.

You should now find yourself in a lush meadow with nowhere else to go. Maybe the bull knows a way out. Unfortunately, bulls don't talk and this one is quite content to just munch away in the grass. If only you could get its attention. Hey, now, now. Oh!

You can now explore the farm. Everything here seems pretty useless, but don't be fooled (as I was). The trowel CAN be used to dig up something interesting - providing the soil is soft enough. If you've got the trowel, then you've also got that pesky mouse running around your feet. You'll have to get rid of it before continuing or it will lead to your downfall. (Maybe it's hungry?)

Once you're finished at the farm, head north in the log cabin and then to the cliff. If you went thorough in your pillaging of the village, you should have the means to climb the cliff. (This game really ropes you in doesn't it? You should be well and truly hooked by now.) Once again, save the game before scaling the cliff, as there is no return on this section.

You should now be on a ledge confronted by the inevitable cave. Make sure you examine the cave thoroughly, then follow the ledge to the peak of the mountain. You've now reached your objective. Oh no! The front body of your contact! The poor fellow must have walked a ghastly death. What will you do now without further instructions? It's wisest to go it alone! The only way is down, but that's just more looks deep. I hope you learnt more than how to make glasses and that nice banana during your holiday in St. Moritz.

When you get to the bottom of the mountain, you may want to save the game again, for you are now occupying General Ganama's territory and all exits (other than the way you came) lead to instant death. It's time for a little pillaging. If you walk around awhile, one of General Ganama's dogs will drive along the road. In fact, they pass by at fairly frequent intervals and could prove to be your salvation. Maybe you could use some of the objects that you've been carrying around for so long. Why not have a drink while you think about it. How about a cocktail like your friend Malinow used to make? Shakes, not stirred. Incidentally, there is a carry bag at this point in the game. Do not try going IN unless you've actually got a trap to get it in!

It's now time for a lively drive in the countryside, but make sure you've got a disguise before going on. Admit it: the scenery by all means, but don't get out of the vehicle. The middle has legs of polished steel! What's that? A champagne? I hope you know the password, because that guard looks terribly trigger happy.

A little bit further and you're safely inside Ganama's base, but don't drive too far or you'll find yourself in a road crash state. Once you're out of the vehicle, it's only a couple of moves to ... the maze of large black rooms!

Oh boy, this one's a doozy. I spent two nights mapping the maze compared to three nights solving the rest of the game! By the time the whole maze was mapped, then painstakingly redrawn in its simplest possible form, I had made the following discoveries. There are 16 rooms in the maze. Each room has 12 exits (i.e. N, S, E, W, U, D, L, O, NE, SE, NW and SW) for a total of 192 exits. The maze can best be represented as a matrix of four rooms by four rooms. The exits from each room will lead only to the same room or one of the immediately adjoining rooms, including diagonals. Thus a

corner room's exits will lead to only four possible rooms (including itself), a side room's exits will lead to only six possible rooms (including itself) and a centre room's exits will lead to only nine possible rooms (including itself). There was only one exit which broke this rule. Even knowing all this, mapping is not easy because going (say) east from one room does not necessarily mean that you can return by going west. Also, many exits are one directional.

You first enter the maze in the room at the upper right hand corner of the matrix. The hard part is finding the room which leads out. It's extremely unlikely that you'll find this room just by stumbling around. The maze is very cleverly constructed so that the closer you get to the exit, the more unlikely you are to actually reach it. You can map the maze using the traditional Hamel and Grevel method of dropping string to make each room unique, but you'll be hard pressed to find 192 moves. Here's where your deductive logic and the above notes may help. (In fact, it IS possible to collect 16 items, but you need you've found your way through the maze! It's like the Hamel problem of which comes first, the chicken or the egg?)

After I'd finished the game, I discovered that there's generally a sign which TELLS YOU THE CORRECT PATH THROUGH THE MAZE! However, it's ~~VERY~~ cryptic and so completely unhelpful that I'm not surprised that I didn't see its relevance in the maze. The recommended path takes several moves, but if you map the maze properly, you'll find a slightly shorter route which takes only six moves.

When you finally surface from the maze, you'll find yourself deep in the bowels of General Ganama's military base. There are food providers, teachers, canteens, service rooms, perfume and cosmetic hangars to explore, but very little to do. Don't worry about the employees wandering about the base. They will not bother you as long as you're still wearing your disguise.

You will eventually encounter a pair of locked doors. The first requires a code number which you should know if you've done everything that your contact told you to do. (Note that when you type in the code number, you shouldn't use spaces, commas, dashes or any other separators between the numbers. If you do, you'll get killed.) The second door requires only a bit of brute force - and the right object.

Well, as long as you've face to face with General Ganama. Remember your mission and act quick - you've only got five moves to get the job done. And make sure you do it properly. Of the two means of assassination available to you, only one leads to a successful conclusion. The other is the biggest red herring of the whole game!

TIME TO GO

That's it for this issue. I hope that you found the playing strategies helpful. I can't remember the last time I received a letter from a PAGE 6 reader, nevertheless my usual invitation still applies. If you have any questions or comments about the column, suggestions for future columns or you just need a hint for a specific Adventure, please feel free to write. If writing from anywhere outside Australia and you expect a reply, please include two international reply coupons to cover the return postage.

Write to me, Garry Francis at 26 Hurlingham Road, Burwood, N.S.W. 2238, Australia

Zapping The Right Byte

I enjoy playing Arcade Games as a form of entertainment and while there have been some excellent games released, there have been many that, although playable, have been far too hard to complete. Have you completed SEA DRAGON, THE BLUE MAN, FORT APOCALYPSE, MINER 2049r, SNOOKIN, LAXER HAWK, BOUTLEHEADS, BULLSHEDASH II, and BRUCE LEE without cheating? I have. Have you completed DRELS, ASTROCHASE, TAIL OF RITA I, YRAE, MARTINSON, SHAMUS II, KISSIN' KOUSINS, and DIAMOND? I have, but had to use a cheat device!

This article gives you guidelines about how to compare certain games by changing the number of lives to 99, 100 or, if possible, the program's original lives. You will need a suitable disk-along and reference to the cheat accompanying this article. Unfortunately, I can only present some information for AMI users (due to lack of a suitable console editor, and there are the added hurdles of language programs) which I think is impossible for a home editor to handle. It's possible that some involved with re-writing the changed program. My information is only approximate and you may require several tries to zap the right byte. So be patient and be careful!

Before you start zapping, I have to issue the warning that you are responsible for your own actions since you may zapping bytes on your own disks. You do so at your own risk. I will not be held responsible, nor will FOCUS, if you zap the wrong byte, and can't change it back to the original.

HOW I DISCOVERED THE SECRETS

I have no knowledge of Assembly Machine Code programming, but I looked at the source codes of FURBERG and PLANETARY DEFENSE from ANALOG Magazine and saw how the lives were initialized. In PLANETARY DEFENSE, it was with LDA #N, i.e. load N into the accumulator. On disk, this would appear as AN #N, but it is possible of course that this combination of bytes would appear several times during the program, and only one of them would control the lives. So, it was a matter of trial and error to narrow down which is the right byte. Although it is possible for a programmer to set the lives with a LDX command, I have found it rare, only FURBERG used LDX, and I presume using LDX is possible too? LDX appears in A1 and L1P7 as A8 on the disk. In all the changes I have made in commercially released games, LDA was used for setting up the lives.

If a game has 5 lives, I checked for A05, or A04, or A03. There are several different ways a programmer may decide to count down the lives. Also, it is possible that the programmer may decide not to use LDA to set the lives at all. In that case, I have to give up the search, because I don't know what other options there are to look for. There are programs

Are those games too hard?
Cheat! Harvey Kong Tin
shows you how!

which I can add extra lives to e.g. DOMAIN OF THE UNDEAD, PANCHOPIE, FLIP & FLOP and others.

HOW TO ZAP 'EM YOURSELF

Right, have you got your words editor handy? Some are very easy to use, once you get used to zapping a few bytes. For convenience, you need one that has a HEX SEARCH, a MODIFY (so that you can make the change and write the changed sector to the disk) and other extra features such as an ATTACH search and HEX and DEC convert.

Before you zap, take note of the original byte, and it's exact location, so that you can change it back to it's former self, in case anything goes wrong. One fail-safe way, is to only zap a byte if you are able to multi-byte, because it is remotely possible that if copy protection is in the sector you zap, you would zap out the protection and won't be able to load the program.

USING THE TABLE

Use the HEX SEARCH to find the reference bytes given, e.g. A03, so that you know where it is in your disk, they should be at the location given but check first. Always keep a note of what the original byte was and where it was, before you change it. In the example of A03 you would change 03 to the number of lives you want. Remember it is in hexadecimal and the maximum of lives possible is 255 i.e. FF. In some cases using a large number of lives will disrupt the screen display too much, and recommend the maximum limits shown in the chart. How fun!

FOOTNOTE

I do have a great respect for the programmers who have written the games, but I can't help thinking that in some cases they set the difficulty far too high. Even with 255 lives, some games are still too hard to successfully finish. Playability is a very important part of any program, yet many games seem to have been inadequately play-tested in their conclusion. If the games could have been successfully completed with reasonable practice, I would have not bothered trying to add extra lives to the programs.

This information is only approximate and maybe other readers could provide more accurate information for a future chart, when they try any of the above edits. And perhaps readers could send in information on games I have not covered.

Storybook

by Allan Knopp

Enthrall your children or your friends by making up your own illustrated stories with this easy to use program

Storybook will enable you to write and illustrate a story in a series of screens which can be saved to disk or cassette. The pictures are drawn in the top section of the screen, using a pre-defined character set in Amiga mode 4 and each screen only takes eight screen pixels, making loading very fast. If you are using cassette a screen will load in less than a minute. I wrote Storybook to be as simple to use as possible as I wanted it to be possible for children to use it, both young children by using the view option, and older children to be able to create their own stories. You should find it quite easy to use.

GETTING STARTED

When you first power up you will be presented with a brief list of the commands available. To begin creating screens just press START. If you want to view a previously saved series of screens then press SELECT. I will describe this option later.

After you press START the screen will clear and there will be eight 'pixels' which the characters are predefined. The new characters set will then appear in the selection area at the base of the screen and a few seconds later the cursor will appear at the left of the selection area. You are now ready to create a screen. Any of the characters shown can be used to draw pictures.

Using a joystick, move the cursor to the character you require and press the fire button. Now move the cursor to the drawing area, press again and the character selected will be placed on the screen. This character can be repeatedly plotted until the character is selected another from the selection area.

CHANGING COLOURS

Colours can be changed while you are drawing. Press SELECT and then a number between 1 and 5 which corresponds to the colour palette you wish to change. It is the background, then push the joystick forward or back to cycle through the colours. Press START if you are drawing. You will see the single background row of the colour palette reverse and remain, but they appear differently in Amiga 4. Press START to apply the colours.

ADDING TEXT

When you want to complete press OPTION to close the text window. You can now type up to five lines of text to generate your picture. You will find that the editing facilities are somewhat limited. This is because location 768 was poked with 0. It causes any letters characters, for example 'Y' or 'C', to be plotted to the screen rather than performing their editing functions. The Delete/Backspace key is the only

editing facility available. Once you have completed the text for the screen press RETURN to save the screen to disk or cassette.

SAVING SCREENS

If you are saving to cassette just answer C to the filename prompt. If you are saving to disk, give the filename as D filename.STO. 'Message' should not be more than seven letters long and the extension STO is needed for the screens to be loaded from disk. Again, because of the lack of editing facilities, if you should type the wrong filename you will not be able to correct it. However, unless the first letter is either D or C the filename will not be accepted, and on pressing RETURN the prompt will disappear and you will be able to enter the correct filename.

If you are saving to cassette, save the screens one immediately after the other on the tape in the order that they are to be viewed. If you are saving to disk, it is important to save them to a newly formatted disk in the order that they are to be viewed. Although each screen takes up only 8 sectors, only one story per disk is allowed as the program does not at present check filenames, it assumes that all files with the extension STO are to be loaded in the order that they have been saved to the disk. In theory over 96 screens could be saved to disk but DOS has a directory limit of 64 filenames. It is suggested that you keep in a maximum of 50 screens which will then allow you to have DOS.SYS, DCP.SYS (if required) plus an AUTORUN.SYS file and the STORYBOOK program or the STORYBOOK READER from this issue's disk.

LOADING SCREENS

To load a previously saved screen for further editing, first open the text window by pressing OPTION, then press ESCAPE and enter either C or D filename.STO in response to the prompt, depending on whether you are using cassette or disk.

READING A BOOK

Storybook gives the option of displaying previously saved screens in sequence. To do this, first run the program and when the instruction screen appears press SELECT. The first screen will appear, and subsequently pressing any key will load and display the next picture in the sequence.

The First XLENT Word Processor XLENT Software (UK) £29.95

XLENT have been providing 8-bit users with interesting print related software for a while now, but this marks their first attempt at a comprehensive word processing package. My initial impressions are that it's a thoroughly practical piece of software with some unique features, and is good enough to give the established favourites like Amstarwin and Paperclip a real run for their money.

The program comes in the slim A5 size plastic wallet popular with many companies, and this contains an amped-up program disk plus a detailed 76 page instruction manual. Unfortunately, the manual isn't indexed, but otherwise seems well written and organised. The disk includes DOS 2.1, so the IBMPC's manual can be used, if required.

PRACTICAL DESIGN

While the program is by no means completely 'innovative' in its, the author seems to have tried hard to make it nice to work with. He's included such features as variable background and text colours and intensities, choice of flashing block or underline cursor, selectable insert or overwrite mode, and joystick or keyboard input for cursor movement and scrolling.

The main edit screen is divided into three areas, these being a tab/ruler line, a twenty line editing window, and a four line command window. The command window is used for status, prompts, and error messages from the program's various functions. It also contains six icons for selecting print, copy, cut, paste, search and disk utility functions. To use these you simply select the required icon and then follow the prompts appearing in the window alongside. It couldn't be easier.

Many of the prompts require a reply through the keyboard. The most frequently needed reply is already on screen as a default, so all you need do is hit Return. In the unlikely event of you getting stuck and not knowing what to do next, pressing the Esc key once or twice will return you to edit mode. Strangely, you don't usually return to your original position in the text, and sometimes find the typing mode has changed too. If you need even more assistance there are four help screens packed with useful information available at a push of the Help key.

Editing is very straightforward, with Cut, Insert, Backspace, and Delete keys doing just what you'd expect. In fact, the operation of the Delete key has been suppressed somewhat. Shift/Delete brings up a menu in the command window, giving you the choice of deleting to end of word, line, sentence, or paragraph. Sensibly, the default is for line - again exactly what you'd expect.

Less frequently used functions are accessed by pressing Shift/Control plus a third key. This permits operations such as counting words, moving word-wrap on and off; calculating number of disk sectors required to save the document; marking up to five distinct positions in the text and then

jumping to any of them as required (VERY useful); changing cursor shape, background and text colour and intensity; try upon and logical sentence spacing; and highlighting all the additional spaces shown on the screen resulting from word-wrap or return characters.

A buffer is used to handle the copy, cut, and paste functions. It's only 800 bytes long though (one screen), which can sometimes be a limitation. Unusually, this buffer may be edited, so you can copy something into it, change it, and then paste the new version back into a document. You can also create new text in it, either by keying it directly or loading a file from disk.

HANDLE TWO DOCUMENTS

It's possible to copy, cut, and paste between two documents by using the program's dual window facility. This divides memory into two halves, and permits the loading and editing of a document in each part. The cut and paste buffer is shared between the two windows, giving the ability to move or copy text from one to the other.

Rather than having two small windows on the screen simultaneously, you flip between two full size windows. My only criticism of this is that the program resets the view to the start of the document each time you flip windows. It would be far better if it returned you to the point from which you left it.

The usual selection of disk functions are included, such as directory, load, save, delete and format. Load options allow you to append files to the document in memory, or insert them at any point within it. Save options permit the saving of the whole file or any selected portion of it. Together, these give you another way of cutting and pasting between documents.

Yet another unusual feature is the disk to-screen speed function. This allows you to read a file from disk and display it on the screen WITHOUT having to save the file already in memory. How many times have you wanted to have a quick look at a disk file because you've forgotten what's in it? Well now you can, and without the usual save, load, reload hassle.

The program is well endowed with text formatting features, implemented via directives. There are control codes placed on special format lines within the text. Facilities include left, right, top and bottom margin settings, physical and logical page size, immediate and conditional page count, line spacing, centering, justification, three part headers and footers, normal and hanging indents, and page numbering. There are some unusual directives too. For example text blocks can be selectively skipped, output passed as shown points, and separator lines printed.

Formatting includes the handling of hard spaces and soft hyphens. The first is used when you want to link two words together to prevent them being split across two lines. Soft hyphens may be put into long words to show where to break

'good enough to give ... Atariwriter Plus and PaperClip a real run for their money'

and hyphenate them when they won't fit onto a line. If the word does fit, the hyphens don't appear. Clever stuff, that!

80 COLUMN PREVIEW

Output can be directed to printer, screen, or disk in single or double column format, with double columns handled in a single pass, if required (XLOK only).

Screen output is used for previewing printouts. It's produced in 80 columns mode in a vertical scrolling 14 line window. The tiny special characters are quite legible (on my TV, anyway) and are perfectly adequate for preview purposes.

Disk output may be used for transferring formatted text to other programs, like XLEP's own Megaflex package, or for bulletin board uploads.

Long documents can be built up from several files - chained together so they print as a single document. It's also possible to include external files within the main body of a document. For instance, you could insert standard paragraphs into a document from a standard text library. There's also a mailmerge feature for producing personalized standard letters.

CONTROL THAT PRINTER

Facilities for controlling your printer haven't been forgotten either. The Atari international character set is supported and you can embed printer control characters in your text to handle the printer's special features. You can also load in custom designed character sets, a sample being provided on the disk.

There's also a printer driver construction set which allows you to set up your own control toggles for underlining, boldface, subscripts, and anything else your printer is capable of. You can even print graphics along with your text, but only on Epson compatible printers. Uncompressed 62 vector picture files, 8 Graph picture files, or Typewriter (another XLEP product) icons may be converted into printable bit



image files using a utility provided.

There's just one more feature I must mention, available only on the XLOK. This is a print spooler - not to be confused with the disk to screen spooler described earlier. This enables your Atari to print out a document while you get on with further editing of the same or another document. I found it slightly disappointing in that the printer runs slower than normal, and there's a noticeable slowing of keyboard response when in use. No input gets lost though, as the program uses a type-ahead buffer. Using a Star 8000 printer on a Blackfoot interface, I found the printer occasionally stopped altogether, but could be restarted by pressing the BREAK key. OK, so it's not 100% successful, but look on it as an interesting bonus.

GREAT VALUE

What can I say except this XLEP product really lives up to its name! It's friendly, reliable (apart from the odd idiosyncrasy), and chock full of useful features. The only extra items I'd like to see included are a good spell checker, automatic heading levels and table of contents generation - perhaps XLEP will add these later. And if they wanted to be really innovative they could add an outline processor and thesaurus, too. Now that WOULD be something to show about!

All in all this product represents great value for money. If you're considering buying a word processor, make sure you see this one before you decide. I think you'll like it. ■

**Coming soon ...
Colossus 4 chess
Colleen Music Compendium**

COMPUTER GAMMON - THE BUGS!

Fancy being a Bug-Hunter? Or doing a bit of Sherlock Holmes work?
Dave Hitchens tried to track down a bug in his Computer Gammon
program from issue 27 only to find part of the solution.
Can you throw any light on the problem?

Shortly after Computer Gammon was published in Issue 27, the Editor wrote to me and asked if I could sort out a bug. Apparently, 400/800 owners experienced a problem with the right hand die jiggling back and forth slightly - something which does not happen on the XL or XE. It turns out that this is one of those bugs that does not respond to conventional debugging techniques, in fact it's not even!

FIRST THE FIX ...

Before going into the technicalities, let's have the case, which involves modifying three lines, and while we're at it there are a couple of corrections to the existing routines you might like to make. The cure for the jiggling is:

```
Line 1750 - after the DATA  
141,1,208,24,185,28,141,1,208 to  
141,1,208,56,215,28,141,1,208.  
Line 1748 - after the 281,79 to 281,80  
Line 2440 - after the 70 to 80
```

For the scoring routine make the following changes:

```
Line 8045 - the (N < 6) should be (N = 7)  
Line 8046 - the (N > 18) should be (N > 19)
```

... THEN THE MYSTERY!

Now to the Sherlock Holmes scenario!

The dice are represented by players 3 and 4, coordinates by subroutines from DICEB and their horizontal locations correspond to the values in location 1. Once initialized, this location holds '0' and is POKE'd into memory location 51258. Adding 20 produces the value to POKE into address 51251.

Now, because the program makes multiple use of both players and colour registers, I introduced three DLI's along with a VBI with the latter pushing the colours and scores etc. The positional instructions for the dice are contained in this VBI and could not be more simple viz: LDA #, STA 51250, CLC, ADC#20, STA 51251. The XE accepts this routine and gives stable dice but the 800 doesn't! The left die is steady as a rock but the right one dithers.

It turns out that replacing the CLC/ADC instruction with LDA #0 cures the jiggling. In addition, using RRC #20 with either CLC or RRC also cures it. Finally, pressing the BREAK key stops the jiggling but the fault returns when CONST is typed or even if BASIC is set into a tight loop (e.g. GOTO 5 where line 5 simply reads GOTO 5).

A memory location was chosen so as to reveal the dice into view at the start of the game but its selection does not affect the Bug (I think it deserves the capital letter!). There is obviously a very strange instruction taking place when BASIC is running and when this particular ADC instruction is used. I tried ADC'ing a memory location and the die still jiggled.

A second, and more insidious, bug which affects both machines (but which has not been commented on by readers as

far as I know) is an apparent breakdown of the DLI sequencing. It's as though they go out of sync in a totally random fashion causing colour flashing and player positioning fluctuations. In particular, DLI13 (the final one) appears to intermittently affect previously scanned areas of the TV display. In fact I've seen this on two issues of commercial software so respected my machine was at fault but I have since checked it out on two 400's as well as my XE and the problem appears on all of them. The DLI's are, incidentally, simply a string of instructions, so ADC's are used here!

I have tried everything I know to-date this - resetting the DLI vector in the VBI, using immediate/delayed VBI's, using a normal graphics 0 Display List instead of the modified one etc., etc. It's all to no avail - until I press the BREAK key when, hey presto, no flashing! As with the dice Bug, however, if you send BASIC into one of its tight one-line loops, then back comes the problem.

I should be very interested to hear from anyone who can shed light on these problems. There appears to be a common instructive cause, and the effect with the BREAK key, in particular, must offer a clue to (and hence) the problem lies.

To summarize, the problems are as follows.

1. Player horizontal-positions are perfectly stable on the XE.
2. They are only stable on the 400/800 system if the ADC instruction is not incorporated.
3. The BREAK key effectively cures the bugs.
4. Bugs return even if BASIC is operating a closed loop.

So, you clever programmers, how about some real detective work? To help you out, the VBI code for the game is shown. There's no better way to improve your programming techniques than sorting out some really obscure bugs! And don't forget, if you solve it, let me know!

COMPUTER GAMMON - VBI CODE

| | | | |
|--|-----------------------------------|---|--------------------------------------|
| PLA LDA #0 LDA #0 LDA #0 STA #0 RRC | colour die VBI | STA #200 STA #200 | also useful for instructions |
| STA #0 STA #0 STA #0 STA #0 STA #0 | score VBI score | RRC # LDA # RRC # LDA # STA # | score shift routine |
| STA #0 STA #0 STA #0 STA #0 STA #0 | no 'no-sequencing' with score | LDA #0 STA #0 STA #0 | die clear in double mode |
| LDA #0 RRC | generate colour change word (RRC) | LDA #0 RRC # LDA #0 STA #0 STA #0 | store the register of 'shooting' die |
| LDA # STA #0 RRC | horizontal die location | LDA # RRC # LDA #0 STA #0 | store the register of 'shooting' die |
| LDA #0 RRC #0 STA #0 | capital colour change for DLI | LDA # RRC # LDA #0 STA #0 | store the die location when required |
| | | JEQ #0 | End of VBI |

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FONT 4

Running a home computer system on a tight budget is never easy, especially when you are tempted by luxury versions of your basic equipment. Owners of 1029 printers will share my envy of the features available on more expensive printers, and will realize why I just had to have FONT 4 when I recently saw it advertised. At around £25 it seemed a good way of upgrading my 1029 to give these new font styles in addition to the standard font.

For your money you get a small board mounted chip with a short length of wire and a switch attached, all vacuum packed in a wrapper that says "Commodore compatible" (That gave me a moment's anguish, but the instructions clearly referred to Atari printers so I went ahead. One initial warning if you buy, be careful how you remove the wrapper as the instructions sheet seems stuck to it).

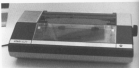
The three new font styles are - Near Letter Quality, Descender and Future. The difference between Descender and the standard font seems small but you have enough of a tail on p's, r's and g's etc. to make a noticeable difference to readability and presentation. The NLQ font gives a square cut style, dramatically different from the *Amstrad* font though I personally found this less less impressive than I had expected. The limitations of a seven pin printer head, I suspect? The third new font is Future, similar to the "computer" style that was fashionable on cheapies a few years ago. Future font is very impressive in upper case and expanded text but in lower case you just get smaller, narrower style letters, not a real change in style. Maybe this is a common feature of the firm, perhaps the Editor can tell us? (A few also use non-standard but to date "lower case" letters, there is a standard, but first used, font variation in typesetting called Small Caps - SC). The instructions also claim that you can use all fonts in reverse video but I have been unable to do this so far. Graphics printing is not offered by the chip.

FITTING IT

The instructions for fitting the chip are clear and accurate but this gave me the biggest headache. I have some experience of circuit boards from my (long ago) college days and I have fitted chips on other equipment but getting inside your hardware with a screwdriver and such is never easy and should always be done with caution. Apart from anything else, it will invalidate your warranty, making it expensive if anything goes wrong.

The inside of a 1029 doesn't give much room for messing about to take care and GO SLOWLY. Accurately the hardest part is maintaining the switch on the case of the printer. You should choose a spot, which will be easy to reach when the case is re-assembled and be very careful where and how you drill holes! I choose a point on the top of the case at the back right hand corner where there is only one wire to avoid under the

At last some joy for 1029 owners.
J.D. Collins finds a way to get true
descenders and more fonts



NLQ.....The quick brown fox
jumped over the lazy dog.

FUTURE....The quick brown fox
jumped over the lazy dog.

DESCENDER..The quick brown fox
jumped over the lazy dog.

ATARI.....The quick brown fox
jumped over the lazy dog.

The different fonts available with Font 4

case. I drilled two quarter inch holes and then curved the edges into a square just big enough to accept and grip the switch without further drilling of screw holes. The installation took me a couple of hours spread over two nights, which sounds a lot of work, but better safe than sorry I thought!

WORTH IT?

Was it worth it? Yes. Although you can't switch between fonts under software control and the price isn't as good as, say, the 1027 printer, I am very happy with the result both on the printer casing and in the print quality. I feel the cost of the replacement ROM was well worth the effort especially as my warranty had already expired. If you don't want all the new fonts, you can get a Descender font only chip for £12.00 but it might seem like a lot of work for just one font.

I have only one complaint. It didn't make it any easier to coax the £ sign out of the printer! Seriously though, FONT 4 will really breathe new life into your 1029.

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STAGE

The PAGE 6 ST section



From a collection of public domain art. Author unknown.

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U.S. Gold plan on supporting the "serious" games side of the ST over the coming months with several conversions of S.S.I. titles. **COLONIAL CONQUEST** will be available "with enhanced graphics" and two further releases are **WIZARDS CROWN** and **RINGS OF ZILPIN**. A new role-playing fantasy adventure is **FRANTASK III - The Wrath of Nihiladras**. U.S. Gold also promises an ST version of Brookband's much acclaimed **PRINT SHOP** to be released in September.

Reports from the Summer CES Show in the States were that the amount of software for the ST is slowing down! Many of the products shown have already been released in this country and were being introduced in the States under licensing agreements. Others of note that may come this way include **SCAD** a 2-D drafting program with 16 memory pages at \$99.95 and **MasterCAD** from Versacade(?) which claims to convert any two-dimensional image into 3-D. Electronic Arts had an enhanced version of their **Basic Construction Set** and **Accolade** promises a superb driving simulator. Also on show from Atari was a credit size calculator with the Atari symbol and name. Just a professional item? Or is Jack getting back to his roots!

Mikros U.K. (name the change from Microdeal) have a couple of new utilities aimed at programmers. Those with Hard Disk drives can try out **Mc-CACHE** which will help with the speed and efficiency of the drives by holding the most recently accessed sectors in memory, like a RAM disk, thus cutting search and access time. For the less wealthy(?) **STAFF** is a whole collection of useful utilities which at first glance look like a collection of public domain programs but which independent assessment indicates is much more. Too many to list but Autoboot programs, disk utilities, keyboard controllers and more are included. It costs £24.95. **Mc-Cache** is also £24.95.

Activision have now signed up **Starry On-Line** following their departure from Microsoft. First two titles released are **KINGS QUEST III** following on from the earlier titles and **SPACE QUEST** which is an adventure in a future time but still in the Sierra style. Both retail for £24.99 on the ST.

Massville back at CES a British company won the prestigious **Software Showcase Productivity Award**. The company are **Provision Software** and the product was **SUPERBASE PERSONAL**. The CES judges praised the database for its "very visual" system offering a unique facility for co-ordinating pictures and text. Apart from the award Superbase had the other distinction of being the only database operating under GEM available in the U.S.

Glump recently reduced the price of the **GFA BASIC Interpreter** and **GFA BASIC Compiler** from £39.95 to £29.95 and had a Special Summer Offer (which you might still catch) of three free disks of public domain software. The price cut is intended to introduce GFA to the home-user, for whom it is an ideal basic, rather than the professional user. Glump also have a new range of GFA products coming. **GFA VEKTOR** is a 3-D graphics package that fully integrates with GFA BASIC and there is an enhancement to GFA Draft called **GFA DRAFT PLUS**. Further products include **GFA OBJECT** for designing and manipulating 3-D objects and **GFA PLANT** which is an enhancement that provides access to the power and precision of native co-processor.

SUPRA 20Mb HARD DISK



Presumably you know the benefits of having a Hard Disk drive for your ST? If not, you could check out the article in Issue 26 in which Matthew Jones explained some of the pros and cons of owning a Hard Disk.

At the time, only Atari's own Hard Disk was available but now you can choose between the Atari drive, the Triangle Drive from Ederose (although there have been rumours that they may no longer be doing Hard Disks) and three different drives from Supra, distributed in this country by Frontier Software Ltd. Supra drives are easy to get hold of and their price has just been reduced, so are they a good alternative to the Atari drive?

We recently had the opportunity to try a Supra 20 Mb Hard Disk and were very impressed. It is much, much smaller than the Atari drive (being 205mm x 115mm x 70mm) due the fact that it uses a 3" disk rather than 5 1/4". While it is not quieter in use, it is no noisier than the Atari drive. It makes a different noise rather than rumble or hiss noise. Connecting up is simply a matter of plugging it to the ST and finding another mains plug for the power.

A number of utilities are provided for formatting, partitioning, booting the drive and the like, all of which are easy to use. Partitioning is optional but is available for up to four "logical" drives which can be of any size you choose. All of these work well and should cause you no problems. I wasn't able to test any difference in speed of access between the Supra and the Atari drive but when you have the fast access of a Hard drive are milliseconds that important? The manual supplied is brief, but contains all the information needed. Hard drives, really are simple to use once you become accustomed to them.

One major factor in Supra's favour, is that, in addition to the standard 20Mb drive, 40 Mb and 60Mb versions are available if you store them (and use allied drives). Before it or not, it really is possible to fill up a 20Mb drive! ST programs are bigger than you might think.

The other major consideration is the size. The Supra drive really is neat and tidy and looks much more professional looked up to your ST. Reliability seems to be no problem. We had it running for a couple of weeks with no problems and other users have reported running them daily for six months or more. If you should get any problems, Frontier will sort them out for you and try and make sure that your precious data is preserved. You get a full 12 month guarantee.

With many items of hardware, the only question is whether it works and continues to work. There seems little doubt on either point with the Supra drives and they should certainly be considered as a viable alternative to the Atari drive. A 20 Mb drive will cost you £229.95 and if you need more storage you can have 40Mb for £259.95 or 60Mb for £279.95.

Superbase Personal published by Precision Software

Superbase Personal is advertised as "Efficient at work", "Easy to use, Flexible & Powerful". The question is, does it live up to such claims? Despite being "easy" the first step is to read the manual. Whilst it is possible to struggle on for a while without doing so you will get far more from the program once you have read it.

SOME DEFINITIONS

Before I start, I shall define a few terms used with Superbase and databases in general. A **FIELD** is a single line consisting of a field name and field data. The field data is generally entered by the user. "Name" is a typical field name, with the actual name entered being the field data. Fields can be of several types, character, numeric, date or several special types. A **RECORD** is a collection of related fields. "Name", "Address", "Tel" could constitute a record. A database **FILE** is a collection of completed records. Thus the names and addresses of all your friends could constitute a database. An **INDEX** on the "Name" field would keep the database sorted in alphabetical order. **RELATIONAL** means that two or more database files can be linked on a "common" field, like a name, and data extracted from each "related" file to produce a report. Bearing all that in mind let's take a closer look at Superbase Personal.

GETTING TO KNOW SUPERBASE

The manual is a spiral bound book of over 160 pages. It is divided into several sections (Getting to know Superbase; Working with Superbase; and 8 Appendices), but starts with a "prologue" section which explains how to set up your system for Superbase, how to load, and differences between the IBM version (which the manual mainly refers to) and the Atari version. The differences are only minor key changes (IBM uses Alt-UL, Atari uses Undo etc.), and the graphics file formats.

"Getting to know Superbase" starts off with loading the program, and explaining how to open files (using a custom file selector) using one of the demonstration files as an example. It then covers the main record display modes which are: Record view, where the field names are listed in the order they occur in the file definition; Form view, where you can arrange the fields in the layout you desire; and Table view, where the field names are displayed along the top of the main window and the data is displayed in columns below (Form and Record views only show one record at a time). For each of these modes you can choose which fields you wish to view, or (by default) display them all. At this point you are introduced to one of Superbase's "ease of use" features, the Command Panel buttons. There are buttons with videotape play/pause style icons to indicate their functions. Not being familiar with such devices, I did not find them particularly illustrative of their purpose, but once introduced, they do seem natural. Buttons for stepping forwards and backwards, fast forwarding (rewinding), and fast rewinding forward are available, as are pause and stop buttons (the use with fast forward/rewind) and a quick search button.

The quick search button is a small insight into the filter mechanism of Superbase. Each file is indexed on only one field

reviewed by Matthew Jones.



at a time (though more can be created and then swapped in as desired). The quick search allows you to use wildcards to find records within the current index. The next button is the "Filter" button which allows you to define a "mask" which will be used to select which records will be displayed and which will be hidden. For instance, if you built a filter on your address file similar to "Njper LIKE "****", only records with the name "Smith" in them will be displayed. The filter can be turned on and off or changed as well. Filters are set up using a dialog box which is utilized in many parts of Superbase, the ones you have learnt to use it, the rest comes more easily. The dialog shows all the fields in the current database file, as well as comparison operators (like equals, less than, greater than), brackets (for prioritising conditions), "AND", "OR" and "NOT" for multiple conditions and the use inclusive wildcard searches "LIKE". Mathematical operators (*, /, + and -) are available to make filters on number fields, e.g. "total" (divisor) / 100) > 50".

Next, setting up a new file is covered. This details the possible field attributes (text lengths, numeric formats, date formats, external file) and describes how to add validation or calculation and required status. Superbase allows just about every numeric and date format you could think of (I say just about because someone is bound to find one that's missing). Currency symbols, decimal places, forced +/- signs are all covered. Calculation is used to make uneditable fields that take their data from others (VAT values, discount levels etc.). Validation is done in a similar manner to the filter mechanism, and a formula like "value > 100" would stop a file less than 100. Required status means that a field must have a value before it can be saved.

Other subjects covered in the new file creation are the three-level passwords, and creating indexes. The passwords allow read only, read and write but not delete, and full access. A password is not however mandatory.

A large section of the manual now covers all the other features in full detail, in the sequence they appear on the drop down menus. There is too much to cover in a review, but it includes: editing of records and saving them, the query functions (the main query facility), importing and exporting

ASCII files, printing, labels, paging, printer options (for initialization string and page length), obtaining disk directories and database status, reorganizing the database (after large amounts of deletion), and external files.

TWO SIGNIFICANT FEATURES

Two features are significant functions of Superbase - the Query function, and External Files.

It is through the query function that Superbase achieves the "Relational" aspect of operations. Essentially a query is a list which is used to extract selected information from the database. You could, for instance, set up a query to list the addresses of all your friends whose telephone numbers began with '91'. If you also had a database with the names of all those who sent you cards last Christmas, you could use the card list to reference your address file and print out labels to send replies this year (why didn't I think of that before!). This would be done by opening both files and setting up a relational query to print a record (perhaps in label format) every time the card name matches the name in the address file. This simple example demonstrates the idea behind relational databases, but Superbase allows much more power than I can explain simply. As part of the query, you may have a report done automatically which allows you to choose to have running totals and / or record counts included in the output. Thus you could have a count done of the number of your friends who sent you a postcard, or a total amount invoiced each month, with an annual total as well. You can specify an order for the output should you wish. This label function may slow down the report considerably, as Superbase has to find each output record first, and then sort. The output can be sent to an ASCII text file, a printer, or a new Superbase file for later use.

A less powerful query filter can be used to do automatic processing, like going through and summing amounts, setting order flags and so on. Similarly there is a facility to automatically remove records (perhaps out of date information). The labellet allows you to specify the layout in a not too difficult way, and is flexible enough to support all the label sizes and layouts you are likely to meet.

HANDLING EXTERNAL FILES

External files are Superbase's most interesting feature. A record can have any number of 'external file' fields. These fields hold actual references of files, and they can relate to either ASCII format text files, or graphics files. The Superbase manual claims that it is able to show (in Word files too, but I found this not to be true. Where the "Picture" icon (a camera) is clicked, the first external file is opened and displayed in a secondary window. ASCII text can be scrolled through, and the window re-sized. If the file is a graphics file-image file, then it will be displayed either in the window (and the colours changed or masked) or in the case of low resolution screens, the screen mode is changed and the whole screen used to display the picture properly. On the monochrome screen, an interpretation is shown of each mode (colour shading, and while obviously not brilliant, does give a fair (if stretched) representation of the picture. Superbase will recognise and display Degas (.PI1, .PI2 and .PI3), Neochrome (MAG) and GEM (.IMG) files on the Atari. Where there is more than one external field, a menu lists allows them to be stepped through. The use of this facility are limited only by the imagination, but includes indexing word-processed documents and digitized pictures. Unfortunately there is no way of

printing the graphics, and no way of editing the text, perhaps I must smile from the inch they're provided.

IN USE

After going through the whole manual, I was able to use Superbase very easily. Without the manual, opening the queries is very difficult as they are quite complex. Experimentation will be needed for the best use, and the hints in the manual will help. Setting up a new database is quite straightforward, and if you don't quite get it right first time (like not leaving enough space for your old friend Mitchell Smythson-Scott-Ande Bag.), changing the format is simplicity itself.

Adding records is not quite so easy, as you cannot enter an automatic input mode where you enter records after record. What you have to do is press Alt-N for a new record, and then when you have finished, press Alt-S to save, wait for Superbase to save it (it does not remember keys pressed while saving), and then press ALT-N again and so on. (There are menu alternatives to the ALT keys.) Another data entry problem I found was in the Form View mode where the cursor keys would not move me from field to field as all properly, and I really got stuck in a field, meaning I had to move around with the mouse. The Return key was alright however, but only took me down, not up. If you have been entering a large number of records, any method to reduce the burden is welcome. Such is the reason I assume) for providing the 'Duplicate Record' menu option. Unfortunately this does not necessarily duplicate the record you last entered (and probably wanted a copy of), but most often the last one selected on the Command Panel, which when I was entering my database on 'C' library functions, was useless.

Another problem which I encountered was the fact that when you change sub-directories, Superbase closes all of the open databases. This means that you cannot have your addresses on one disk and cards list on another to do your searches, which is a pity.

The one aspect of functionality that I miss, but don't know how much I really need, is multiple active indexes. The Superbase system has one active index, and you can maintain extra indexes on any or all of the other fields. These can be switched in at any time, but this means that you can really get a file like 'Bloggs A., Bloggs Z., Bloggs T.' where it would have been better to have had the secondary field (in this case the initials) sorted within the main index. Only the main 'all-levelling' query allows such sorting.

CONCLUSION

Overall I have found Superbase very easy to use, it has some good dialog for selection (and especially good little information 'alerts' which disappear automatically). Like all software, it is not perfect, but unlike most it comes alone, despite any few problems. Superbase must be a serious contender in the database market, and if you can make use of the external file feature, this could clinch it. Precision Software are promoting a 'Professional' version later in the year (which will include programmability, a word processor, and an application builder), with a cheaper upgrade path for 'Personal' owners, so it is a system which could grow if you need it to.

Superbase Personal costs £99.95 and is published by: Precision Software Limited, 6 Park Terrace, Winchester Park, Sarney, KT4 7JZ. 01-339-3087

Using GEM from the C language

Second in our programming series

by Steve Pedler

In the first article in this series, we looked at some of the graphics capabilities of GEM, culminating in a simple demonstration. In this article, we will examine some more GEM functions and add a couple of extras to the first version of the program.

HITCHES, GLITCHES AND PROBLEMS.

There were a few irritating incidents with the first article which I will deal with first. I compiled the first program with Metacomco's Lattice C compiler version 3.03, with which it compiled and linked without problems. I subsequently upgraded to version 3.04 of the compiler, and on recompiling the program two warnings were output. These may have occurred on other systems, so I include lines for them here. The first warning

came from the compiler, in that a function return value mismatch warning occurred three times. This happens because Lattice 3.04 compiles very closely with the proposed ANSI standard for C, in which functions not returning a value to the calling function should be declared as `void`. These functions - `main()`, `init_gem()` and `finish_gem()` - return no value, and the way to fix this warning is either to declare these functions as `void`, or - at least with Lattice C - to use a compiler option to disable this warning message in this particular context. The problem doesn't affect the running of this particular program, it is just a warning of a syntax error that might cause problems elsewhere.

The second warning was returned by the linker, to the effect that the GEM VDI global arrays `control()`, `init()`,

`print()`, `mouse()` and `print()` had been defined more than once. Again, this does not prevent the program from operating, since the linker uses the first values it finds and ignores any others. The reason is presumably that the compiler automatically defines these arrays so the programmer doesn't have to do it. This may be specific to Lattice, but if you are like me and don't like seeing warnings from the compiler or linker here's how to fix the problem:

- i) delete the definitions of the five GEM VDI arrays
- ii) replace them with the following arrays: `#GOLD work_init []`, `work_init []`, `work_init []`
- iii) replace all references to `init()` with `work_init []`, and all references to `mouse()` with `work_mouse []`

Other minor problems were that the `SETCOLOR` function (`Setpalette()`) was misappellated as `Setpalette()` (not in the listing, last in the text of the article) and that the format of the string for short lines was shown incorrectly in the text. The brackets surrounding the `init`, `text` and `button` should be square not round brackets, and the character used to separate the lines of `text` and the `button` in the vertical line character, not a colon. This character is obtained by pressing `Shift` and the key adjacent to the left `Shift` key on the `ST` keyboard. It does print out as two short vertical lines one above the other on a dot matrix printer, so the typewriter's confusion is understandable! Again, these errors did not affect the actual listing.

THE PROGRAM LISTINGS

Listing 1 accompanying this article contains some minor changes and additions which should be made to the previous version (0.1) of the program.

Table 1. The attribute functions.

| Attribute | Functions | Parameter(s) |
|---------------|--|---|
| Line | <code>vd_line_type</code> <code>vd_line_width</code> <code>vd_line_color</code> <code>vd_line_style</code> | <code>line_style</code> <code>line_thickness</code> <code>line_color</code> <code>line_end_style</code> |
| Fill | <code>vd_fill_interior</code> <code>vd_fill_style</code> <code>vd_fill_color</code> <code>vd_fill_parameter</code> | <code>fill_style</code> <code>pattern_fill_type</code> <code>fill_color</code> <code>fill_border_visibility</code> |
| Polymerker | <code>vd_mkr_type</code> <code>vd_mkr_height</code> <code>vd_mkr_color</code> | <code>marker_type</code> <code>marker_height</code> <code>marker_color</code> |
| Text | <code>vd_text_height</code> <code>vd_text_rotation</code> <code>vd_text_color</code> <code>vd_text_effects</code> <code>vd_text_alignment</code> | <code>character_height</code> <code>text_baseline_rotation</code> <code>text_color</code> <code>text_special_effects</code> <code>text_alignment</code> |
| Miscellaneous | <code>vd_color</code> <code>vd_wmode</code> | <code>change_a_color</code> <code>change_writing_mode</code> |

other than the obvious one that `v_circ()` draws complete circles whereas `v_arc()` can draw portions of a circle (i.e. arcs), is that `v_circ()` uses fill attributes but `v_arc()` uses line attributes. If you want circles filled with a colour or pattern you can use `v_circ()` but if you want circles drawn with thick lines or different line types (such as dotted lines) use `v_arc()`. You might care to modify this program to use `v_arc()` rather than `v_circ()`. To draw a complete circle using `v_arc()` set the start angle to 0 and the stop angle to 360 (angles are given in tenths of degrees). You can change the line colour with `vt_color()`, which is called in identical fashion to `vt_color()`, and the line width with `vt_width()` which has this format:

`vt_width()` device handle, line width

where width is the line thickness in pixels. The width should be an odd number (default thickness is 1) and if an even number is given the nearest lower odd number is used. The line type can be changed with `vt_type()` as follows:

`vt_type()` device handle, line type

where line type can have one of the following values:

| value | line type result |
|-------|-------------------------|
| 1 | solid line |
| 2 | long dashed line |
| 3 | dotted line |
| 4 | dash-dot line |
| 5 | dashed line |
| 6 | dash-dot-dot line |
| 7 | user defined line style |

Experiment with these values and see what effects are produced.

To return to the demo, the program now enters a "while" loop in which another circle is drawn at the head of the chain while the last one is erased. This is done by setting the circle colour to zero (background) and overwriting the last circle. At the end of each pass through the loop, the state of the mouse buttons is checked and providing a button has not been pressed the loop continues. The function used to detect a button press is `vt_mouse()` (just to make a change from `get_mouse()` which we used last time). Call this function as follows:

`vt_mouse()` device handle, mouse button, mouse x-coordinate, mouse y-coordinate

where the mouse button can have the same values as we found with `get_mouse()`. We are not interested in the position of the mouse here, so the coordinates are just placed in the dummy variable. Note that pointers to the three variables, not the variable names themselves, are passed to the function. (This must also be done for `get_mouse()`.) Finally, before returning the mouse button state to the main() function, the mouse button is checked again until the user releases it. This ensures that the button is not still being pressed on exit from the function, which might have awkward effects.

DEMONSTRATION 3

This simple demo shows how text can be printed to the screen using GEM. Rather than go through the demo in detail - it's very simple - I will discuss the functions used in the program and leave you to decide how the program works.

GEM has two functions for outputting text to a graphics screen. The simpler is `v_print()`, which is used as follows:

`v_print()` device handle, text x-coordinate, text y-coordinate, text string

How the x and y coordinates are used is affected by one of the text attribute functions, `vt_alignment()`, which we will look at in a moment. The text string can either be a literal string enclosed in double quotes (the compiler automatically adds a terminating null-byte as required by C conventions) or a pointer to the string. Both methods are used here, the second method being used to print the Atari logo on the screen. The logo comes in two halves with the character values 0E and 0F (hex) respectively, and these values are placed into the array `str[]` at the beginning of the program.

The function `vt_alignment()` allows the way GEM uses the supplied coordinates. It is called as follows:

`vt_alignment()` device handle, horizontal alignment, vertical alignment, selected horizontal alignment, selected vertical alignment

where the last two parameters are supplied as the addresses of (i.e. pointers to) two variables into which GEM will place the selected alignments. In this example, the dummy variable is used for convenience. The horizontal alignment can have one of three values:

| value | text alignment |
|-------|---|
| 0 | left justified - x coordinate is that of the leftmost end of the string |
| 1 | centred - x coordinate is that of the centre of the string |
| 2 | right justified - x coordinate is that of the rightmost end of the string |

By default the text is set to left justified. The vertical alignment can have the following values:

| value | text alignment |
|-------|---|
| 0 | y coordinate is that of the text baseline |
| 1 | half line |
| 2 | bottom line |
| 3 | bottom line |
| 4 | bottom line |
| 5 | topline |

I am unsure of the effect of values other than zero, which is the default value. Readers may care to try them out and see what results are produced.

The second method of text printing is to use `vt_justified()`. This is used as follows:

`vt_justified()` device handle, x-coordinate, y-coordinate, text string, string length, word space flag, character space flag

The first four parameters are the same as for `v_print()`. The string length is the distance on screen, expressed in pixels, into which the text string is to fit. You can therefore be compressed or stretched by giving a length different to that of the string itself. To do this, GEM will either have to alter spaces between characters or between words, or both. You can specify which of these methods is used by setting the two flags in the function. If the flag is set to zero, space alteration is disabled, if set to one, it is enabled.

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The other attribute functions used here are straightforward. Text colour is selected with `vt_color()`, and character height (in pixels) with `vt_height()`. There are minimum and maximum limits on character size, and these are returned in the four parameters following the requested height. We aren't really interested in these here, so they are placed in a dummy variable. Text special effects can be selected using `vt_effects()` which is called as follows:

`vt_effects()` device handle, effects)

where different values of the variable effects have these results:

value effect

- 0 normal text
- 1 bold text
- 2 light text
- 4 italic text
- 8 underlined text
- 16 outlined text
- 32 shadowed text

These values can be combined, so that (for example) a value of 39 would produce underlined italic outlined text.

Most of these effects are shown in the demo, although the effect of shadowed text is not very apparent.

The final effect shown is that of changing the text baseline (refer to using `vt_rotation()`). This is called as follows:

`vt_rotation()` device handle, baseline rotation)

where the baseline rotation is expressed in terms of degrees. Normally, this is set to zero, producing horizontal text, but it can supposedly produce text printed at an angle. Unfortunately, I found that in low resolution at least only angles of 0, 90, 180, or 270 degrees were accepted, and any other value resulted in the nearest of these angles being selected. This may simply be a limitation of low resolution and it may be that other angles can be used in higher resolutions.

Some of the text in the screen is shown enclosed in a box with rounded corners. The box is drawn with the following function:

`vt_box()` device handle, points array)

where the array contains the `x` and `y` coordinates of the top left corner of the

box in its first two elements, and the coordinates of the diagonally opposite corner in the second two elements. This function uses line attributes.

Finally, just for a change the demo waits for a keypress before exiting rather than a mouse button-click. For this purpose we could have used a standard C library function, but instead I have used the GEM function `over_keybed()`. This waits for the user to press a key and returns a 16-bit integer (not a char) containing the value of the key pressed. The value returned is therefore not an ASCII value but a GEM VDI keycode (note that these can be found in most GEM reference books). The great advantage of using this function rather than one from the standard library is that it will detect the use of the function keys as well as standard ASCII keycodes.

COMING NEXT

I think that about wraps it up this time. In the next part of this series we will look at some of the remaining GEM graphics functions, and after that it will be time to examine those features which really distinguish GEM such as windows, menus, dialogs and so on.

BARBARIAN

Pygnosis

Price: £24.95

Reviewed by
John Davidson *for*

"Can you become Hago the famous dragon-slaying, monster-murdering Barbarian?" That's what Pygnosis would like to know.

I have not been a great fan of Pygnosis games but their latest release, *Barbarian*, is truly magnificent. Pygnosis have really pulled out all the stops to bring us their best game yet.

The whole package is one of extreme quality. The packaging, as always, is very good. Inside the box you will find two disks, an instruction sheet, a novella, and a fantastic poster created especially for the game by Roger Dean. The story leading up to the game is quite long and complicated, but I shall attempt to describe the basic plot of the game: You are Hago, son of the famous hunter and dragon slayer, Thoron. Many years ago, Thoron was killed by the dragon Vulturax, who is guardian to the evil Necron. The surprising thing is that Necron is your father's brother, who was killed by your father many years ago in an attempt to free a city from Necron's evil reign. Necron's soul was not destroyed when Thoron killed him, and it is this which lives on, wreaking havoc upon villages and towns by sending hell dogs and eye men to steal children and animals. Your task is to enter the underground world of Dragan, where Necron has constructed his lair, and to destroy it thus avenging the death of your beloved father.

In order to complete the game you must destroy the crystal which is the source of the evil power of Necron. Once the crystal has been destroyed, the volcano in which Dragan is situated will begin to erupt, making it impossible for you to reach the surface again before it blows. The time it takes you to destroy Necron's crystal, is not only your score for the game, but also the time which you have to get back to safety at the end of the game.

Hago can be controlled by any combination of mouse / keyboard / joystick, and as with all Pygnosis games so far (with the exception of *Armad*) the mouse is probably the best form of control. You manipulate Hago mostly with a group of icons at the bottom of the screen, which enable you



to do such things as run, jump, attack, defend, etc., etc.

That's what the game's about and here you play it but what are the graphics and sounds like? As we now come to expect from Pygnosis the graphics are absolutely superb. While loading the game, you are treated to three really good pictures. The first is the new familiar Pygnosis logo drawn in many shades of grey and blue, which has been on all of Pygnosis' recent games. After a short while the "Barbarian" logo appears with a fantastic picture of your character wielding a great broadsword. Pygnosis games usually have good title screens and this is definitely their best yet.

You are next prompted to insert the second disk, and a few seconds later you are treated to probably the best picture I have seen on a computer game. The Hago: Dean poster found in the packaging has been reproduced faithfully on the screen, complete with the red dragon (presumably Vulturax, Necron's guardian) standing over the waterfall and the scene lit by the background. The loading screens aren't the only impressive pieces of artwork within the game. The backgrounds, and especially the sprites, are also excellent. Your character, Hago, for example is drawn in many shades of brown, and he has long flowing blonde hair. Around his waist he wears large silver wristbands, depicted in several shades of grey. The attacking hordes are equally well drawn. The number of three evil creatures in the game is quite overwhelming. I have so-far only completed about 25% of the game and I have encountered at least ten or eleven different creatures, each having its own way of attacking you. Some attack with swords or axes, hell hounds attack with their teeth, others just jump on you (or

through you!). Once you have got the hang of the game some of the earlier creatures are easily disposed of with your mighty sword.

The sound in *Barbarian* is as impressive as the graphics. As we have now come to expect from a lot of the more recent games, the sound effects are digitized, thus giving a very realistic feel to the game. Most of Hago's moves are accompanied by some kind of cry or grunt. Ones of note are when he attacks a creature, grunting and grunting with each blow, and then when he runs away. He drops everything he is carrying, cries for help and then runs off in the opposite direction. All of the creatures have their own noises as well, for example the Hell Dogs bark, the mountain muscular guards go around making sounds like they are saying "chik", which gives the impression that they are a bit on the thick side (which indeed they are!). One of my favourite sounds in the game is when there is a very large creature of some kind and totally in answer, and each step he takes towards you is accompanied by a massive "clank".

So what's my conclusion about *Barbarian* then? Well, I think that it is most definitely Pygnosis' best game yet, and it deserves to sell well. The graphics are superb and although the animation is a little lumpy in places, you don't really notice it. The sound is very good and adds a great deal of atmosphere to the game.

The packaging is great, as usual, and the novella that comes with the game is very well written, containing a few cryptic clues to help you in completing the game. Overall, this is an excellent game which most experienced gamers will enjoy because it is both entertaining and humorous.

GAUNTLET

U.S. Gold
Price \$24.95

Reviewed by
John Davison jnr

The much awaited ST version of this excellent game has finally arrived. Many months of missing are finally over, so was it worth the wait? The eight bit version was reviewed in issue twenty eight and was given a not very favourable review. Is the ST version any better, then? Well, yes and no.

Graphically and sound wise the game is superb, but U.S. Gold have yet again failed to iron out the bugs. Purchasers of the game on the various eight bit formats previously complained to U.S. Gold about the bugs, through letters to the company itself, and through letters to various other computer publications such as 'Computer and Video Games'. This I would have thought would be an incentive to actually get it right this time. But I fear that yet again many, as very obvious, bugs have managed to get through what should have been quite rigorous play testing. Bugs such as suddenly having two of yourself instead

of just one! Or each as when one character goes through an exit to the following level, and the other exits to, say, level eight and the game goes completely nuts. It can't then be played until one of the characters' health points run out and be therefore done!

When the game loads (it comes on two disks) you are greeted by the now famous Gauntlet title page, and with some quite impressive music, which has been sampled from the actual arcade machine. The sound is the one thing in this game which is consistently excellent, all of the sound work being done by 3-bit Microsystems (presumably with their Replay cartridge). After the music etc. was over I attempted to start the game by selecting the Wizard, as this is my favourite character both in the arcades and on the eight bit version of the game. I pressed "insert" to bring the Wizard into play, and I waited.....

The disk drive whirred and chugged a little before finally the computer splashed four 'bombs' across the middle of the screen. Oh no!! I quickly reloaded the game and tried selecting the Wizard again, and yet again the game crashed. After much experimentation I discovered that with joystick 1 it seems you could only be a

Warrior or an Elf if you are playing a one player game! Yet another BUGGY!

The sprites in Gauntlet are all very good, the four major characters are extremely well drawn and the various monsters are significantly better than in the eight bit version. The backgrounds contain much detail and in many cases look very close to the arcade version. My only real complaint about the graphics is the scrolling, which is terrible. It is probably the worst scrolling I have yet seen on an ST game. It is so bad that after a while it makes you almost 'bee-eyed'!

But ... even though the scrolling is bad, and the game as a whole is bug ridden, it is still, underneath, an infinitely playable game! The ST version has not lost any of the playability of the arcade machine, other than the four player aspect. With two players you will find yourselves shouting at each other and helping each other out and generally having a good time.

I'm not sure if it was worth the wait, as I was personally expecting something a little better than this. The longer you wait the more you expect and perhaps if it had been released earlier it would have had much more impact.

AIRBALL

Microcatal
Price \$24.95

Reviewed by
John Davison jnr

It's hard to keep up with Microcatal nowadays. I see when you think they'll stop for a while because they've released something good, (i.e. Goldrunner) they go and release yet another superb game. Their latest offering is Airball, a three dimensional arcade adventure of exceptional quality.

The plot of the game is this: You have been transformed into a rubber 'airball' by an evil wizard/god/demon knows why, but you haven't. Your task is to save about the mansion in which you have been imprisoned and find the spellbook so that you can return to being a human. Amongst the things that are hindering your path through the mansion are spikes, killer pads, and trap doors. Also, to add to your many worries, your ball has a slow puncture which means that every now and then



you have to find a pump with which to re-inflate yourself.

The graphics in the game are superb, each room is depicted in many shades of grey with cracked tiles in the floor and very solid looking pillars and sculptures. The graphics have all been done by the now famous Pete Lyon, who, as you know, did the graphics for Karate Kid II and Chikensemen. The music and sound within the game are also very good. There are four tunes in all - one on the title screen, one during the game, a depressing sorrowful tune when you die, and a party like tune on the high score table.

More

The game can be controlled by either mouse, joystick or keyboard, and I would say that a joystick is most definitely the best control method. The mouse is probably the worst as it is very difficult to master, but then I would imagine that it depends on what you are used to.

I can thoroughly recommend this game as it is both very playable and impressive to look at, which is really quite a novelty compared to many recent ST games. Most companies now appear to be putting their all into the graphics and sound, but making a game which is very boring to play. Airball on the other hand is different, being a worthy addition to anyone's collection. In fact many would say it's an essential buy and, like some of its predecessors from Microcatal, it is most likely to become a classic.

MOUSE TRAP

MicroValue/Tynesoft
Price £14.95

Reviewed by
John Davison *jr*

After my comments about Tynesoft in the review of *Timeblast*, you might think that I might pan whatever they produce but this is not true, as with *Mouse Trap* they have produced a game which I consider to be very good.

The game is basically a ladder and platform game, not exactly the most original idea but one which MicroValue/Tynesoft really have turned into a very pleasing game indeed. You control Melvin the Mouse, and have to win back the affections of your girlfriend, Mary, who has just left you for another mouse (ah). She feels that you are no more than a cheese scavenger! So what do you have to do to win back your stabilised sweetheart? Well, you do what you do best, scavenging - to find food and fortune.

That's the plot, sweet isn't it? The game, as I said earlier, is just a ladder and platform game but the graphics are especially good. They are very crisp, clear and colourful making the game very pleasing to the eye. The

sprites which you control, Melvin, is very good, and there is only one word to describe it really and that's - 'cute'. Yes, a cute little mousey character, who dashes about the screen with his little tail wiggling about and his nose bobbing up and down!

The other sprites on the screen are equally pleasing, especially the big deprey guy who appears every now and then, with the massive nose and the big blinking eyes. The things which attack you are some of the whizzers I have ever seen, they range from fried eggs, to glass rolls of toilet paper! All of them are very nicely drawn in a cartoon like style.

The sound in the game isn't bad. The music is very cheery and happy although not amazing, but average, but the sound effects are, agreeably, just about top extreme. Still you don't really notice that they are missing.

This is the first game where I might possibly believe the claims on the packaging! The message on the back of *Mouse Trap* is - "MOUSE TRAP the best platform style game written for the ST with superbly detailed graphics and compulsive game play. Oh in style, brilliant in design, a MUST for every ST owner." - which although a little "big headed" is just about true. This game is great value, so if you like platform games, get it! I hope that we may see more of Melvin in future releases from MicroValue.

PROHIBITION

Infogrames
Price: £19.95

Reviewed by
John Davison *jr*

Prohibition is not the first game to be released from the French company Infogrames, but it is the first that I have encountered, and I must be honest with you, it isn't exactly the greatest game ever written.

Infogrames have taken the theme from the *Prohibition* era in the 1930's in America and turned it into what is potentially a good game but which falls short in several areas. As with many games nowadays it is another shoot 'em up. You control the sight of a machine gun, and must stroll around the various buildings blowing away the gangsters hiding in windows, doorways, doorways etc. The gunnery is controlled by either the mouse, which feels fairly

natural after a while, or the keyboard, which doesn't. The background scrolls smoothly by in any of four directions, and is quite fast. The background itself is in medium resolution, so only four colours are available. The colours chosen are black, red, white and grey which gives a certain 'old' moviey cinema theories eye feel to the game and adds to the atmosphere enormously. However, whereas other reviewers have said the graphics are good, I personally feel that they are rather too plain. I feel that the authors could have done a much better job.

The sound is digitised, as in many cases on the ST. The screams of the hostages and the 'ratner' of the machine gun are all excellent. When you are hit, the sound of your screen and gunning really is quite horrid!

This isn't a bad game, but then again it isn't a good game either. Some people will however find it entertaining because it tempts you back the "just one more try".

NINJA MISSION

Mastertronic
Price: £9.95

Reviewed by
John Davison *jr*

This is the first in Mastertronic's budget range of games for the ST. Basically 'Ninja Mission' is the old Mastertronic game 'Ninja' ported across from the 8-bit computers, however the graphics have been improved a fair bit.

Upon loading the game, you are greeted with quite an impressive picture, along with a fairly good tune. The tune was written by David Whitaker, who I believe is quite well known for his musical creations on the Commodore 64. The game has you playing the part of a Ninja who has to 'Enter the Temple of Death and regain the glowing idols stolen from the Princess by the Hordes of Darkness'. What this really means is that 'Ninja Mission' is an arcade adventure where you go around picking things up, and instead of shooting little robots or whatever, you have to beat them up, Ninja style.

The mission begins at the Title, and here you will usually find a Ninja star or two lying on the ground. You pick this up and then head off to either the left or right hand side of the screen. When you leave the screen, everything goes black and the name of the next screen comes up in suitably chunky Chinese style writing. This is all very pretty, but it does slow down the game considerably. Other than that the game is quite playable and enjoyable if you like less 'em up games. The sprites are very good, being fairly large and reasonably detailed (not as much as the International Karate sprites though) and they move quite smoothly. The joystick reacts quite well unlike on some karate games, and there is a reasonable number of moves, some of which I have not come across before in any other Karate game, involving such things as a Samurai sword and the mine star.

Overall this isn't a bad game but it is not the game that will 'blow the block bins off all the others' as the packaging claims. The price is good, although I still don't count nearly ten quid to be a budget release.

SHUTTLE II Microdeal \$24.95

Reviewed by
John S. Davidson

Long ago, when 8-bit Atari's reign supreme, Microdeal brought out a 16K cassette based simulation game called Space Shuttle. It looks like they've now dusted off the concept and produced a completely new version for the ST. The basic idea behind it is the same as before - to complete a Space Shuttle mission from launch into orbit, locate and retrieve a faulty communications satellite, and return to your landing site on Earth. In an attempt to add a competitive element, Microdeal have added point-scoring, high scores, and other features to the basic simulation, making it more of a game than a serious simulation.

As you'd expect, this implementation is light years ahead of the old version. It's apparent right from the colorful title sequence showing a 3-D rotating cube with different graphics on each face. Improvements noted through to the packaging, too - the disk and instruction booklet are enclosed in a glossy, high quality cardboard box. But then at about three times the price of the old version I'd expect a few improvements.

Initially you play the part of the Mission Controller, your aim being to make the right decisions about launch and landing then scoring bonus points. These decisions include choosing launch site, preparation time, landing site, and gambling against increased weather conditions which could cause launch delays (and cost you bonus points).

Overall, I found this version of the game rather painless in many ways. This was! The authors seem to have made it almost impossible to score any bonus points here, and no amount of skill or strategy on your part seems to change this. Points are lost when electric storms cross the launch site, and this seems to happen virtually every time you play. Very demotivating!

At this stage you take the pilot's seat. Immediately before launch, the headfield slides back giving you a view corresponding to the chosen launch site. (How come, if the Shuttle's sitting vertically on the launchpad?) As the

Shuttle lifts off, the view swells down giving occasional glimpses of clouds and airships (Airships? Yes, airships!) before the sky darkens and stars appear.

In the centre of your control panel are three mouse operated "illumination wiper" slider bars, controlling pitch angle, wing roll angle, and thrust power. You have to continually adjust these during the launch to stay on the ideal launch trajectory, which is shown graphically on a display alongside the sliders. As the launch progresses your actual trajectory is plotted along with this, so you can see how well (or badly!) you are doing. Points are accumulated for staying on track.

The control panel includes digital displays showing current altitude, velocity and time into mission. The launch trajectory is marked with ten significant "events", which should each

'too complex'

occur at a given time, altitude and velocity. Hitting them at the prescribed values is not easy, even at the easiest of the six difficulty levels. If you do manage it, you get more bonus points. Certain events have to be achieved at a specific roll angle or thrust setting, and several others require you to initiate an action via the keyboard, such as releasing the external fuel tank. Again, this seems unreasonably difficult to achieve - but perhaps I'm just getting old and my reactions aren't what they were!

However badly you handle the launch, you eventually find yourself in orbit. The screen now shows the Orbital Manoeuvring System control panel, and is consistent with the upward satellite. Three digital displays show how far ahead, behind, left/right, or above/below you the satellite is. By firing the appropriate manoeuvring engines using these sliders again you can change the Shuttle's orbit to match that of the satellite. Achieve this before all the OMS fuel has gone and you're rewarded by the satellite drifting into view and - you guessed it - bonus points!

The next screen shows a side view of the Shuttle, with the satellite and the Earth in the background. With a few left mouse clicks you open the Shuttle's cargo bay doors, get a crewman suited up for a space walk, and guide him outside propelled by his airbags tethered impact. By clicking on any of the joystick's eight direction controls you can steer your man to the

satellite. You have to attach him to the top of the satellite and then get him to run it back into the Shuttle's cargo bay. Yet again this isn't easy.

Every time you fire the joystick, not only does your man move in the direction chosen, but the satellite randomly changes ITS direction of movement. Also, your man can only move at set speed. Clicking twice on the same directional control doesn't make him travel faster, so he can't catch up with the satellite if it's moving away from him. Nor can you make him stop by firing the joystick in the opposite direction to his current motion. All very unrealistic, illogical, and frustrating.

I never did get the hang of getting back to Earth. You have to "divert" the Shuttle by flying it through an S-curve to slow it down. The idea is similar to the launch, where you have to keep as close as possible to a predefined path shown on your instruments. Deviation from this causes the Shuttle to heat up - divert for too long and the Shuttle gets incinerated.

Controlled via the three sliders again, this time controlling wing attitude, height, and air brakes. So far, I've managed to fly it round the first bend of the S-curve, but then the program drives ME round the bend! No matter what I do I always seem to end up as a fireball.

The final screen is rather odd. You still feel you're in the pilot's seat of the Shuttle, but through the windscreen you see a rear view of the Shuttle as it glides down towards its landing site. Using the same controls as for de-orbit you have to guide the shuttle down onto the runway, remembering to lower the landing wheels before you touch down, of course. The instrument panel now shows side and plan views of your approach, plotting your progress down onto the runway. Previously, there's no predefined path marked on these displays, so it's a bit hit and miss - usually miss, as every flight I've made has terminated abruptly 120 feet inside the runway itself!

In conclusion, I was disappointed by Shuttle II. It doesn't seem to know whether it's a game or a simulation. As a game, it seems too complex and too difficult to score points, even at the easiest level. As a simulation it has too many game elements and chance items. It could be much improved by better instructions, particularly with respect to descriptions of the slider controls and how you should use them in each phase of the flight.



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THE ELECTION PROGRAM Software Express £29.95

Reviewed by
Les Elingham

How many programs can you think of that can be described as truly original? Almost every program nowadays, whether game or business, is based on something someone else has already written but, as far as the ST goes at least, you really haven't seen anything like The Election Program.

Before you moan at about boring politics let's be honest. Even if you don't actively follow politics, the General Election results are fascinating, interesting and even exciting aren't they? Be honest, you either watched the box or read the papers, didn't you? If you have even the remotest interest in politics or statistics or just trivia then I guarantee that you will find The Election Program interesting or even exciting. I did it couldn't care less who gets into power!

The program is basically a huge database of the results of the most recent General Election (the version reviewed came out before the 1987 election and so refers to 1985) which is presented in any fashion you choose. You can look at the country as a whole or break it down into different areas. Facts and figures can be presented as plain text or graphically illustrated by continuity as a superbly colourful graphic manner that should be a lesson to anyone writing database software. With this approach, anything can be made to look interesting. You can select details of any constituency in the country which will, in addition to giving the appropriate results, show a map of the constituency in its area. You can play at swingometers by changing the percentage vote of each party to see who effect small or large swings might have and can watch the results in superb dynamic fashion 'as they come in'. An on-screen map shows seats being held by each party with 'markers' such as 'Labour takes Lewisham' or the like as seats change hands.

Options Poll results can be entered and saved to disk and then be averaged or manipulated in other ways. By-election results can be included as

they happen and projections made on the likely result if applied nationwide. 'Contingencies' can be found where there are small or large majorities or three way fights or low or high turnouts. In fact the list goes on and on. Almost every way that you can think of to manipulate the data is included.

I am not really interested in politics but I found this an intriguing, fascinating and interesting piece of software. It can be used just for fun or as professional tool. Anyone involved in statistics or education should certainly have a copy. If you are just interested in facts and figures you should have a copy and it's even worthwhile if you just want to see how scoring a database can be made to look.

Updates are provided after major elections so the product should have a long life. Even though it's too late for this year's Election you can still play 'what if' games and add the By-election results as they come in.

I bet you have seen the advert for this and thought 'boring! If I had seen an adverb concerning a program about politics I would have turned away too fast, having booted this up again for this review... I can honestly say that The Election Program holds its interest and is well worth a few hours of entertainment / education every so often. How many games that you have paid twice the price for will be as relevant in four or five years time as this program? The funny thing is, it is not a game at all, it is a serious statistical tool, but if Peter Snow can keep about like a small boy with a new toy why can't you?

PRO SPRITE DESIGNER Eldersoft £39.95

Reviewed by Elliot Stein

From Eldersoft comes a program which assumes that the programmer who's interested in creating sprites is also an inevitably talented artist with the mouse!

The lack of drawing tools needed to create the sprite's design is shocking for a program selling for £39.95, especially after programs such as the original Degas and Newsroom have been using the technology for over two

years. The drawing screen is a 112 x 22 grid representation of magnified pixels resembling boxes, which are similar in appearance to Degas' room option screen. To create a new sprite one must choose a colour, move the cursor onto one of the boxes in the grid and click. The box changes to that colour. It's good for minor touch-ups but to create a quality and precise sprite image it's grossly inadequate and fairly time-consuming. Once the sprite is created however, manipulating it is fairly straight-forward.

The sprites are moved by the principles of frame by frame animation. For example, if you wanted the sprite of a little girl jumping and waving her arms, you would first draw the image of the little girl on the screen as you'd want her to appear in the very beginning of the sprite. This still image would be called frame one. You would then click on the control box near the side of the screen to advance to frame two. Using the frame copy option will duplicate frame one's image onto frame two. Now you merely change frame two by slightly altering the position of the girl. The entire process is repeated over and over, frame by frame, until the illusion of motion is created when all the frames are played one after the other.

In order to achieve a fluid motion, Pro Sprite Designer also requires several frames per second to be drawn. Try to imagine the long tedious work in producing a sprite of several seconds or even a minute long! The space ship sample given with the disk is made up of 46 sprites but using this program, I can't imagine it taking less than several hours to produce. If you're willing to spend the time creating the sprites, you can play them forward or reverse, repetition them on the screen, change the order of the frames, alter the speed and the timing between frames, or even edit and delete specific frames.

The save and load options allow you to use another program on the disk to incorporate your sprites in ST Basic, Rex Basic, Assembler or C programs.

So far, there isn't an abundant choice of sprite creation programs on the market for the Atari ST and if you need a sprite kit, this will do the job creating quality sprites provided you are willing to use the primitive, time-consuming, tools of the program. Coming soon however is a graphics package from Rainbird Software and it might be best to wait before making the decision of which package to buy.

JACKFONT V1.1 Vogler Software, \$49.95

Reviewed by
Matthew Jones

Jackfont is a monochrome-only utility program designed to edit fonts used by any program which uses GEMOS, or GEMOS fonts (at the moment only a few like EasyDraw, Elogos Plus and Fleet Street Publisher allow multiple GEMOS fonts). As such, it is a GEM-based as until now there has been no good font editor available either on the Atari ST or the IBM PC.

Jackfont has three windows that it uses for font editing. The main one is a large grid display (from 1x1 to 128x2) typical of font editors and the second large one (the Select Box) contains a full 256 character display from which the character to edit is selected. There is also a small 'actual size' window in which size variations (bold, underlined etc.) of the character can be displayed. The process of editing a character is to select the character in the Select Box, and then use the mouse in the main editing grid to correct errors.

Bold, shift, mirror and flip can also be done and three fonts are supplied for experimentation. When the character is to your satisfaction, you select another to edit - the edited character is copied back automatically. When the whole font is finished, you can save it back to disk (choosing another filename if you desire).

Dialogs are available to allow setting of all the various variables associated with a GEM font, including the point size, the Top, Ascender, Descender, Bottom and Half values, the file format (font or Motorola), proportional, shading and more. A very useful dialog is an automatic re-sizing facility, which stretches the current font to make a complete range of sizes ready. Also available is a test screen where the current character is inserted in a sentence and displayed in several type styles. It is such a pity that this is not complemented by a complete display of all the font's characters on-screen at once, as this would be invaluable.

The manual starts with a most educating overview of fonts and is a credit to Vogler. Only a few bad points (no pun intended) - the manual describes the 'ID Number' as 'purpose

reference, is used internally by GEM. It is best to skip this item as GEM doesn't appear to care what its value is.' As a programmer who has used GEMOS (FastFont) I happen to know that this is how a programmer actually selects a particular font. In a general GEM or DTP program this is not apparent, but when you want only one font, (e.g. viewdata) you need to know the font ID to select it. Different sizes of an ID are selected with point sizes.

Jackfont has some advanced techniques of font selection, and one is acknowledged in the manual. Because the selector and editor are in separate windows, you must first click in the window before you can work in it. In the case of the edit window, if you start clicking too soon, the font click is mis-understood, and you must click on another point before it will start editing. The manual tries to excuse this, but it is really bad programming, and should be fixed. Also the Select Box window should not 'top' when clicked in, but should just work out where you clicked and set up the appropriate character for editing. Tapping the window continuously soon wears you out, and there is nothing else to be done in the Select Box anyway. A key to stop to the next / previous character would be useful here. Also needed is auto-update of the small 'actual size' screen.

If you have one of the programs mentioned at the beginning of the review, or are interested in GEMOS fonts, then this program has nothing to touch it on the market at the moment. I shall be using it often, though I look forward to a new version with the irritations removed.

SHORTCUT V1.0 Vogler Software, \$29.95

Reviewed by
Matthew Jones.

Shortcut is a desktop accessory designed to make life easier. It does this by looking at the keys that you type and if it spots a sequence that you have previously defined, it automatically backspaces over it and enters the full version. This is similar in operation to the Thunder! and JustSpell spelling checkers. The principle is that you define a list of shortcuts and their

replacements, and this will speed up your typing. For instance, you might start 'dir' as the key word, and 'directory' as the full version. Vogler recommends using a special character at the end (like #) to stop 'dir' being replaced in other words like 'dir'.

Shortcut can be used for any text operation, not just word-processing. The default selection provided with Shortcut is a large list of GEM library functions for programmers. Any GEM application that accepts text can benefit from Shortcut (even dialog entries are included).

Shortcut is not however without problems, but some are major and some are avoidable. The first is plain annoying. Some programs (First Word being one) cannot input text as fast as Shortcut can send it, and thus a delay must be set. The annoying part is that the speed is not saved in the keyword files, thus every time you start Shortcut you have first to change the speed to that required. Another problem is that Shortcut can then not quote other keys that you type while it is 'auto-typing'. This means that if you hit keys during the auto-type they appear in the middle of the word, thus causing garbage. To be able to continue typing straight after a keyword and still get the correct sequence would be much better. The most major problem is that you can enter a blank keyword, and as soon as you click on #END, the replacement starts pouring into your application continuously. Stopping it takes several minutes of frantic attempts to hit the CLEAR button of Shortcut to kill it. Another disconcerting problem is that it does not appear in the Desk menu at power on, but waits until the first application is run. I cannot think of any reason for this, and find it annoying as I thought Shortcut had not loaded the first time.

The 12 page manual is nothing to write home about, but does its job adequately. The program is quite intuitive to use, and so the manual will not be needed much anyway.

Overall, Shortcut does do its job well, and for someone who does a lot of repetitive or complicated typing (sequences up to 30 characters), Shortcut is well worth looking at, but if you have any other keyboard enhancers make sure it will work with them.



K-COMM 2

Kuma
\$49.95

Reviewed by
John S. Davison

K-COMM 2 is an updated version of an earlier Kuma product. It consists of two main GEM-based programs, K-COMM and K-VIEW, now supporting videodata type systems as well as ordinary bulletin boards and modem services. From its specifications it looked just the job to pursue the Minolta Technology W5400 intelligent modems I had been trying out.

It comes in the flimsy cardboard packaging common to the K series of Kuma products. Inside, there's a single sided master disk and a 76 page instruction booklet. The booklet is quite well presented, containing access sheets as well as text, but unfortunately I found it to be unhelpful, if not confusing, in places.

INSTALLATION PROCESS

Before you can use the program, you have to prepare a 'working disk' from the supplied master by going through an installation procedure. This has the advantage of preserving the master as a backup. The installation process is painted on a single drive system, involving over 80 disk swaps!

If you damage the working copy, you can only re-install the master onto your original working disk. And you must never reform that working disk, otherwise the re-installation process won't work. This is Kuma's version of copy protection. Once installed, K-COMM and K-VIEW may be loaded from the working disk.

Before using K-COMM you have to configure it to suit the service you want to use. This involves setting all the usual terminal parameters, such as baud rate, number of data bits, stop bits, parity, and so on. One unusual setting is 'bit/s' mode, where incoming ASCII characters with a value of less than 32 are displayed as control characters rather than being acted upon - useful for finding out what control characters a particular host is using. There's also a

'descriptions' entry, which allows you to give a title to the configuration, reminding you what the configuration is for the next time you look at it. It's also used as an index entry in your list of saved terminal configurations - much better than trying to remember file names.

As well as configuring the terminal program you also have to set up the modem type. The program has support for dumb (internal) modems, pulse dial modems, and various makes of intelligent modem, including Hayes computers. This gives you facilities for setting up the command strings to be sent to the modem at specific times, for instance auto-dialling and disconnection. Once the basic command strings are set up you can automate their use further by using some of the program's more advanced features, such as the auto-login facility.

AUTOMATED PROCEDURES

Auto-login is designed to automate the whole process of logging on to a remote system, including automatically configuring the modem, dialling the number, establishing the link, and supplying the login identification and password information. It's done by defining expected 'prompts' and their corresponding 'responses'. K-COMM watches the character strings coming in from the remote system and if it finds a match with one of the prompts you defined, it sends back the matching response. You don't need to do anything until the system is ready for productive use. This could be a great timesaver if you use lots of different remote systems requiring different terminal configurations and login procedures.

K-COMM has many other features, including file uploads and downloads (with S-MODEM if required). It can 'snapshot' any screen into a buffer which can then be viewed at any time - useful for capturing command menus for quick reference on systems you're unfamiliar with. It can also log everything to disk for later review or printing. The program has a facility for displaying disk files, so you can look at previously downloaded or log files without leaving the program. There's a single line editor for offline preparation of particularly complex lines of text, and facilities for

auto-answer of incoming calls and allowing the remote user to upload or download files from elsewhere.

THE PROOF OF THE PUDDING...

Sounds super, doesn't it? Unfortunately, it doesn't deliver what it promises. I didn't get on well with it at all. The instruction booklet turned out to be woefully inadequate in places and I tried to get round this by invoking K-COMM's online help facilities, but the help files turned out to be identical to the instruction book! The basic communications worked fine, but I had great trouble with the auto-login facility. A phone call to Kuma revealed there have been problems with getting K-COMM to work with the W5400 modem. They provided me with modem configuration details which partially solved the problem. As time it made the auto-dial part work, but I still couldn't persuade the program to actually perform the login automatically. I gave up after several frustrating sessions of experimentation and many wasted phone calls.

Attempts at downloading files from bulletin boards were also less than successful. The software appears to do all the right things, reporting number of blocks transferred, writing to disk, etc., but when I came to use the files I found them to be incomplete. Log files, too, suffered from missing data and when I tried to display them using the program's display facilities, it often locked up on me. On one occasion the program actually crashed.

In conclusion, I switched to K-VIEW to see if this was my fault, using the PRINTEL demonstration system as a test vehicle. This worked OK until I tried to save a frame to disk. Result - a TOS error! At this point I gave up in disgust.

K-COMM 2 managed to turn a great specification into a great disappointment, and can't be recommended in its present state. It proves once more that you shouldn't judge a program by its specifications or glossy advertising blurb. Perhaps with a bit more fiddling about, or with additional information from Kuma it could have been made to work properly. But surely, this shouldn't be necessary on a piece of software costing nearly £50!

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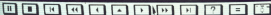
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PRO SOUND DESIGNER

Eldersoft
£57.44

Reviewed by *Elliot Stein*

Perhaps the best way to review software is under actual field testing conditions and I had just the project in mind! The project is the premiere of a new stage show in the Edinburgh Fringe Festival that I'll be directing entitled "The Ballad Of Halo Jones", based on the popular series from 2000 AD Comics. Unique to this show will be the extensive use of computerised special effects, all being produced by the mighty Atari ST.

We decided to use the ST to produce sound effects for the show as well as to record, edit, and manipulate several voice-over narrations. Since computers are capable of only digital sounds, a digitiser such as the hardware supplied with Pro Sound Designer or it's competitor 'Raplax' (by Microdeal) must be used to bring the analogue sounds of the 'real world' to the ST.

First thing to do is to plug in the hardware, however unlike the hardware portion of Raplax which only conveniently plugs into the ST's side cartridge port, Pro Sound Designer connects inconveniently through the ST's rear printer port. For many ST users, like myself, who use their printer a great deal the constant plugging and unplugging of the Pro Sound Designer's hardware and your printer cable will be a nuisance and irritating nuisance. In addition as Eldersoft do not yet have the plastic cases to their sound sampler the hardware's components are inescapably exposed and vulnerable to damage from static electricity as well as from other unforeseen circumstances. The hardware consists of the exposed circuit board, three chips, the printer port connector, two wires to connect to a nine volt battery (which the manufacturer needs to purchase) and two 3.5mm audio jacks. Connecting the hardware into the ST is as easy as plugging in your printer cable. Once connected to the ST, the lower audio jack plug connects to the source that the digitiser will be taking the sound from, such as a microphone or a stereo system. The top plug is for the hi-fi option which is £14.95 extra if you choose to purchase



Elliot Stein used the Pro Sound Digitiser in a theatrical production. Did it work?

the additional hi-fi upgrade kit. This will allow you to play your sound samples back through your stereo system instead of through the ST monitor's low fidelity speaker.

ACTION!

For the Halo Jones project, we decided to use the hi-fi option to send the sampled sounds to a four track tape recorder. The classic, aesthetically dated design of the external hardware is quickly forgiven as the Pro Sound Designer software is hooked-up. The main work screen is probably the best designed and most attractive screen of any serious application software for the ST or most other computers. Unlike Raplax's restrictive keyboard-only operated screen, the Pro Sound Designer features mostly mouse operated icons. In the centre of the screen is the Waveform Display, an oscilloscope-like representation of the sound entering the ST from the external source which is used to set the volume levels of the incoming sound. Across the bottom of the screen are several icons resembling the controls on an ordinary tape machine and which operate in a similar fashion.

After getting our sound levels from the Waveform Display, we began to record a brief monologue performed by one of our actors. We merely clicked on the record icon and, as the actor spoke, the Pro Sound Designer recorded every word of his thirty second monologue. As in recording with other types of

media, the speed used to record the sound is relational to the quality of the sound. On a normal tape machine, recording at a high speed would give far better quality and clarity than on a slow speed and the same holds true for sound sampling on the ST. Sampling at the high rate of 50 kHz gives far crisper and clearer sounds than at 14 kHz. There are consequences in using faster speeds though. The faster the speed used to sample, the more memory is consumed which is, I suppose, similar to a tape machine where higher speeds use up more recording tape.

Pro Sound Designer conveniently offers a choice of all speeds from 14kHz to 50 kHz. We chose the default speed of 8 kHz which enables roughly 30 seconds of memory storage on a 500 KB ST. Once recorded, selecting the Playback icon on the bottom of the screen enabled us to listen to the sample that we had just recorded. There is even a reverse play option which plays the sample backwards! To halt the sample before it's playback is finished, you may press the space bar and any other key will repeat the sample. Just as recording has a convenient mouse-operated speed selector, the playback has an identical control enabling a variable selection of playback speeds from 14kHz to 50 kHz. For the voice of the actor, who portrays the voice of a computer which is operated by intelligent mice, we decided to play back the sample at a faster speed to achieve a higher-pitched distorted voice.

CHANGE THE SOUND

Once a sample is recorded, the long rectangular window above the controls displays the wave of the sampled sound. Over the sampled sound display is a bar which displays the current positions in memory of the left and right memory pointers as well as the distance between both pointers. The two memory pointers are used in editing the sound sample and are controlled by the four pointer adjustment icons which allow the pointers to move either way across the displayed wave. To edit the sound display, the left pointer is moved to the beginning and the right pointer to the end of the segment. The wave between the pointers is the segment which will be edited. Pressing **Reverse Sample** reverses the sample between the two pointers and allows you to play it backwards. We used it to create a segment within a song to create a very distracting effect in the music.

'possible use in film — television — theatre'

Cut allows you to delete a section of sample wave for fine editing of the sound sample. **Transparent Copy** allows one to overlay the sound between the two pointers onto another section of the sample. This can be used for creating echoes, harmonies, or even building the illusion of thousands of people laughing from one solitary laugh. We used this function in *Halo Jones* to create the illusion of the voices of a crowd of thousands of people from a sound sample of two actors talking in a studio! **Block Copy** allows cut and paste operations between various sections of the sampled wave. It also allows for the chronological re-arranging of the sample's ingredients. For better accuracy in editing various sections of the sample, the **Magnify** and **DeMagnify** keys allow zooming-in or zooming-out on any specific portion of the entire sound wave. For example, one may choose to view the entire wave for a two minute sample or choose to view a detailed enlarged fraction of one second of a sample. Using the **Magnify** and **Cut** keys, we were able to remove a very brief space between two syllables of a word from an actor's speech which had

a distracting background noise on it. The final control on the bottom of the screen is the **Loop** option which allows the playback to be heard over and over.

AUTOMATIC OPERATION

The function key display is on the left hand side of the screen. Used to program the ST's function keys so that a selected part of a sample may be assigned to each key, it remembers the speed and location of the sample and plays it back at the touch of it's designated key. Using the many sound samples included on the *Pro Sound Designer* disk, it is possible to easily create an eight button drum machine. The function key's information can be saved to or loaded from a disk at any time. On the right hand side of the screen are the waveform controls. The **Automatic Play** icon enables an outside noise source to trigger playback. To use this option merely set the sound level that you want to trigger-off the **Automatic Play** then click on the **Automatic Play** and the **Play** icons. If you set the level for automatic play at seven, then as soon as a sound makes the **WaveLength Display** hit seven, the prepared sample will play back automatically. The instruction manual which comes with the program suggests using this option as a burglar alarm or as an answering machine.

There is also an **Automatic Record** option which operates similarly to the **Automatic Play**. It's extremely useful for recording something which may have a long pause at the beginning. In the *Halo Jones* project, we used **Automatic Record** so that the sampler would begin recording as soon as the actor begins to speak. This helped relax the actor, and he was able to begin when he was absolutely ready without having to be cued. A **Lock** option allows the **Automatic Play** and **Record** functions to reset themselves and continuously operate from sound control.

EDITING THE SOUND CHIP

Also on this section of the screen is the **Hi-Fi** option for those who choose to purchase the additional option, an option to change the colour of the waveform indicator, a **Pause Waveform** which freezes the screen's display until it is pressed again, and options to **Save** and **Load** sampled sounds. The most unusual function on this section of the screen is the **Edit Sound Chip**. As you

click on the **Edit Sound Chip** option, a new screen lowers across the sound sampler screen. Both the **Edit Sound Chip** and the **Sound Sampler** are entirely different programs. None of the sampled sounds can be used in this section of the program since sounds are produced by direct editing of the ST's internal AT-3-8910 sound chip. On all 16 registers of the three sound channels, the sound editor allows for control of pitch, frequency, constant envelope shape, tone, noise, sustain time, carrier frequency, as well as software register controls.

Though there have been many other programs which allow for the creation and manipulation of sound and noise in this way, many of them public domain programs, this is the best designed and most easy to use. A different set of function keys allow you to allocate to them different sounds and noises and a save/load choice allows for disk storage. For the *Halo Jones* project, we were able to use the **Edit Sound Chip Program** to create sound effects of laser guns, explosions, and background noise of heavy machinery.

To use the various sounds created in your own programs, there is a utility on the disk that allows you to save them into a format usable by **ST Basic**, **Pascal**, **C**, and other assembler programs. There is also a routine for using sound samples in your own programs.

CONCLUSION

Pro Sound Designer is extremely good value for money, with possible use in many different aspects of film, radio, television, or theatre production as well as computer programming, personal entertainment, and music. Even though sound samples created by *Pro Sound Designer* lack **MacII** compatibility, it is still an invaluable tool for music or live production. For those musicians who must have a **MacII** compatible sound sampler, it is rumored that **Interleaf** is planning to market an upgraded version of this program with **MacII** compatibility.

For the *Halo Jones* project it performed remarkably well, allowing the editing of a surprisingly versatile choice of sound samples and effects without consuming an unreasonable amount of valuable time in doing so.

Interleaf certainly deserves praise for marketing a product of such quality for the extremely reasonable price of £37.

Brown's Musical Xtravaganza

by Peter Brown

Hi there, music lovers. Brown here. You know what I think back longer than I care to remember I have always had a desire to bring together my two great loves - computers and music. I am a guitarist and a keyboardist by training but my trusty 1982 Atari 800 was so limited in what it could do in the musical field that, gradually, I lost interest in all computer activities but an American program called "Financial Wizard" which I used to keep my bank manager at bay.

Developments in digital synthesis for musical instruments revolutionized my love of the keyboard and the creation of the Musical Instruments Digital Interface (MIDI) soon whetted my appetite for a computer controlled keyboard. I could now blend my computer and musical abilities together into an all consuming passion. I could make a melody of my long suffering wife, perhaps of my three little kids and allocate a significant proportion of my funds. A merry to computer controlled musical synthesis.

So, earlier in this year, I set down to look at what was available. The one and only MIDI capable computer was the Atari ST and there it became my logical choice. After further deliberation my eventual decision was to acquire an Atari 520 STM +, an SMM25 mono monitor and an AST 800 twin 1MB drive. The larger RAM memory would allow the manipulation of bigger pieces of music, the monochrome display would be easier on the eyes and the 1MB drives would transfer the musical data all the faster.

I got my system in July after a very annoying three month wait. I had opted to do business with Bath Computer Shop where DN and Steve did their best to get my system together completely unaided and unattended by a hapless AS + T. Such was my frustration that I contacted AS + T to find out what was causing the delay. During the course of the conversation I found out that they were still advertising a drive combination which I was told was no longer made (Twin 1000C with PSU) but I stuck to my decision to wait for the FD 600 and paid dearly for it in terms of the quarter year wait. The Bath (now Trendbridge) staff were more than aware of my dissatisfaction and were more than kind by way of extra software sent with the system.

The next round of decisions lay in the choice of synth. I checked out the Roland Alpha Juno 1 and 2, the Yamaha DX 21 and 101, and the Casio CZ 1000 and 3000. Primarily on a value for the money basis I opted for the CZ 3000. The choice of timbre (voice) facilities is very similar to the Yamaha DXs but the CZ was £180 cheaper. I also felt that the CZ was easier programmed than the DX. A fellow musician put me off the Roland but it is down to personal preference in the final analysis. While looking out for synths I copied a tidy little Yamaha RX 21 drum machine going for the right price. Both the CZ 3000 and the RX 21 are equipped with MIDI and use digital sound sources. I could now connect the ST, the CZ and the RX all through MIDI. Only the software needed choosing.

The more I checked the software out the more I got confused. There is a plethora of music programs available for

the ST and quite a few are MIDI capable. I felt that the hardware form would be a guarantee that offered a comprehensive range of MIDI operations. A sequencer is like a multi-track tape recorder which arranges music stored on disk to be played as the composer wishes. The computer can play a piece in its entirety and save it for later modification or he can put the piece in track by track, doing bass, harmony and melody separately in sync. He can then play the individual tracks back as one song. Software for the CZ series appeared to be cheaper than the DX series, although a good many programs are not dependent on the synth. I had chosen my synth correctly! Hybrid Arts software was what I was looking for and so I went for EZ Trak which is a 20 track sequencer with enough facilities to use off the nearest rival. This company also produce full blown professional packages that are employed in top recording studios by some of the leading lights in the music industry. With a pedigree like that I revelled in my choice.

With the growing interest in hooking ST's up to synthesizers, we felt that many readers might want to dip their toes into the swirling musical waters so we asked a musician to let us know what he put together. It wasn't Midge Ure so read on, you might be able to afford it!

I realized when Steve came early. After a bit of ping pong, my great dream came to reality. I connected the computer to the synth using cables from the ST's MIDI out to the CZ's MIDI in and from the CZ's MIDI out to the ST's MIDI in. This arrangement would allow the transfer of MIDI data to and from the computer and synth. I could play a tune on the CZ and the ST would hold it in RAM and then play it back at whatever (or all) tempos! EZ Trak could also save any tune as compositions to disk enabling budding Busha and developing Drentis to retain their opposer the electronic posterity. It should be noted that an equivalent multi-track tape recorder could put you back thousands of pounds as sequencers like EZ Trak are fantastic value. I hope to say more of this program and it's ilk in future issues.

So what does the future hold. Well music lovers, I hope to purchase a program called GE Android which will allow me to program timbre data into the synth and save it to disk as part of a patch library. This is another Hybrid Arts product so I am expecting something of a very high standard. I may upgrade EZ Trak to a more pro affair called SyncTrak which causes the 40 track recording and lots, lots more. I will not indulge himself here for fear of spoiling forthcoming articles. From a hardware aspect, I will be investing in a small Tascam line mixer to allow simultaneous playing of the synth and the drums. I hope to mix the output of the synth with that of the RX 21 drums. This composite stereo signal will be fed to the AUX in of my domestic HiFi amp. At present, I still have not heard my little collection of digital delights in full. Someday, not too far distant, I will savour the perception of something created by Brown for Brown alone!

Catch you later.

Next issue — An in-depth look at Super Conducter, one of the cheapest music packages. Is it good enough or do you have to pay as much for the software as for the ST?

INSTANT CHARACTER SETS

The great majority of programs use custom character sets but what a character set is created in BASIC there is usually an annoying long wait while the data is transferred and read into the new character base accompanied on screen by those famous words: "Initialising ... Please Wait".

Most programmers use the long winded loop POKE I=0 TO 2023 to construct the new set. It works but sometimes seems to take forever. There are two ways to speed up the process. Disk drive owners can create a character set as a file on disk and have it load into the program quite fast using an EOCB block but the second method is something quite different.

Suppose the entire character set was stored in a string! The set would then be instantly available because of the Atari's unique fast string handling. Sounds good but there are problems. Unfortunately the Character Base register (address 754) requires the character set to begin on an even number of pages, that is the address of the string would have to be absolutely divisible by 256, otherwise the characters would be all wrong. The Atari stores strings in a 'dynamic' form so that the actual address of each string changes as your program is developed so this method cannot be used, can it? Supposing the address of the character string was changed to point to a reserved part of memory, (with an even number of pages)? It would then remain at that position because the program being written would not affect any previous memory. Why could POKE the address of the reserved memory into CHR\$0 and it would work! The character set would truly be instantly set up.

HOW TO DO IT

Below is or not you don't have to work all the details out for yourself. The accompanying program can be used without having to understand the workings of it. All you need to do is alter the data in CCB for your own custom set.

Each line from LINE 1000 contains 30 characters so it should be fairly easy to work out the positions of whatever character you want to alter. Remember that all the upper case characters are coded first then the Graphics and lower case letters.

The first character is CHR\$(32) - a space, so line 1000 stores the 30 characters from CHR\$(32) to CHR\$(61). Line 1010 stores from CHR\$(62) to CHR\$(91) and so-on.

One word of WARNING. It is vital that CCB is the first variable that the program sets, therefore make sure you type line 10 before anything else. The ATARI stores variable names in the order that you type them in so if you add this routine to an existing program it will not work, as CCB will be added to the end of the variable name table. To overcome this little problem, add the routine then list the entire program to tape or disk using LIST "C" or LIST "D:FILE". Then type



'Initialising ... please wait' Now you don't have to! Les Howarth has an instant solution

NEW and re-enter the file using ENTER "C" or ENTER "D:FILE". The same table should then be correct. This procedure must be followed if you use TTPO to check the listing.

HOW DOES IT WORK?

The computer's memory is first divided by 8 pages. This could be any number but you should never leave memory by less than five pages for a character set. The reason for this restriction is that when a 'clear screen' (CHR\$(128)) instruction is encountered, ATARI BASIC tends to wipe out some of the memory above the screen and above RAMTOP which would of course wipe out some of your characters if they started immediately above the screen memory.

The Address of Strings and other variables is stored in a table. Address 134 and 135 (VVTF) points to the start of the variables, each one being allocated 8 bytes in this table. For strings the third and fourth bytes in VVTF gives a reference address for the string. This is not the actual address but an OFFSET number of bytes from the beginning of STARP (locations 140 and 141). These are the two bytes which need to be stored in order to redirect the string to your reserved memory.

In line 2000, 'D' is the address of the first variable in STARP, and 'E' is the address of VVTF. In B+1 and B+1 are the two bytes to change. In line 2040 'Q' finds the necessary OFFSET number of bytes which will direct the string to 8 pages above the screen. 'Q' is then divided into high and low bytes and these are POKEd into VVTF in line 2060.

The final instruction, which is placed at the end of all the new character data, is to POKE the string address into CHR\$0 - POKE 754, MEMTOP

That's it. I hope that this technique will prove useful to you and speed up those annoying initialisation sequences in your programs. If you have any difficult understanding the program, a read through the COMPUTE! book REVISED MAPPING THE ATARI should help. It's a book that should be at every programmer's side.

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Contact



HELP WANTED

HOME RACINGS: Anyone interested in Flat and National Horse racing please contact. Would like partners with programs etc. 10000 and disk at present but considering purchase of an ST soon. Don Butler, 177, Lightly Avenue, Grimsby, South Humberside. Phone 749590

PEN PALS/CONTACT

IAN LEANDRO, CALIFORNIA: ST Pen Pals wanted. ST computer club in the United States seeks world-wide friends to correspond with, exchanging ideas and public domain software. Write: Assistant Editor, S.I.C., P.O. Box 1508, San Leandro, California 94577, U.S.A.

ST PEN PALS: Seeking pen pals all over the world concerning the ST computer. I would be very interested in contacting anyone in the Middle east if possible (not a slave driver). Please write to: Helioscope Collins, 14, Colin Crescent, Winton Centre, Sackville-Turn, ST1 6SE, England. (S.A.R. appreciated card response center to guaranteed).

PEN PALS WANTED: Would like to make pen pals from around the world especially magicians and role playing enthusiasts. I have a disk drive and 100K. You can contact me on 051 528134 or write to James McKewen, 14, Frederick St North, Macclesfield, Durham, DH1 8SD

ST USER: Would like to make contact with other users to exchange ideas etc. Also for sale, but cheap drive £25. All letters will be answered, write to: Miriam, 137, Condy Road, Grimsby, South Humberside, DD10 1LY in phone 0472 74984

NEW ZEALAND: I want an Atari 800XL, 1024 drive, 1024 or 2048 printers, Touch Typist and 1024 tape deck. I am interested in educational software, hardware modifications and finding further uses for my 800 printer. Anyone welcome to get in touch. A. Lewis, 85, Wain Terrace, Waimua, New Zealand

PEN PALS WANTED: Anywhere in the known Universe. I will answer all letters promptly. I have an 800XL, 1024, 1024K. I appreciate send help with Hunk Waters Guide. Please write: Kay Ingham, 68, Sainsbury Street, Bishop Auckland, Co-Durham, DL14 4JL. Tel. 0568 58112

STARI ST: Pen pals wanted to swap info, ideas, programs written in 8000 and C (source code). I use Drogap and Mergent packages. Letters from non-programmers also welcome. Write to: J.R. Patterson, 38, Avenue St, Brentwood, Co-Durham, DL16 7JW

FOR SALE

PAID: 6 Issues 2 to 27 in one binder with 11 program disks relative to issues 16 to 27. £29 incl. p&p. **ATARI LEXER:** issues 3 to 24 in one binder with 1 program disks the issues 1-3. £29 incl p&p. H. Kapralak. Tel: 0244 3671

IBM KEYNOTE MODULES: Set 104 plus 648 memory module for Atari 800XL. J.R. Patterson, 38, Brentwood Crescent, East Preston, West Sussex. Tel. 0905 723824

XL SYSTEM: Atari 800XL, 1050 disk drive, 1024 recorder, all in immaculate condition plus masses of software on disk in suitable disk box plus disc covers. £230. Ring 0142 (See Classified) 7070

100 PRINTER: For sale, £25. Plus free software, distributor and distributor Plus. Contact R. Archer 0621 9445 (evenings).

MAGAZINES FOR SALE: Computer & Video Games Vol. 1, No's 3, 7, 8, 15, Vol. 2, No's 6, 9, Vol. 3, No's 6, 7 plus 1984 Jan, Aug, Sep, 1985 Jan to Dec, 1986 Jan to May, Aug, Sep, Dec and May 1987. All good to nice condition. Will ship. Office: Jason Praggood, 14, Cambridge Road, Wiggins, Lutterworth, LE15 2GL. Stamp helps for postage reply.

SE SYSTEM AND HARD: 1000K with 1050mm, touch tablet, AlphaScan 81 printer with manual, OS System manual, Hardware manual, Assembly Guide, almost all the Compact disks for 8 bit Atari, Computer Animation Program, 4800 84.1, 9, Registers, all issues of PRG 8 and Atari User and several issues of Atari Assembler and Monitor. Low cost. WANTED: Epson or compatible printer. P. Praggood, 14, Parson Street, Botolph Claydon, 01509 (0156474)

XL AND PRINTER: Atari 800XL, disc recorder and software. £200 n.o.s. Approx. LX 85, 4 month old, with accessories (disk box) and software. £800 n.o.s. Tel. Dave Preston 0272 545550

1000 DRIVE: Including software. Nice condition, still boxed. Will be bought as a second drive but has not been used. £30 plus postage. Please offer 4 p.m. and ask for Barry. 011 5024781

SYSTEMS FOR SALE: 1) 8000L enhanced with Dimension, 1000 Higgs enhanced disk drive, 1024 printer, books, games software, software etc. £280 n.o.s. 2) Atari 1000XL, 1050 disk drive, games, utilities, software and books. £280 n.o.s. 3) Atari 8000XL, 1024 disc recorder, books, games. £280 n.o.s. Tel. Colin 80078043, after 4 p.m.

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XL SYSTEM: 800XL, 1050 disk drive, 1024 recorder for sale. Excellent condition. Loads of software, disk covers, books, tape and 2 manuals included. All for only £275 n.o.s. Please Mail to 0402 734344

MAGAZINES: Full collection ANTIC's April '84 (No. 1) to July '85. ADAMANT's Jan/Feb '84 (No. 1) to May '87. Offers are invited for full collections, are ready to send in instalments. Make me an offer! Also 21 Computer magazines May '83 to Jan '85 plus many old ones, any offered I've bought an Amiga. Any Amiga contacts out there please get in touch. Please Geoff 914 426 454

MODEM: W 5000 for sale £20. Wharfedale intelligent modem 4 works 1200/15 with 800 interface. Use Hayes commands £240. TurboScan A intelligent Centronics printer interface (Use serial port) £40. Please Keith 0245 264030

WANTED

BOOKS, MAGAZINES ETC: Wanted for Atari 8 bit computers. Also 1024 printer and 1050 disk drive required. Send details and price required to: J.C. McNeill, 71, Dalston Drive, Old Kirkcaldy, Southsides, DD10 1DP

WANTED: FORTH issues 1 to 6, 8, 9, 11, 12. Member issues 1 to 5 and T. 28AC-30 Assembly with instructions. Prepaid all over Britain. All replies to: Tony Longworth, 15, Greenfield Road, Lyle Green, South Wirral, Cheshire, L29 1PL. Tel. 0551 150 0805 (before 9 p.m. please)

DISK DRIVE: Atari 1050 disk drive wanted, in the region of £30. I would be willing to swap it for a Game Max 100 keyboard. If interested ring 011 502 1343 after 4 p.m.

DISK DRIVE ACTION: Wanted, a 1050 disk drive also Berlin, MAC 40 and/or the Toolkit for other. Please phone Julian with price on 0491 503739 or write to: J. T. Bean, 18, Kings Road, Colwyn Bay, Gwynedd, LL59 7YU

100 PRINTER PART: Does anyone have a spare "bottle" that fits onto the back of a number of the 1024 printers? This is a small, white, piece of plastic with 15 teeth. I have been told that I would normally have to buy the whole number 1 (20) to get this part. Chris Simon, 38 Ffrenchcote, Mynydd Iaf, Mudd, Gwent, GBT 4JF

WANTED: 500 interface, Touch Typist or Koda Pen, ANTIC magazine V, 5 No's 10 and 11, 1050 drive, finaly or dual 0.6. Please contact 04455 51116 or write to: R. Flynn, 81, Festival Terrace, New Inn, Pinner, Bucks, HP24 0JH

CLUBS ETC.

THE SYSTEM: Bulletin Board based in Nottingham 0502 817914 has regrettably now ceased to exist. It was apparently hoped that the Board may continue but due to a long journey to Liverpool, this is now impossible. Barry has my unconditional consent, however, wish this page for more promising news in approx. 3 years time!

SPRINGWOOD COMPUTER CLUB: Welcome anybody interested in computers. We meet every Monday night at Springwood Leisure Centre in the Alpinia Road at 7 p.m. Further info? Please Fax on 0288 815150

MJDBASE

A powerful and flexible database for your 8-bit Atari

MJDBASE is a fully featured database for your 8 bit Atari. You can use it for keeping details of your record collection, books, addresses, reference articles or for Club records and spare records. In fact, anything you need to keep a record of can be included because you can configure MJDBASE to suit yourself.

TYPING IT IN

MJDBASE is a complex piece of software and the Listings are, naturally, quite long but if you use TYPO 3 as you go, you shouldn't have any problems. There are three listings in all which should be typed and **SAVED** in order. You must use the filenames "D:INTRO" for Listing 1, "D:MJDBASE.MGR" for Listing 2 and "D:MJDBASE.UTL" for Listing 3. To run the program you type **RUN "D:INTRO"** which will then run the other modules. You can, if you wish, add an asterisk to the **INTRO** program.

USING MJDBASE

MJDBASE is divided into two modules. The main 'Manager' module allows you to add, delete, search, sort, update, mark, extract or to records while the Utilities module is for setting up, re-organising and generally making amendments to the structure of the database. The full instructions for each module follow and it is essential that you read through the appropriate sections as you use the program. You will need to keep the instructions handy as you use MJDBASE so it may be a good idea to photocopy the pages and keep them with your disk. The program is relatively easy to use but it is suggested that you set up a few practice databases and try all of the features before you commit your lifetime work of priceless information to disk!

Michael Jackson provides what many serious Atari owners have longed for

This program is available ready to run on this issue's disk - see page 69 for details

Here are the full instructions for using MJDBASE.

THE MANAGER MODULE

MJDBASE is the main record management module of the MJDBASE system. This module allows you to:

- | | |
|---------------------|---------------------------|
| 1. Open Database | 4. Close Database |
| 2. Obtain Record | 7. MJDBASE - Utilities |
| 3. Add Record | 8. Directory of Databases |
| 4. Sort Records | 9. Bulk Output |
| 5. Review Structure | 10. Drive Set Up |

This section will take you through each of these functions and show you what they do and how to use them to best effect.

1. OPEN DATABASE

This command allows you to connect to a given database and must be used before any operations can be performed upon a database.

On choosing the command, there will be a prompt for the Database name. If the user has forgotten what databases are available on the disk, then by entering 'L' and pressing RETURN, a list of databases will be given. (This can also be achieved from the main menu option (9) - Directory of Databases.)

Once a database name is supplied (a database of this name must have been previously created by using the 'Create Database' command found in MJDBASE - Utilities module), your MJDBASE Manager will connect with the chosen database and load information about the database in question and will show:

1. How many fields.
2. Field Details.
3. How many current records.
4. Maximum No. allowed.
5. The Key Field.
6. Direction of Key.

(If there are no records in the database you are reminded at this stage that you need to use the option **Add Records**.)

This is known as the 'Structure' of the database and the MJDBASE Manager must know all these details in order to manage your data correctly.

Having successfully opened your database, you are returned to the main menu. You will notice that the name of the currently connected or opened database will now appear toward the top of the main menu screen. You are now ready to use the other commands. If you attempt to use other

commands (except F & R) before opening a database, you will be reminded that you must 'Open the Database first'.

2. OBTAIN RECORD

The Command to obtain a record allows you to access any or all of the records in your database. Once you have obtained your record, several other commands will become available to you. These will be explained a little further on.

On choosing this command, you will be prompted to indicate a number indicating one of the following search criteria by which your record or records will be obtained or retrieved:

- | | |
|---------------|-------------------|
| 1. Key Search | 3. Marked Records |
| 2. Flip | 4. Any Character |

Key Search: This search criteria gives you the fastest retrieval time since it references your index which is held in memory. When you enter this choice, you will be prompted for a value which MJDBASE Manager will use to locate your chosen record or records. If, for example, you entered 'HELLO', it will search those records whose key field contains the characters 'HELLO' in the starting characters. (If your index length is say, 5 characters, MJDBASE Manager will choose those records with 'HELL' as being the first characters in the key field. - Index information will be found in the chapter describing the MJDBASE - Utilities module)

The smaller the search data you supply, the wider the potential range of 'matched records'. **NOTE:** Please note that this key search assumes that your search characters start with the first character of the key field.

Flip: Should you wish to browse or 'flip' through the records without seriously searching for any particular one, this command will obtain all the records for you in the logical sequence dictated by the sorted order of your index (i.e either in ascending alphabetic or descending alphabetic order)

Marked Records: This search option will only access those records that have been 'marked' (for details about 'marked' records please read about the 'Mark Record' sub-command further on.)

Any Character: This is a flexible search option since it allows you to search your whole database for a string of characters. Since this option scans the whole database without the key, this takes a little while depending on the size of your database. Please be patient!

Having displayed your record on the screen you will notice that the key field will be indicated by an '>' to the left of the field name.

You will also see an information bar across the top of the screen. From left to right you will see 'K'; 'Rec No' and 'Search'. Next to 'K' you will see either 's' or 'd' showing that the key is in Ascending or Descending order and beside that you will see the how many characters. The 'Rec No' sign indicates the logical number of the record in key order. The 'Search' indicator shows the criteria by which you are currently obtaining records.

As mentioned earlier, once a record has been obtained and displayed on your screen, you have several sub-commands available that mainly relate to the currently displayed record:

- | | |
|----------------------------|-------------------|
| a) Next record | f) Refresh Record |
| b) Back to the last record | g) Stop obtaining |
| c) Erase record | h) Mark record |
| d) Update record | i) Clear mark |
| e) Print obtained record | |

Let's look at each of these sub-commands:

Next record: You will see from the highlighted sub-command bar that to obtain the next record, you merely press RETURN. This will obtain the next record that conforms to the currently sorted alphabetic index and/or search criteria.

Back to last records: By entering 'B', MJDBASE Manager will re-obtain the last record that was displayed. This is particularly useful if you wish to re-display a previous record without having to go through the main menu again. (This option is currently only available with the 'Flip' search criteria.)

Erase records: This command will remove the currently obtained record from your database. (See how to revive these records in the chapter dealing with MJDBASE Utilities). By using this command, two things happen:-

1. All references to the record will be removed from the index that is held in memory.
2. The record on your database will be 'flagged' as having been deleted. (The physical record will still remain on your database but will not be recognised by MJDBASE Manager)

As you use your database, you will find that the database data file will become increasingly populated with 'deleted' records. (This will be indicated by having a large data file when you are only dealing with relatively few records). From time to time, it will be necessary to 'weed' them out totally. The 'Compact Database' command will do this for you. This is found on the menu to the MJDBASE Utilities module. For further details see 'Compact Database' in the chapter dealing with the utilities. **WARNING:** The 'compact database' utility physically removes the flagged records. Make sure that you have 'revived' all the records (this option is found in the Utilities module) you want before you use this command. There is no return after this!

Update record: By entering 'U', MJDBASE Manager will ask you which field of the obtained record you wish to update. Enter the number which relates to the field you wish to update. (When a record is displayed on the screen, each field will have a number beside it on the left. This is the number you enter)

On entering the number, the appropriate field will be displayed together with it's current contents. The cursor will be automatically positioned at the beginning for your convenience. Make your amendment to the field as you wish then press RETURN. (Remember not to amend the field to a size larger than is allowed for it.)

The record will be re-displayed showing you the latest change. You will be prompted for another field number to update. When you have finished updating a record, enter 0 to the prompt. The database file and index will be amended accordingly and the next record will be automatically obtained for you. (You will not be allowed to update a field with more characters than the field was originally meant to hold. - This is defined when you create your database. See the chapter on Utilities for more information.)

Print Obtained Record: This sub-command ('P') will allow you to obtain a 'hard copy' of the record you have currently obtained on the screen. Be sure that your printer is turned on and 'on line' to your computer.

Refresh Record: This command allows you to re-display a record which has too many fields to show on the screen at one time. This saves you from having to advance to the next record

then use the 'Q' command to get back.

Stop obtaining: Entering 'S' will stop further searching on the database and return you to the main menu.

Mark Records: These may well be times when you want to remember a particular record or records for your own special reasons, perhaps as reminders of some sort.

MIDBASE will allow you to flag or 'Mark' any record with this command. As a result, every time a marked record is obtained you will be reminded by a beep sound. Marked records can also be searched for under the 'Obtain Record' command called from the main menu.

Clear Mark: This command will remove the 'mark' from the record.

3. ADD RECORD

This command allows you to expand your database with more records. When you enter the command, you will be prompted for data for each field within the record. When you are entering a key field you will be notified of this by a '*' to the left of the field name.

After all the fields for each record have been entered, you will be prompted to indicate whether further records are to be added. If so, then merely press RETURN, if not then press 'E' to end. As you enter the records they will be automatically sorted in accordance with the existing index.

4. SORT RECORDS

This command allows you to sort the active (in memory) index in the opposite alphabetic order that is currently in force. This means that if you want to change the direction by which you obtain records then you don't have to re-create the index!

On entering this command, you will be reminded what the current index direction is and prompted to enter 'A' for Ascending or 'D' for Descending. On entering 'A' or 'D' your index will be sorted instantaneously and you will be returned to the main menu. You will now be able to obtain your records in accordance with the new key direction.

5. REVIEW STRUCTURE

This option allows you to review the status of the currently opened database at any given time. As mentioned before, this is automatically given to you when a database is initially opened. It is useful, though, to be able to remind oneself what the current index is and the field lengths.

6. CLOSE DATABASE

This is the command to signal to MIDBASE Manager that you have now finished with the database. It is important to use this command if you have made a change to the database since you opened it. If this is neglected, then you will lose the current index and possibly lose track of all the recently added records.

In order to remind you when it is important to close the database when you have finished with it, the options on the main menu will be highlighted.

N.B. If by accident, you do forget to close the database or there is a power failure before you can close it, then all is not lost. Please see the section of DATABASE RECOVERY later on.

7. MIDBASE - UTILITIES

This option allows access to the second of the MIDBASE

modules. The utilities. Details about this module will be found later in the article.

8. DIRECTORY OF DATABASES

This command allows you to see what databases are on a disk.

9. BULK OUTPUT

Up to now, your MIDBASE Manager has allowed you to view and print your records on an individual basis as you have obtained them. This useful command allows you to output your selected records in different formats either to screen, printer or disk on an automatic basis (without having to press RETURN the next record etc.)

On entering this command, you will be prompted for the search criteria to useal (See Obtain record). Here you will be saying to MIDBASE Manager that all the records that you want output via the Bulk Output routine will conform to this search key data.

Once you have entered this, you will be asked whether the Bulk Output is to be directed to the screen/printer or to extract mode. By entering 'S' or 'P' output will be fixed to the screen or printer respectively. The data output will comprise of your selected fields side by side under the headings. For example:

| NAME | ADDRESS |
|-------------|-------------------------|
| Pred Higgs | 10, Downing Street |
| Ivy Tibby | 2, Newleaven Road |
| Jack Waddle | "The Oaks", Cooney Lane |

The 'Extract' mode is a more flexible mode and is primarily designed to allow 2 styles of output:

1. Data output will consist of field data only (no headings) and each selected field will output one after the other rather than being output side by side on an one line as (as described previously) (see above example). This means that simple labelling output can be achieved.
 2. Data can optionally be output in Database format thus giving you the ability to create new database data files. If you choose to only output some fields, you can effectively 'delete' a field when creating your new database file.
- If 'Extract' mode is chosen, you will be prompted with 'Data Device'. Please enter 'S' for screen output, 'P' for printer output or 'D'xxxxxxxxxxx for disk output.

Using 'extract' for Database creation

If you opt for disk output with the aim of creating a new database, please do the following:

1. Make sure that the output filename you supply has an extension of '.DAT' since this signifies a data file to MIDBASE.
2. Answer 'Y' to the question about database format.
3. After the data has been output to the data file. You must use the 'Create Database' command in the Utilities module to create the structure which will reflect the fields which are in your newly created database file. Make sure you call the database the same name as the database data file you have just created (including the extension).
4. Use the 'Create Index' in the Utilities module to register your new database file into an index.

Finally, you are able to direct MIDBASE which fields you want included in the output. Not all of the fields need be output. The number relating to a field that is to be output should be entered. This must be repeated for as many fields

is not required. These numbers are found to the left of the field names.

In addition to the actual field numbers, there are 3 extra values which can be used:

- a) 0 This means you have finished your selection of fields for output.
- b) -1 This means you want all the fields in the record output. (This is easier than entering all the field numbers one at a time!)
- c) 99 This clears all the fields you have selected in case you change your mind and want to start again.

When you enter 0, MJDBASE will do the work!

10. DRIVE SET UP

This command allows you to use more than one drive and to eliminate disk swapping. The MJDBASE software will always expect to find its component modules in Drive 1. Therefore, the Master disk holding the MJDBASE modules must always be inserted in Drive 1 when prompted.

11. DATABASE RECOVERY

Should your computer system crash or be switched off before you properly close the database, you will lose your active index to that database.

When this happens, it means that you may not have an up-to-date index by which you can keep track of your records. You are able to recreate your index by using the "Create Index" command found on your MJDBASE Utilities module. For more details on this, see the documentation dealing with the Utilities module.

MJDBASE - UTILITIES

MJDBASE Utilities is a database tool module and is part of the overall management of your database. This module allows you to:

- | | |
|---------------------------|--------------------------|
| 1. Create Index | 6. Delete/clear database |
| 2. Compact Database | 7. Drive set up |
| 3. Create Database | 8. Reconstruct database |
| 4. MJDBASE Manager | 9. Review records |
| 5. Directory of databases | |

This section will take you through each of these functions and show you what they do and how to use them.

1. CREATE INDEX

This utility causes MJDBASE Manager to arrange and sort your records on any field.

MJDBASE Manager will only be able to look, retrieve and organize records that appear in an index. If, for example, you create an index based on the key field "NAME" and the index is in 'Ascending' order, then all records will be presented to you so that the field NAME will be in alphabetic order.

An index also allows MJDBASE to locate your chosen record much faster by simply searching the index rather than the complete data file.

On entering this command, you will be reminded of the structure of the database in question and prompted for the field number which you want as the key field. Once you enter the number, you must then enter the number of characters of

the key field that you want to be included in the index. The larger the number of characters, the more precise the search and sorting operations will be but also you will be able to manage less records. You will be given a guide as to the maximum number of records you can safely expect to enter with any given index size. This will be notified to you on the "Review Structure" and "Open Database" commands on MJDBASE MANAGER module as well as with this command.

Once you have entered the field number you want as the key field, you will be asked whether you want the index sorted in Ascending alphabetic (A - Z) order or descending (Z - A). Enter A or D as appropriate.

The Create Index utility will now create your new index for you.

2. RECOVERY WITH CREATE INDEX

This command does not look for an existing index and therefore can be used to create an index which has been lost or corrupted by accident.

3. COMPACT DATABASE

After a while, you may find that your data file is extremely large considering it's holding relatively few records!

This is because when you delete records, they are not physically removed from the data file but merely flagged as having been deleted. It is done this way for the sake of speed and convenience when using your database. As a result, you should strip away the deleted records occasionally until your data file only holds "live" records thus giving you more space on your disk.

This utility does just this job. It strips away and thereby compacts your database file. Not only does it do this but it automatically re-indexes the new compacted file in accordance with the existing index.

Once you enter this command, you will be prompted to enter the name of the database which you want compacted. Once you have done this, it will display the structure for your information. Follow the prompts and your database will be compacted.

4. CREATE DATABASE

This is the command to use when you want to set up a database right from the beginning.

You will be prompted for a name that you want to know the database by. Enter any name. (Not longer than 8 characters) Next you will be asked how many fields your records will have. Please indicate this.

Now you will be prompted for details about each field a) the name and b) its length. The name of the field must not exceed 12 characters. You will next be reminded of all the fields that you have defined (and their lengths) and asked to designate one of the fields to be the key field by entering the appropriate number. You must next define the number of characters of the chosen key field to which the key will apply.

The utility will now create your database. If you have wish to change the index length of the key field, you can use the "Re-Index" utility.

Your database is now ready to have records added to it via MJDBASE Manager module.

5. MJDBASE MANAGER

This command accesses the main record management module, MJDBASE Manager.

6. DIRECTORY OF DATABASES

This command allows you to see all the databases on your disk.

7. CLEAR/DELETE DATABASES

This command is one to use with care! Clearing a database is not the same as deleting it.

When you clear a database, you merely remove all the records from it and the database will be almost as if you just created it except that it will still retain the current index structure.

Deleting a database physically removes all trace of a database from your disk!

You will be warned just before the deed is done in case you want to change your mind! Just follow the prompts but be careful!

8. DRIVE SET UP

This command allows you to use more than one drive and to eliminate disk swapping.

The MJDBASE software will always expect to find its component modules in Drive 1. Therefore, the Master disk holding the MJDBASE modules must always be inserted in Drive 1 when prompted.

9. RE-STRUCTURE DATABASE

This command allows you to alter the size of existing fields within your database.

Even if the database has hundreds of records already in it, this command will allow you to shorten and lengthen fields to accommodate your new requirements.

On entering this command, you will be prompted for the database name which you want to restructure. On entering the name, the Utilities module will load the current description of structure for your information and then display the fields for amendment.

You will be asked to enter the number of the field you wish to alter and then be prompted for its new size. The fields will be redisplayed reflecting the new size for your chosen field. This operation can be repeated until you have decided upon the new field sizes that you want. When you have finished, you must enter 0 to indicate this.

The MJDBASE Utilities will recreate your database records with the new sizes incorporated. If the new size is smaller than the original, your data will be truncated as 'behave'. If your new size is longer than the original, then your field will be padded out with spaces.

10. REVIVE RECORDS

This command is probably the most precious one you will want if you create records by accident. These records remain SINCE the last comparison can be restructured with this command.

On entering this command, MJDBASE will prompt for the database name. Once you have entered this, MJDBASE Utilities will scan your database for erased records and present them on the screen individually for you option to revive or not.

If you choose not to revive any displayed record, you will still have the chance to revive it and you COMPACT the database. Then all 'erased' records really will be beyond recall!

```

01 0 0000 *****
02 0 0000 *          *
03 0 0000 *          *
04 0 0000 *          *
05 0 0000 *          *
06 0 0000 *          *
07 0 0000 *          *
08 0 0000 *          *
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10 0 0000 *          *
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100 0 0000 *          *

```

```

01 0 0000 *****
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99 0 0000 *          *
100 0 0000 *          *

```


Cliffhanger

by Heath Lawrence

This year in 2020, Advancements in space technology have made it possible for Earth-based operations to establish mining operations throughout the solar system. A research team on Mars has uncovered rich deposits of vast minerals they beneath the planet's surface.

Waiting no time, the enormous industrial firm of Megacorp Inc. has set up a mining colony on the Red Planet for the mining is initiated—creating huge chunks of rock and debris to haul from this operation into the sides of the open mining pit, which threatens to bury the whole operation.

You must capture chunks of debris before they disappear the side of the pit. Your only equipment is a speedy Catcher Cage. To activate this Catcher Cage just flip in the landing, checking it with TYP0 5 and SAVE a copy before you RUN it.

The Catcher Cage consists of two parts. The first is a pulley that can be raised and lowered by pressing or releasing the joystick button. Attached to this are pulleys that move sideways when you push the joystick left/right. You can also move the grabber vertically and the pulley horizontally at the same time.

Any debris touched by the moving Catcher Cage will be caught and immediately disposed of in a nearby void tank. The lower down the pit you reach the debris, the more points you get.

Further complications? You bet! Mining on Mars means highly explosive Radon gas bubbles into the atmosphere. Should your Catcher Cage touch one, the gas will be released and destroy you instantly.

Also lurking in the pit are hazardous blue corrosive-filled clouds. Different groups of mobile preservation groups have made destroying these corrosive things. Killing a Cloud results in the loss of five points.

Each time a chunk of rock strikes the hill face, the danger level (shown in the bottom right corner) increases by one. When the danger reaches five, it causes the cliff collapse, destroying the mining operation and you. The Catcher Operator's health is measured at the top of this cliff, so when it collapses, you're finished.

Cliffhanger is the first program from ANTIC magazine to be published under an exchange agreement. It first appeared in ANTIC Magazine Volume 5 Number 7.

Heath Lawrence lives in Peapack, New Jersey, and has been programming his Atari for almost ten years.

The key to Cliffhanger is anticipating where the next chunk of debris will hit and getting there first with your Catcher Cage. Another useful method is the "fishing technique". Just press the joystick button and let the Catcher Cage descend a little way below the debris. When the rock is directly over the grabber chain, release the button. Also, the Catcher Cage moves twice as fast as the debris, so you'll probably get another chance if you miss the first.

Mining on Mars in the 21st Century

```

BT 1 000 *****
02 1 000 # CLIFFHANGER #
04 1 000 # by Heath Lawrence #
08 1 000 # ALL 1988 ANTIC PUBLISHED #
00 0 000 # *****
08 1 000 # RELEASED WITH PERMISSION #
00 1 000 # BY PAGE 5 - ENCLAVE #
02 0 000 *****
00 1 000
00 10 0000 000
10 00 00100 000 00100 000 00100 000 001000
100
M0 10 000 MOVE DEBRIS
TE 00 00100 000100-0 0 100 000100 000 1000 1000 1000
RETURN
M0 00 1000 10 1000 1000000000 00100 00
01 1000 0000 000 00000 000100000
00 00 00000 100000 1000 000000 10 00000 1000
1000 1000000 100
00 10 1000 100000 00000 100000 1000000000
00 00 0000
10 0000 00000 1000000000 00010000
+1000000 000+000000 10 00000 1000
0000 1000000 100
LE 100 00 00100 0000 10000 00100 0000
0 00010 100000100 00 0000 1000 000
00 1000000 100
P0 00 1000 000000000 1000000 00
10 100 000 00
07 00 100 100 00 0 000 1000000000
100000100 00000 1000 000000000 000
0000 100
10 100 1000 000000000 10010000 0000000
100000 100000 00000000 10000000
```


TURBO BASIC

A GRAPHICS DEMO

Turbo Basic has recently become very popular and we have received so many requests for more information about the various commands available and offers of programs written in Turbo Basic that from this issue we start a regular page devoted to Turbo Basic. The focus of the column depends on you. We need show programs written in Turbo Basic to demonstrate some of the features of this amazing language together with an explanation of what the program does and how it is programmed. Anything will be considered provided it uses the commands unique to Turbo Basic and the only limitation is size - the program and article must not be more than one page in total. Let's hear from you.

To get the ball rolling from this issue, here is a short little graphics program very quickly thrown together to demonstrate how programs can be written in Turbo Basic easily and quickly. It is certainly not a great example of programming - you could do better - but it does show some of the features not available in ordinary Atari Basic. Study the listing carefully and you will begin to understand how programs can be structured in Turbo Basic.

The program simply draws circles in Graphics 8 to allow you to design patterns on screen. The joystick will move the cursor around and pressing the fire button will plot a circle of the size currently chosen. Just press START to choose another size and then press any key, the size is chosen quite arbitrarily from the list.

It's not a brilliant program but was dead easy to write and it's free. Let's see what you can do. We'll pay you £20 for any programs that are published. Remember they must have brief supporting documentation and must fit on one page.

WHAT IS TURBO BASIC?

Turbo Basic is a new Basic language for the Atari originally published in a German magazine and now released to the public domain. It adds over 60 new commands to Atari Basic, runs three to five times as fast, is totally compatible with all your existing programs and comes with a compiler to compile any Atari Basic or Turbo Basic program to run at machine language speed. You should be able to get a copy from any source of public domain software such as your local user group or a friend or even from the Page 8 Accessory Shop.

```

00 1 000 *****
01 1 000 #          TURBO BASIC DEMO          #
02 1 000 #          by Les Ellingham          #
03 1 000 # PAGE # MAGAZINE - ENGLAND        #
04 1 000 *****
05 1 000
06 1 000 *****
07 1 000 # PAGE SETUP
08 1 000 # PAGE SETUP
09 1 000 -----
10 1 000 # PAGE NO. 00
11 1 000 # IF PEEK(002791) < 255 THEN GOTO 007
12 1 000 # GOTO 151000000+70-05000000=001
13 1 000 # WOP 051000000+100-051000000+100 1000
14 1 000 # 000000
15 1 000 # IF PEEK(0000) < 255 THEN GOTO 0000
16 1 000 # GOTO 0000_00_00
17 1 000 -----
18 1 000 # PAGE SETUP
19 1 000 # GRAPHICS 8 (10)0001000010000 100,0
20 1 000 # 1000 100,00
21 1 000 # ON 0000,00000,00000,0000000 # KEY
22 1 000 # "000"0000 "
23 1 000 # OPEN 00,4,0,"0,0"
24 1 000 # 000000
25 1 000 -----
26 1 000 # 170 # PAGE 0000
27 1 000 # FOR I=1 TO 10 STEP 0
28 1 000 #   FOR J=1 TO 10 STEP 0
29 1 000 #     COLOR 1:IRCLE 0,Y,I*SIZE
30 1 000 #     NEXT J
31 1 000 #   FOR I=1 TO SIZE STEP 0
32 1 000 #     COLOR 0:IRCLE 0,Y,I*SIZE-1
33 1 000 #     NEXT I
34 1 000 # 000000
35 1 000 # 0000
36 1 000 # PAGE SET
37 1 000 # FOR I=1 TO 10
38 1 000 #   "00"0000 "10000 00,00,00
39 1 000 #   COLOR 1:TEXT 00,0,00
40 1 000 #   SET 000000000000000000000000
41 1 000 #   10000
42 1 000 #   0000 00,00,00
43 1 000 #   COLOR 0:TEXT 00,0,00
44 1 000 # 00000000
45 1 000 -----
46 1 000 # PAGE 000000
47 1 000 # COLOR 1:TEXT 0,0
48 1 000 # COLOR 0:TEXT 0,0
49 1 000 # 000000
50 1 000 -----
51 1 000 # 400 # 000000
52 1 000 # GRAPHICS 8 ("0000"1000) "0 100
53 1 000 # "0000"

```

program by Les Ellingham

TUTORIAL SUBROUTINES

Did you know that you can read the joystick without a dozen IF ... THEN statements? In the second of our Tutorial Subroutines, Ian Finlayson presents a very compact subroutine to handle joystick input

As I start the second in this series of tutorial subroutines I had better explain how all the subroutines will be laid out. In the last issue the disk contents subroutine started at line number 10000 (with a REM statement preceding it in line 30000); this time the subroutine starts at 10100 and from now on I will increment by 100 each time. This will allow you to store all the subroutines in one file rather than having to store each separately. The REM identifier statements will all be put ahead of the main line number at which the subroutine starts.

LOGICAL OPERATORS

My subroutine this time is based on the use of logical operators, and as some people have difficulty with the underlying concepts I will try to explain first and then develop the subroutines. The logical operators are fast and they can be used to generate compact code.

The fundamental concept is this - The value of a logical statement is 1 if the statement is true and zero if the statement is false.

That is all very well, but what does it mean? An example would be the expression (A > B); this has a value of 1 if A is greater than B, and zero if A is less than or equal to B. It is quite easy to experiment with this technique by typing into your computer in direct mode. Try the following (each line must be completed with RETURN):

```
A = 1 : B = 1 : ? "A > B = " : (A > B)
```

```
A = 1 : B = 0 : C = 1 : IF A = B OR A = C THEN ?  
"TRUE"
```

The relational operators are < (less than), > (more than), = (equal to), <= (less than or equal to), >= (more than or equal to), <= (not equal to). They can be used with the Unary Operator NOT and the Logical Operators AND and OR. NOT reverses the value of an expression so, for example, NOT(A = B) and A <= B are effectively the same.

READING THE JOYSTICK

Joystick position is obtained in Basic from STICK(X) for joystick port X, STICK(1) for port 2. Alternatively PEEK(X) gives the same value as STICK(X) and PEEK(X) the same as STICK(X). The value returned depends on the direction in which the joystick is pressed. Eight different directions are detectable resulting in nine possible values including stick control. Relating joystick direction to the points of the compass, the values are as follows:

2. JOYSTICK LOGIC

| Position | Decimal | Binary |
|-----------|---------|--------|
| Centered | 10 | 1111 |
| N (Up) | 14 | 1110 |
| NE | 6 | 0110 |
| E (Right) | 7 | 0111 |
| SE | 5 | 0101 |
| S (Down) | 13 | 1101 |
| SW | 9 | 1001 |
| W (Left) | 11 | 1011 |
| NW | 10 | 1010 |

The decimal numbers appear to be a rather random set but if you look at the binary equivalent in the third column a logical pattern appears showing that each cardinal point has a switch which controls one bit of a 4 bit number.

The fire button or trigger on the joystick is detected in STICK(X), STICK(1) or by PEEK(X4), PEEK(X41). These return a value of 0 if the trigger is pressed and 1 if it is not.

THE FIRST JOYSTICK SUBROUTINE

The first subroutine gives only up/down and left/right movement.

Line 10100 - TT3 is the variable for position across the screen (or column position). This could be the position of the cursor or the position of a player. TT3 must be changed to the variable name used in the main programme. TTMAX is the variable which defines the highest value to which the horizontal position can go, normally the value of the right hand column on the screen (which depends on the graphics mode in use). It is defined in the main program to stop the cursor going off the screen causing an ERROR 140 - cursor out of range.

The first (/) bracket of this line has a value of 1 if the joystick is to the right and the right hand limit has not been reached while the second (1) bracket will have a value of 1 if the stick is to the left and the cursor is not on column 0 (the leftmost column on the screen). Thus the cursor will move right one place if the first condition is satisfied, left if the second condition is satisfied and stay in the same horizontal position if neither is true. If you do not want the left hand edge of the screen to be your limit you can define a variable TT3MIN in place of the zero.

Line 10110 - This line is the same but for vertical movement. TT4 is the vertical position (or row number) and TTMAX is the bottom of screen. Again if you wish to reduce the height of travel use TT4MIN in place of the zero in the second bracket.

This two line subroutine does nothing on its own so I have included the program joystick as a simple demonstration. Combine joystick with the subroutine and when it is run you can move around the screen with a joystick.

```

01 1000 00      PAGE 0      00
02 00 00000000 00000000 00
03 00 000000 00000000 00
70 00 000000 00 00000000 00000000
04 00 000000 000000 000 000
05 00 000000 000000 000 000
06 00 00 00000000 0000 000000 000000 000 00
07
08 00 000000 0000000000 00

```

```

01 0000 0000 00      PAGE 0      00
02 00 00000000 00000000 00
03 00 000000 00000000 00000000
04 0000 000000000000000000 00000000
05 0000 000000000000000000 00000000
06 0000 000000000000000000 00000000
07 0000 000000000000000000 00000000
08 0000 000000000000000000 00000000
09 0000 000000000000000000 00000000
10 0000 000000000000000000 00000000
11 0000 000000000000000000 00000000
12 0000 0000 0000 0000 0000 0000
13 0000 000000000000000000 00000000
14 000000000000000000000000 000000000000
15 0000 000000000000000000000000
16 000000000000000000000000000000
17 000000000000000000000000000000
18 000000000000000000000000000000
19 000000000000000000000000000000
20 000000000000000000000000000000

```

in position 1 drawing when the trigger is pressed and ceasing when the trigger is released. The only line which may need clarifying is line 48. 'IF STRIG00' is the same as 'IF STRIG00 = 1' due to 'if the trigger is not pressed'.

THE SECOND JOYSTICK SUBROUTINE

The second subroutine takes account of the diagonal positions of the joystick.

Line 11000 - For computers TTS has been put equal to STIC000. In the brackets TTS < 8 is when the joystick is to the right while (TTS = 8 AND TTS = 12) is when the joystick is to the left.

Line 11001 - Vertical position. The first (=) bracket has the operator (TTS-0) <= INT((TTS-1)/4) which is only true for values of TTS of 5/8 and 11. You could use (TTS = 5 OR TTS = 9 OR TTS = 11) instead and there must be other alternative expressions. The second (:) bracket uses (TTS/2 = INT(TTS/2)) which tests for an even number i.e. 4,10 and 14 for upward movements.

This subroutine can be tested with Joystick by changing line 900:

```
90 GOSUB 10700:GOTO 20
```

Familiarity with the logical operators is worth while as they are invaluable for programming multiple condition sentences.

I hope that you can use these routines in your own programs and you should be able to find other applications for this type of programming.

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SOFTWARE REVIEWS

Reviewers **Paul Rixon**
Les Ellingham
John Sweeney



survive the 6 levels of this difficult 'shoot 'em up with a difference'.

The game follows the plot of the film quite closely, so a trip to the pictures might help you figure out some of the puzzles at each level. These are not difficult but you are likely to lose several lives before you figure out just what you need to do to survive each level. The game starts with target practice in Gibraltar where you must operate friendly SAS men on a target range with a point gun. Trouble is they are shooting back at you and every hit loses you a point. Another problem is that one of these men may not actually be a target on your side, you'll have to find him and kill him to go on to level 2.

Although armed initially with the point gun, you can change weapons at any time by selecting a new weapon with the joystick from a panel at the bottom of the screen. In fact all control is by joystick and this is one of the reasons that *The Living Daylights* is such a challenge. The joystick controls a small cross cursor which you use to pinpoint where Bond will fire his chosen weapon and also to move Bond from one screen to another by placing the cursor at the far right of the screen. Fast reactions and thinking are needed to decide when to stop running and turn and fire - it will take some practice to survive even the first level with enough strength to complete the second! Add to this the fact that the joystick also selects weapons and allows Bond to duck, jump and roll and you have a game that will keep you going for hours trying to master each level.

The screen is split into three areas, each of which scrolls independently. The foreground scrolls fastest and is only there for effect whilst the mid-ground is where Bond runs along and has to avoid rocks and potatoes etc. All adversaries are to be found in the background where they will pop up randomly to throw anything at Bond from behind and knives to bulldoze Oh, and you'll probably come across the odd helicopter dropping bombs as you progress! The screen design is good, scrolling as smooth as

you have come to expect from the Atari and the sound effects match the action. There's even a pretty good tune to start the whole thing up.

So what of the other levels? Level 2 finds you in the Lenin People's Music Conservatory from where you have to get the Russian defector Koskov out to safety whilst avoiding snipers. Level 3 is *The Pipeline* where you must work past the pipe workers with Koskov. Guards and falling pipes cause trouble here. Level 4 is set inside *The Mission House*. Koskov has been rescued but they want him back! A crack killer has been sent in and you'll need your wits about you. Can you trust the millionairess?

Level 5 is *The Paragon* where you have to meet another agent but whilst you managed to escape the killer Neeson in the previous level he is not dead and will try orders to kill. By now Koskov is missing and you find yourself in *Tangers* where you must battle for your life on the rooftops. Coming near the end now, if you can get this far!

Level 7 is in *The Military Complex* in Afghanistan on a Russian Air Base (you shoot down Bond). The Russians are also even like journalists in Afghanistan but also secret agents so you had better watch out! Finally your objective - *Whiskey's House* - where you meet the mastermind behind it all, *Bond Whiskey*. Have you got what it takes to get past all his defenses to finally win the game, roll the credits and go home to bed?

Some first if you complete all of this. One added complication is that between each level you have a choice of lost one weapon in addition to your pistol and if you choose the wrong one the chances of surviving the level are reduced. Some weird and wonderful things are on offer from a bazooka to a globe blaster! Although basically a shoot 'em up game, you do have to think as well and a read of the *Osery brief*' instructions on the packaging will give you some clues.

Enough words. This time we have lots of pics to take a look and judge for yourself how good it looks. If you are worried about a 'conversion' to the Atari let me just mention that each version has been programmed individually and the Atari version was done by a company



THE LIVING DAYLIGHTS

Domark

48k cassette £9.95

1 Player

Joystick

You have to be good to be Bond. Fast reactions, quick thinking and a degree of good fortune are some of the qualities needed. Shame *Timothy Dalton* got the part in the film, but at least now there's a chance for you to audition for *The Living Daylights* - the computer game that is! Are you good enough to play? You don't need to be handsome or be able to pull the ladies, or even own a dinner suit, but you will need some qualities of fast reactions, quick thinking and a great degree of good fortune to



Level 1 - Litterateur



Level 2 - The Pipeline



Level 3 - The Military Complex



Level 4 - Whisker's House

called De Re Software. Those who have been with Atari some time will realize that this means the people involved know their Atari.

I am not going to tell you how to get it but I will let you into the secret of exactly how to get to Level 4. Come close. Aaaaah!! Looks like Timothy Dalton has still got the part!

Les Ellingham

221B BAKER St

Datasoft

Disk

£14.95

1/4 players

Joystick Keyboard

221B Baker St is, of course, the legendary home of Sherlock Holmes so, not surprisingly, you play the part of Sherlock (or one of his colleagues) in attempting to solve numerous intriguing cases, mostly involving murder most foul!

It is an accurate copy of the board game of the same name which has been around for about 10 years and which bears many similarities to Cluedo: you move your character around the board on the throw of a die, enter numerous buildings to obtain clues and, when you think you know the Who, How, and Why of the case, you check to see if you have won. Unlike Cluedo, each time you play 221B Baker St, you use a different scenario. There are 30 cases provided with the game, and supplemental libraries are planned. Each case consists of a couple of hundred words describing the circumstances of a crime, the various suspects involved in it, and what you have to discover about it in order to win. There are two types of clues: General Statement Clues (e.g. Alice Glast was seen outside the Pub the night of the murder) which may or may not be red herrings and Puzzle Clues (e.g. KILLER CLUE (Poet Penn) - I: Capone's first name), very much like crossword clues and always sufficient to completely solve the crime if you can find them all.

Extras include the ability to lock locations, secret tunnels (not present in the board game), and the Carriage Depot which allows speedy transport around the town.

The board is angled on the screen, only showing a small part of the 10 by 10 board (making a map is recommended); the buildings are all shown in nice 8-BP graphics. The characters (up to four of them) shuffle around the board in response to the joystick and entering a location causes a picture to be displayed, with various sound effects such as clogs booting and flag-borne sounding, and of course a clue is shown (you should make some checklist of the locations for recording your clues). Once the novelty of the graphics and the animation has worn off however, it all becomes rather laborious. The characters move slowly; the board is repainted rather than scrubbed, and the pictures take ages to

load from disk. As a one player game it has little to recommend it (the board game is playable by a single person), and even you have multiple players you have the problem of preventing the others seeing your clues on the screen. There are two solutions. One is to just make everyone else turn away which is extremely boring for those who have to turn away (of course in the board game you just get on with your turn while the previous player is looking in the clue book) and the second solution is provided by an option to have Clued Clues - this involves each player being allocated a code (there are 30 provided) and the clues being displayed with certain key words in code. This adds the extra dimension of allowing the players to try and break the codes and read each other's clues but I personally found that it slowed the game down even more, and that, since everyone has a full set of codes, it was relatively easy to work out which one each person was currently using.

The board game costs about £10 and has 40 rather than 30 cases. As such it is about half the price per case and it is much more playable given the plodding speed of the computer version. If you already have the board game note that 11 of the 30 are duplicates of the board game cases. It's a great game and I recommend you rush out and buy it now - but preferably the board version!

John Savewey

PANIC!

Atlantis

Software

£1.99 cassette

1 player

1 joystick



Here's one for all you platform addicts out there who have been waiting patiently for a good old-fashioned exercise in monster bashing.

It has become something of a tradition in computer games to present a completely unbelievable story which, supposedly, explains the purposes of the game and why, indeed, you should want to play it at all. Not so in PANIC!, the concept is uncomplicated and the documentation does not attempt to persuade you otherwise. If you can remember the days of Brotherband's Apple Panic then you'll know exactly what this one is about. As any Crossreference owner will tell you, the

only sure way to dispose of a monster is to dig a trap, wait until he falls into it and then hit him over the head with your nasty stone!

I couldn't help thinking that I'd seen these particular monsters before somewhere - possibly in Haasstronic's 'One Man and his Droid'. Unfortunately they are contained in a similar manner to the man you are controlling, leading occasionally to some confusion! Red monsters will be killed by falling through just one trap, but yellow and green ones require two and three traps respectively, which calls for some nifty tactics in order to contain them. Naturally, they are just as keen to see the back of you so it's slightly reassuring to know that you have two additional lives in hand.

Each screen consists of several 'brick' platforms interconnected in the familiar fashion by ladders of varied length. Nothing new here. A time limit has been implemented in the guise of an oxygen level which depletes steadily until your demise. Obviously the idea is to complete the necessary task before this happens, thus obtaining additional bonus points to put you in contention for a place in the high-score table.

Atlantis software have come up with an unimpressive reworking of a classic theme. Not really my cup of tea, but platform enthusiasts will not be disappointed.

Paul Rison

DEATH RACE

Atlanta

Software

£2.99 cassette

1 player

1 joystick



Let's all welcome a new company to the Atari scene called Atlanta Software, who have got off to a cracking start by smearing this fast and furious Dodge 'em type race game into the thriving and competitive budget market.

DEATH RACE takes nearly a quarter of an hour to load in from cassette, the reason being that it has been encoded in long inter-record gap format. If anyone from Atlanta is reading this, could we please have short IRC's in future? Reach for your driving gloves and crash helmet, assume a firm grip on your joystick and wait for the lights ... out ... gooo ... GO!

Overtake at least seven cars within the righty rounds allowed and you will acquire the right to continue, but with the added complication of heavier traffic and less time. There are five

BRIAN CLOUGH'S FOOTBALL FORTUNES

CDS Software

£14.95 cassette

£17.95 disk

2-3 players

Keyboard only



Allow me to introduce the first Atari computer game that is not played on the computer. Passed? Then read on ... CDS Software's second Atari release is a football managerial game which is played with counters, cards, and a real 40cm squared cardboard playing surface!

BRIAN CLOUGH'S FOOTBALL FORTUNES (quite a mouthful!) provides competition for two to five players who take on the roles of team managers, the idea being to steer their teams to the top of the league tables, triumph in cup competitions and emerge at the end of the season with a healthy bank account. It is said to have been designed with plenty of advice from this Brian Clough chaplain, who presumably receives a good share of the royalties for having his photograph on the title card.

Packaging is quality stuff. A double sized box opens up to reveal a treasure trove of contents - five plastic counters of the sort you would expect to find in a Tiddlywinks set, 112 'player' cards each ordered with the name of a famous(?) footballer, his field position and his 'star rating', six 'immunity' cards, ten blank cards in case your favourite player is not included, £5,700,000 in cash (must be a new design from the Royal Mint) and finally that multi-coloured board. It has

pre-selectable 'levels' however these seem to do little more than change the screen colours. In line with old favourites such as Baja Buggies and Pole Position, your screen view is slightly to the rear of the car you are 'driving' - and what a size it is! This one is not your every-day Formula One Grand Prix model. Apart from being a two colour PMG game it is also supposedly capable of an amazing 50mph! Attempts to embark on a slalom course around slow-moving traffic at this speed and you will appreciate the difficulties. Your five lives aren't going to be around for long!

Graphics? Well, they're not up to Eteknable standards (then what is?) but at 50mph the last thing you will want to be doing is admiring the scenery. Sound consists of adequate engine roars, beeps as each car is overtaken, and a suitable racket to accompany the event of your car exploding! The race track is of

three-six squares around its perimeter each stating a situation that is likely to occur in the every day life of the team, accompanied by a suitable representative logo. Oh, yes! There is a computer program included too, but I'll get on to that in a moment!

The concept behind FOOTBALL FORTUNES is as follows. Each manager is given a squad of thirteen players, including defenders, midfielders, strikers, utility players and - of course the goalie. If a manager is not happy with his squad then he can make substitutions, loans, transfers or bid for stars players at the auction (this is where real comes into the proceedings). After removing the squads from the pack of player cards, the remainder are shuffled and played face down on the board. They become the auction pile (you're about that later).

Next thing to do is appoint a banker and a computer operator. The banker gives an initial handout to each manager and will deal with future financial matters as they arise. The computer operator activates the computer-ole for each manager, who moves his counter accordingly (this leading on a square that represents the situation he must deal with. I won't go into full details, but as a couple of examples, if he lands on an 'Application' square then the auction pile is turned face up and bidding commences. The highest bid wins the player on the pile and the manager must pay the bank, or else! If he lands on a 'Manager's Luck' square then the computer operator obtains an appropriate comment from the computer, which could be good news or an absolute disaster.

the Roman variety (not a brand in sight) but it disappears realistically into the background as the opposing car struts size progressively to give a good 3-D effect. The surrounding scenery changes periodically, albeit somewhat abruptly, from high rise office blocks to countryside and water, or it may occasionally blank out completely as you enter 'night play'.

Only a couple of gripes. Sometimes, a car will ramble into the back of yours before you've had a chance to accelerate off all the starting grid, and also there is no 'passer' facility. DEATH RACE is a commendable first time effort that will test your reactions to their limits. I have every reason to believe that it will become a front runner in the hard-fought battle between the software houses to claim top-spot in the budget league. Don't miss it!

Paul Rison



After each manager has completed his move the computer operator calls up the fixtures list and inputs the team strength for each manager. The computer determines the results of the match on the basis of each team's 'star rating'. The managers can now collect game money from the banker.

Having lost or made a fortune, the whole process begins again and so on until the end of the season. Every manager is awarded game points based upon his performance in the top string league, European competitions and F.A.Cup, together with his cash balance at the end of the game. There is no link

to the number of seasons over which the game can be played, this must be determined by mutual agreement. If it all sounds a bit complicated then don't worry, CDS have provided a comprehensive instruction booklet which explains all of the rules in a clear and readable manner. They have even provided a FOOTBALL FORTUNES hotline number just you get into difficulty.

Now for the bit I have deliberately left until last, and that is the computer program. The first thing I noticed was the loading instructions - 'Type KLN "C"'. Surely not! Yes, the entire program is written in B-A-S-I-C. After a routine primary wait (the fancy terms title screen deserves a mention) a READY prompt appeared. Just for the fun of it, I typed LIST, and there it was - not even garbled in the customary scrambled variables format!

I typed KLN, and following another wait it asked for the names of the teams, the names of the managers and the skill level required (1-4). Each manager was then allocated his initial squad, and the tape started running, yet again, until six minutes later when ... another READY prompt! Everything about the program seems to involve a delay. I have nothing against Basic being used but I have no doubt that using it in a program where

primary purpose is sorting out data was a big mistake.

The screen display consists of a pleasantly redefined character set on a multicoloured graphics mode 0 background. It presents a menu from which the league and points tables can be viewed as well as issuing random 'Manager's Luck' and 'Selection Problems'. One nice feature is the 'teleprinter' which springs into operation whenever match results become available.

One of the more essential features of the program must surely be the automated die, however it did not seem to work on my 8086. Whether this was due to Revision (Bug) Basic or a programming error I am not sure, but each time I selected the die option my computer locked up - which meant reloading the entire program.

BRIAN CLOUGH'S FOOTBALL FORTUNES is a fascinating board game which, in my opinion, should have been marketed as such. The program does a great injustice to the Atari's capabilities, which is a great shame as it lets down an otherwise prize-winning package.

Crave CDS, you can do better than this. A great package but what about the program to go with it?

Paul Dixon

CHIMERA

Firebird

£1.99 cassette

1 player

1 joystick



Firebird established themselves as a major UK software house creating 'cheapo' games for those who had not yet discovered the unbridled power of Atari. 1988 saw the production of their first Atari release, one of which was an arcade adventure called CHIMERA in the style popularized by Ultimate's Alien 8 on the Spectrum. Now they have added a new dimension to re-release titles by resurrecting CHIMERA, previously a £9.99 'budget' game in their Super Hitbox range that now demands the price Silver status at the ridiculously low point of £1.99.

If you missed the story first time around, let me guide you through. As luck would have it, you have managed to get lumbered with the unenviable job of saving the earth from total annihilation

(yet again!). The problem seems to be that an incoming alien vessel looks set to pulverize life as we know it, unless of course you can prevent this happening by activating the vessel's conveniently inbuilt self-destruct mechanism and (preferably) escaping prior to its detonation. If you are thinking 'that doesn't sound like the easiest task in the universe' then you would be dead right! The game begins with a warning that if you manage to complete it within a month then you must be some kind of freak. I do not doubt those claims for a minute!

You control the somewhat sensitive movements of Chimera (Could be one of R2D2's relatives) around an astounding three dimensional complex of rooms and corridors which have to be explored if you are to collect all of the necessary items, including boxes of bread and mugs of water to top up your food and liquid supplies. The graphics here are excellent, especially the intricate detail of your Chimera.

The lower half of the screen displays information on the state of your health, the current object being carried and the score, which is calculated according to

the number of problems you have solved. Above this is a scrolling message indicator that keeps you informed on the latest gossip and provides assistance should you require it from computer terminals which appear throughout the complex.

Added difficulties arise in the form of water-sapping raditors, electro-matic barriers, hidden objects and that damned irritating thumping noise in the background! Drawing up a map of the complex is absolutely essential. There is no save game feature so it will be necessary to plot the positions of bread, water and other artifacts for future reference. Please note: observe a mention, there is a super 'rainbow' graphics demo accompanied by some good quality music.

Compared with Macrotron's Molecule Man which runs along similar lines, CHIMERA comes up tops in my book. Don't expect a fast paced action game, but be prepared for a real challenge. At 'normal' prices it would be a good buy. At under two pounds, you can't go wrong!

Paul Dixon

HELPING OUT

As a relief from programming tutorials, and the fact that this issue will be on widespread public sale, I thought that I would share with you some of my letters which I receive from beginners. Most come with an a.s.c. so answers will be returned directly. Those that do not include the necessary a.s.c. just have to wait for moments like this.

For those of you not familiar with this column, let me explain the idea. I try to help out those people who are just beginning their ATARI computing. I write about the basics of computing and try to keep it at a low level. I cannot please everyone with my level of writing - even beginners progress! - but I hope that the column has been instrumental in getting a few new ATARI owners on the road to writing their own programs.

TYPING LISTINGS

I have often conversed with the Editor, Les Ellingham, about the magazine listings. His biggest headache is people who ring him about a listing that they cannot run, yet lots of other people can. I can verify that after many hours of typing and proofreading a type of word blindness occurs. It is very hard to spot the mistake at the time, yet next day the error is so obvious. The moral is to rest your eyes and give it another try much later. Another good point is to read the instructions - when all else fails!

I received a letter from a reader in Co. Meath who asked about TYPO 1, a great debugging aid when typing in programs. The two letter codes printed in the magazine is only for comparison with the code that appears on screen when you use TYPO 1. If the codes are wrong then you must find the error and correct it yourself, the computer will not do it for you! The program and directions are in every edition of the magazine.

SOME COMMON ERRORS

Error codes can be very frustrating if you do not know what they mean. Issues 21 and 22 of PAGE 6 is covered an explanation by Steve Pender of those codes and are worth getting hold of. As an example, in the same letter BRRRRR 130 was quoted. This means that a non-existent device was specified. This could be as simple as CLOSE #01 instead of CLOSE #0 - double typing a character. It could be more involved such as CLOSE #NSL. NSL is a variable that should have been set at the start of the program and either has not been set or has a wrong value.

A really common error is 043 AT LINE 0. When the program has loaded a mistake has been found by the computer. Getting to know error codes is important. If possible try to get hold of the issues mentioned or a photocopy of the relevant pages and pin them up somewhere handy in your computer. This will save a lot of time and frustration.

Remember to LIST the program often to cassette or disk, press NEW and RETURN then ENTER the program back again and continue typing. This may not fully combat the infamous ATARI lockup (some other computers are prone to this as well) but at least you do not have to type the listing from the beginning again.

THE WIDER WORLD

Several months ago, all fired up after reading "Going Online" by John Davison in PAGE 8, I obtained a modem and tried out some bulletin boards. I would like to thank Ian Hillen for his letters and kind words about PCW, and for his help during the time I wandered around "The Globe at Home". If you are interested that you could contact him at the BBS, 01 888 8894 (ST Phone Home). I consider it an interesting experience.

I had a letter from a man in Litchborough who had trouble writing programs. I diagnosed his problem as trying too hard! The secret for beginners is to type in very small programs, then amend one bit at a time and see what happens. Get to know the commands and how to use them before you try out any long listings. If you are a slow typer, or are not used to the control characters or even if like me you prefer the easy life (who mentioned the word *hap!*) why not consider a subscription to PAGE 6 on disk?

WHAT BOOKS TO READ?

I have often been asked about a good book to start off a programming hobby. I have always recommended 'ATARI BASIC - a self teaching guide' by Alderson (called the Wiley manual) for copyright beginners and 'Your ATARI Computer' by Les Pender and 'Keyboard Mapping for the ATARI by Computer' Books which are books that everyone who wants to program should have.

I have sometimes been asked to debug or write programs for readers. This is very time consuming as you can imagine and is something I do not undertake. I will however write small programs, say four or five lines, to demonstrate a particular point. It is then up to the readers to investigate this and try to amend it to his or her own use. One letter prompted me to start the 'Write - a - game' articles (issue 18 onwards), awarding sleepless nights for GUT Windup! Sometimes I receive disks, these give me problems if they are double density as I will use an 810 (small hint to Paul Rixon).

Having just used the word 'bar', why is it that we see very few female names in PAGE 6? What is Linda Tinker doing now? How about... (Look out for programs by Sarah Krantz and Linda Mayesmith in forthcoming issues. Ed.)

On odd occasions I have received responses from people whose letters I have answered. They are nice to read, as they give me an idea of how much help I have been. One such letter

Mark Hutchinson's column for those new to Atari programming

was from Mrs. Ellen Barnes whom you wanted to purchase a computer. It was a very nice letter, but what made it better was to see an article from Warren in Page 6 so that just proves that you can do it as well.

If you care to write to me at the address below, remember the name, if you mean a reply.

**MARK HUTCHINSON,
1, HOLLYMOUNT,
ERINVALE, FINAGHY,
DUBLIN 15,
IRELAND**

THE FIRST STEPS COMPUTER DICTIONARY

Over the next few issues I have decided to write definitions of some common words found in computing circles. Many beginners don't understand the jargon and I hope this will clear up some of the mystique. Unfortunately the definitions will be quite short due to lack of space (the Editor keeps cutting my columns!) but I hope they help.

Address - A number identifying a specific location either in memory or, with a peripheral, a specific register within the peripheral interface.

Algorithm - A sequence of steps to be followed when performing a task.

Alphanumeric - a character from either the 26 letters or ten numerals.

Analog - Relating to continuous quantities.

ASCII - The American Standard Code for Information Interchange. A 6, 7, or 8-bit code used to represent letters, decimal numbers and certain control functions.

BAUD - One signalling element per second. The measurement of the signalling rate on a data channel.

Binary digit (bit) - The smallest unit of information that can be used in a digital computer. Either a 0 or 1.

Byte - A group of bits considered as a unit. A byte is the smallest unit of information that can be addressed.

Bootstrap loader (boot program) - A short program that allows more complex programs to be loaded through an input device, i.e. cassette.

**COMING SOON IN FIRST STEPS
reading and saving screens and more
dictionary definitions.**

automake

run your basic programs automatically

In issue 27 we published a letter asking for a program to automatically run a BASIC program when a disk is booted. We received dozens of submissions from readers but almost all of them were based on a program published in Computer magazine which, because of copyrights, we cannot re-publish. So, we searched through several hundred User Group newsletters we have acquired over the years and found one in a recent issue of Pan Atari News from the Panama Canal Area Users Group. It would only run a program called AUTORUN.BAS so we added a few lines of code to make it run any program you wish and we have called it AUTOMAKER.

```

00 1 0000 *****
00 2 0000 ***** AUTOMAKER *****
00 3 0000 ***** ORIGINAL PROGRAM FROM *****
00 4 0000 ***** FROM STEVE BROWN *****
00 5 0000 ***** MODIFIED BY LEO ELLIOTT *****
00 6 0000 ***** *****
00 7 0000 ***** PAGE 0 MODIFIED - 00000000 *****
00 8 0000 ***** *****
00 9 0000 *****
00 10 0000 *****
00 11 0000 *****
00 12 0000 *****
00 13 0000 *****
00 14 0000 *****
00 15 0000 *****
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00 100 0000 *****

```

Type it in, check it with TEST 3, and load it to disk before you run it. Now place a disk, with DOS on it, into drive 1 and run the program. You will be prompted for the filename of the program you want to autostart. Type it in, making sure that it is correct, and press RETURN when prompted. The program will write an AUTORUN.SYS file to your disk. Now whenever you boot up with that disk, your BASIC program will run automatically! If, later on, you want to run another program instead, you could always run the AUTOMAKER program again and it will overwrite your original AUTORUN.SYS file.

AUTOMAKER is not the most sophisticated program but it does the job. What more do you want?

THE RESOURCE FILE

The Resource File is a new service provided by PAGE 6 to help Atari owners both 8-bit and ST find sources of information, help and supply. An entry in this feature does not necessarily imply any endorsement by PAGE 6 and readers are advised to check for themselves to ensure that the information is still current. We would ask any readers who find information to be inaccurate or out of date to let us know so that an entry may be amended or deleted.

RETAILERS

The following retailers, to the best of our knowledge, support Atari 8-bit or ST.

ATARI WORLD
15, Farnham Street
Dorchester
Wiltshire
Tel: 01242 61420

BERKLEY COMPUTING
14, Ash Grove
Berkley
Essex
Tel: 01774 62660

COMP
11, High Street
Reading
Berkshire RG1 1 1AB

COMPUTER CENTRE
11, High Street
Berkley
Essex
Tel: 01774 62660

COMPUTER WORLD
10, Broad Street
Birmingham
B3 1 1AD
Tel: 0121 643100

COMPS
11, High Street
Reading
Berkshire RG1 1 1AB
Tel: 0121 643100

OLDFORD COMPUTER CENTRE
10, Oldford
Wolverhampton
WV10 1 1AD
Tel: 01902 11100

OLDFORD COMPUTERS LTD.
10, Oldford Road
Wolverhampton
WV10 1 1AD
Tel: 01902 11100

ST WESTERS LTD.
11, Cambridge Road
Oxford
Tel: 01865 41700

STUDIO
11, Richmond Street
Reading
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BBS

Name: GARDING FIDO
Numbers: 8787 50911
Hours: 24 hours
Board: Atari 800 - 2400
Features: Atari 800 and program library

Name: THE VILLAGE
Numbers: 01 494 250
Hours: 14 hours 7 days
Board: VIC, VHS, VHSR, VHS
Features: 0.5 hours, ST, etc., CFM etc.

Do you run a Bulletin Board which caters mainly for Atari 8-bit or ST? For an entry in this feature please send us details as above (5 words max on Features) on a plain sheet of paper headed **RESOURCE FILE - BBS**.

Any background information included will be filed for reference but not published.

USER GROUPS

Name: CROSFELL ATARI USER GROUP
Contact: Dave Luggitt
1, Church Close
Brampton
Huntingdon
Cambs
Phone Numbers: 0440 89111

Name: SOUTH WALES ATARI GROUP
Contact: Raymond Price
Maritime House,
5, Lewis Street
Cardiff
Phone Numbers: 011 24991 9430

Name: RACE ROAD A.T.G.
Contact: Tony Longwell
15, Greenfield Road
Little Smeeth
Sheff. Ward
Chester
L16 1PL
Phone Numbers: 01274 62000
01274 62000

Do you want others to know about your group? Send details as above (5 words max. on Members) on a plain sheet of paper headed **RESOURCE FILE - USER GROUPS**.

That's all you get! We will not publish any other details on meeting times and please send no change. Approx someone responsible to handle any enquiries required.

IT'S UP TO YOU!

If you feel that your organisation should have an entry in this feature, write to us. While we do have details of many other User Groups and Bulletin Boards we have not included these as we do not know of the details are correct.

PAGE 6 reserves the right to delete any entry from this feature for any reason. Inclusion does not imply any endorsement by PAGE 6 and PAGE 6 can accept no responsibility for the accuracy or completeness of an entry. Please tell us if you find any entry out of date.

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