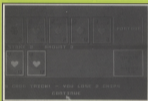


NEW ATARI USER

The Resource for the ATARI CLASSIC and the ATARI ST

Issue 65 December/January 1993



PONTOON

a neat version of this classic game for you to type in

FOR THE ATARI ST

TRANSFERRING FROM THE ST
TO THE XL/XE AND BACK

ZOOL

Seems to be the game of the year!

FOR THE ATARI CLASSIC

A NEW MAPPING THE ATARI?

Extracts from a forthcoming book

TOKENISED BASIC

A utility to explore the inner workings of Basic

DIRECTORY HEADER

Add a professional touch to your disks

BUILD YOUR OWN WRITE PROTECT SWITCH

PLAYER MISSILE GRAPHICS



The magazine
for the Dedicated
Atari User[®]

CONTENTS

Issue 55 - December/January 1993/4



You know what I'm gonna say!

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NEW ATARI USER
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PROGRAMS

MAZE PRINT <i>A fun program that could be expanded</i>	14
PONTOON <i>The famous card game played without cards</i>	18
TOKENISED BASIC <i>A utility to explore some complex aspects of Basic</i>	30
DIRECTORY HEADER <i>Add a professional disk header the easy way</i>	36
LITTLE MEXICAN <i>An unusual dice game where you have to lose!</i>	40
MINI TURBO	44

FEATURES

TOUCH TYPING DRILLS <i>Add more exercises to Atari's Touch Typing</i>	9
PLAYER MISSILE GRAPHICS <i>Another chance for you to get to grips with PMG</i>	10
A PENNY LOT <i>A wry look at computer owners</i>	16
COMPUTER GEEK? <i>Let's face it, we're all geek sometimes</i>	21
WRITE PROTECT SWITCHES <i>How to build your own for the 610 and 1050</i>	22
A NEW MAPPING THE ATARI? <i>Extracts from a new book</i>	24
CONFESSIONS OF AN ADVENTURE ADDICT <i>Yes! KISS, if the A.A. meeting again!</i>	38

REVIEWS

TURBO TAPE DECK	5
EYEWITNESS ELECTRONICS <i>A non-computer book of interest!</i>	15
TARBUS & THE ORBS OF DOOM / MISCZE VALDSIRA	47
KULT / NIGHT MISSION PINBALL	48

ST FILE

FROM ST TO XL/XE	55
AND BACK	
MAKING MUSIC <i>A free program from Yamaha</i>	56
CRAZY DAZE! <i>Half a dozen bargain games</i>	58
PD ROUNDUP	60
ZOOL <i>Best game of the year?</i>	62

DEPARTMENTS

EDITORIAL	4
MAILBAG	6
THE TIPSTER	28
THE CLASSIC PD ZONE	34
DISK BONUS	40
COLOURISTS	
TUTORIAL TIME	46
THE ACCESSORY SHOP	49
CONTACT	54

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TURBO TAPE

Checking out Micro Discount's Turbo Tape Deck

If you were reading *New Start* I have where it was published under the title of Page 8 Magazine then you may well recall advertisements from a company called Flamin'. Among several products they advertised a tape deck conversion kit that enabled cassette to be loaded at super fast speeds, but the main drawback was that you had to be handy with a few tools in order to convert your own recorder and it was not exactly easy to convert most tapes. Now, Micro Discount has re-engineered the Flamin' device and can supply SC-12 cassette decks with a rate of turbo speed together with a good selection of commercial games ready to load in high speed format.

THE TURBO RECORDER

If you already have a cassette recorder and are handy with a soldering iron then you can purchase a Turbo kit and install it yourself! But the majority of users will be happier to purchase a fully converted unit.

The SC-12 TURBO RECORDER from Micro Discount costs £23.00 plus £2.50 postage and only needs to be plugged into your computer. It will load all standard tapes as well as the High Speed format so that you have no worries regarding your existing software collection. All your present tapes will load but only at the usual speed. If you want to take advantage of the High Speed facilities then you will either have to convert your tapes or buy ready to run High Speed tapes from Micro Discount or Tige Developments. Several games and utilities are already available.

HOW DOES IT WORK?

A High Speed tape has a special header that loads the Flamin' program at normal speed taking about 25 seconds and on 'bootstrap' from there on the program blocks into memory at the highest speed achievable and the loading times are reduced by eliminating moments as detailed in the table opposite. The load process is silent with the usual loading sound replaced by on-screen status lines consisting of a line at the top of the screen indicating how many bytes have been loaded into memory and a horizontal bar of garbage showing the information being loaded. I have no idea why this is necessary as it only serves to make the process look quite unattractive, as if the programmer couldn't figure out how to shut off the screen. The status information at the top is quite adequate to show that the load is progressing properly. Still it doesn't indicate the loading and average load times are so short that it won't bother you too much.

ADVANTAGES

As far as games go, the loading times are improved so much that you are likely to play your favourite games much more often and you will wonder how you ever had the patience to load the games before. And the Turbo Recorder also opens up the possibilities of using more serious programs like word processors.

Micro Discount sell a High Speed Word Processor on cassette which is actually state-of-the-art, cassette based word processors have been available before but they suffered the major drawback

TURBO LOAD TIME COMPARISONS

	STANDARD LOAD	TURBO LOAD
ARCADE FIGHT MACHINE	9 min. 7 secs	1 min. 34 secs
AMNURQTE	15 min. 5 secs	2 min. 27 secs
BUNKEYS SCARY SCHOOL	15 min. 10 secs	2 min. 17 secs
CAVERNA	12 min. 5 secs	1 min. 15 secs
PEGO	15 min. 26 secs	2 min. 28 secs
GHOSTBUSTERS	14 min. 48 secs	1 min. 52 secs
HIMBIE'S HOUSE	12 min. 5 secs	1 min. 15 secs
JOCKY WILSON'S GARTS	15 min. 25 secs	2 min. 15 secs
LAS VEGAS CASINO	15 min. 12 secs	2 min. 17 secs
BREAK FORCE	14 min. 50 secs	1 min. 50 secs
MOUNTAIN BIKE RACER	15 min. 5 secs	2 min. 27 secs
WILIA COMMANDO	15 min. 26 secs	2 min. 45 secs
STACK UP	8 min. 21 secs	50 secs
MEMORISED 8	10 min. 43 secs	60 secs
L.A. SWAT	10 min. 5 secs	60 secs
THE LAST GUARDIAN	14 min. 5 secs	1 min. 12 secs
TAGALON	13 min. 5 secs	1 min. 8 secs
TIGER ATTACK	12 min. 10 secs	1 min. 27 secs
TYRES	15 min. 13 secs	1 min. 48 secs
ZYBEX	15 min. 25 secs	1 min. 58 secs

tape of taking ages to load and then ages to save and load any documents you have created. The High Speed Turbo format means that, at last, word processing becomes practical on a cassette based system. This version of TurboWriter loads in 1 minute 45 seconds and will save and load in high speed. The manual is on the reverse of the tape and comes in fact parts with the total comprising 87 pages when printed out. The first part of the manual takes just 30 seconds to load, less time than it takes to print it out! On a standard recorder this might take up to 18 minutes to load making any word processing session a long, slow and tedious.

Other serious programs available include PRIME LAB, a 385-byte program for the IBM printer, an excellent drawing package called DRAWBOARD and also PRIME BASIC: an cassette complete with a photograph of the manual that Page 8 put together! Ah, well!

WANT TO BUY ONE?

If you don't have a cassette deck at present then I can see no reason for buying a standard deck when for about £14 more you could have the SC-12 Turbo Recorder. All standard tapes will run and you have the opportunity of purchasing high speed format tapes. These work on a little more expensive at around £4.50 each but are well worth it. Spend your time playing games rather than listening to their load!

If you already have a cassette deck, then you could convert it yourself, and we hope to cover the conversion procedure in a future article, but you might prefer to just sit out and buy the SC-12 Turbo Recorder. It is, without doubt, the best thing I'm hearing in disk drive.

Les Ellingham

Mailbag

Well, the time to compile another column has come round again, so it's time to feed up PaperClip and sift through the post that has been forwarded from Birmingham Towers in Stafford.

Allan J Palmer

**Allan J Palmer
sits in the hot seat
at the sorting office
awaiting your
letters on all things
Atari - get writing!**

**Write to MAILBAG at
Page 6 Publishing,
P.O. Box 54, Stafford,
ST16 1DR**

PRINTER SOLUTION 1

In issue 64, Steve Taylor asked for assistance in using a Commodore MPS1200 printer with his Atari 800C. Peter has been a speeding bullet, Tony Dingham from Lincoln responded as follows:

I have been using a MPS1200 printer with various XL and XE computers for around three years and have encountered no real problems. The MPS1200 has a 'standard' Centronics parallel connector and a serial connector in the form of a 4 pin DIN female connector (this unfortunately was designed to work with something called a Commodore 64/128 cable). The printer will work fine via a parallel interface if you use the AtariPrint card, and as the printer can be adjusted for different emulations, Epson FPM0, IBM ProPrinter and IBM 80C, with various other functions such as carriage return etc., I found that a little bit of playing around with these has been necessary. Some word processors on the Atari worked better with different emulations. For example, with the printer set for Epson FPM0 and using AtariPrint, the text sign prints out as an English pound sign, whereas with the IBM Drivers Added Management by PowerPC Plus via Data DrivRight word processor, it prints the hash symbol. I have found the IBMPS100 to be a great little workhorse and it can turn out pretty good 300 quality, although graphics tend to suffer with a 'banding' effect found on most 8 pin printers.

Thanks for your help, Tony, which I have passed on to Steve. It's the combination of assistance like this which will help keep the Atari Classic alive and encourage people to continue supporting our favourite arena. I hope at least will follow Tony's example and respond to other questions.

PRINTER SOLUTION 2

Also in issue 64, Richard Preston reported problems in using AtariPrint+ with his Panasonic KX-F1125 printer and single sheets. Following my suggestion to investigate the printer drivers produced by Richard Gore and available from TR0000 (P.O. Box 8, Waltham, York & Wain M20 0GJ), Richard Gore himself has written:

I was pleasantly surprised to see my name mentioned in the reply concerning the printer drivers I wrote for TR0000. However, I think Mr Preston is approaching his problem the wrong way. I've had the best way to use this printer with single sheets to do

follows: Write your document using ARI+ on a sheet but don't include the page width line tabs. Be sure you haven't disabled the printer's paper cut sensor, then clear your document using the 'Print Printer+' option by pressing OPTION-F1 and note where the page boundaries occur. Next print your document on a sheet, using OPTION-F1 from those published in issue 6 of TR0000's club, ensuring you don't want to use subscripts or superscripts. The printer will stop printing near the bottom of a page when the paper cut sensor indicates there is no paper left, however, by pressing the 'COLLINE NEXT' button you can force the printer to print the next line of text (the paper cut sensor is positioned a couple of inches, effectively behind the paper so you should have enough paper left to print another three or four lines of text). Repeat this until you have printed your full page (as noted earlier), then insert a new piece of paper and press the 'COLLINE NEXT' button once more and the printer will carry on as usual. If you want to use sub/superscripts, things are a little more complicated as ARI+ has a 'feature' that makes them at the start of each page (using my direct strip-out) - this can be easily corrected by using a CONTROL-C command at the start of the start of each page (full details are given in the documentation supplied with the TR0000-004).

The Panasonic KX-F1125 is an excellent printer at a good price. You may be interested to hear that 805's new Atari 8-bit News-paper is printed using one. Finally, I'd just like to get a plug in for my new game for the Light Disc - it's titled 'Alice Blue' and should be available from 055 982 Thomson Avenue, Bally, Derrinstown CO4 803, now, priced around five pounds.

Thanks for the advice, Richard. Your comments are always welcome. Good luck with your future Atari Classic ventures - anything new for 8A?!

A PRINTER QUESTION

Now we have a request from Jack Barnes of Ulverston, Cumbria:

I have a Atari 600 and a 1400C together with an 800 strip-out. I purchased a Brother 1625 printer which has a 800/80C driver interface plug from a 80 pin connector on the printer which has 20 wires connected as follows:

- pin 1 Protective Ground
- pin 2 Transmitted Data
- pin 3 Received Data

pin 4 Request to send
pin 5 Clear to send
pin 6 Data for Ready
pin 7 Signal Ground
pin 8 Received Line-Signal Detector
pin 11 Secondary Response to Send
pin 20 Data Terminal Ready

On connecting a pin D plug to pins 2-8 and 20 on pin the 89A interface handbook, the printer does not respond, what should I connect the other two pins to, or will I need an interface for the printer in addition? If anyone can help, I would be most grateful."

"Well, Jack, judging from our past successes, I'm sure we'll get response from at least one of our Mailbag readers who will be able to supply an answer. Won't you?"

LETTERS FROM FRANCE

Daniel Chastelain from Neuchâtel, near Argens, France writes to be single-handedly keeping the French postal system in profit. For last a number of letters from him over the last two or three months. Among them he mentions that he is in correspondence with Ted Perry regarding the serial printer insertions mentioned in an earlier issue. Daniel has also sent more comments and disks regarding his use of ACE-C, and I must apologize to Daniel as I have not had the opportunity yet to study these disks in great detail, but Daniel certainly seems to be able to use ACE-C successfully.

TV PUZZLE

Jason Kendall from Houston, Louisiana asks for some advice: "I have a GEORG and a Philips TV (2002 model). When using the computer, the color numbers on and off if the TV has been on for a minute or so beforehand, if the TV is off for a long time (say 15 hours) instead the color comes on OK. With the 2002 SET, the color comes on either way. The LG202 is okay with either TV. Is the problem with the SE/TV or cable from the SET? Can it be fixed?"

Can anyone shed some light on this?

ATARItris II

Jason continues, "I was amazed at how good ATARItris II (the latest 60 disk version) was. However, on 2-player cooperation mode, occasionally the 'B' blocking disk block appears at the start of a level if player 2 has won the previous round. Also, player 1 gets frozen for a while - their piece hangs in mid-air. Can this be resolved? As for scoring the high scores, you need to copy all the

files to a DOS 2.0 disk rather than just write-enable the same disk as DOS is unable to access the file."

Had you're enjoying another of the disk houses even if there is the occasional feature - anyone got any files for them?

INDUS DRIVES

From Birmingham, Herts, Jack Lee is pleased to report that following issue 64, and his request for information about the Indus OT disk drive, he has "...already had some response from one of the 'Contact' columns." Ye old Mailbag Editor was also able to dig out some info in the form of an original advertisement and a couple of reviews of this drive and passed them on. Jack hasn't "...got the drive operating yet, but I will keep trying. Meanwhile, I've bought an X2001 and a 1020 printer and I'm really getting into DOS, BP, C3D, etc./ I'm amazed by the amount of really good stuff there is in the PD library, and have made contact with some User Groups and operators. Any other old computers supported or enthusiastically 1 wonder, or is the Atari 8-bit really special?"

Had to hear you're making progress. Jack, it really seems as though the Atari 8-bit is a "Classic".

CLASSIC vs IBM

Regular correspondent Ted Berry states his letter with "I had not intended to write to MAILBAG this month due to ill health and the large amount of handwritten writing to be repaired which has arrived since my first letter was published. All my spare time is taken up answering letters and repairing faulty equipment or should I say repairing or re-jigging tempering. In fact, all except one job that has arrived here has either been damaged physically or has been discarded and then re-commissioned successfully and presented not to work. I wonder why people do not leave things alone when they do not understand them?" As they say, Bill, a little knowledge is a dangerous thing, Bill continues by observing that Derek Perry only received 50 people with an interest in Atari to make a trip to the Games Atari Show possible. "...but only 27 could take the time to stand up and be counted" Ted goes on to describe his recent experience with having a IBM PC clone installed at the local company of which he is a director. "It was a long story about, it took a month to get the machine configured correctly and up and running. "So what has this to do with my Atari? Well, it was very easy to obtain help and operators and a mouse and using a hard drive is fantastic, so is the BARBERSYS for the EMS memory manager the ATTOEDC.BAT and CONPRO-

20K. If only my Atari could do half of this I would be happy and of course because there is so much available and so many suppliers the price is kept down. As an example, to fit a hard drive to my 80000 will cost, allowing for exchange rates and size of drive, about £2000, to fit same to the IBM clone, about £600, and I can have it today! This offering of another computer that can keep me away from my first love has prevented me from entering a drive from C.C.S. in New York and some of the other goodies they can supply as I have to cover the cost and lots of my have to work hard for money I suspect. I may be selling all my Atari and buy an IBM clone, 386 - I won't of course, but I am tempted. What do you make of that, should I keep to my Atari or should I make more sense to buy an IBM clone? Just think of all the hard work that Lee and his team of contributors put in to keep the Atari Classic alive and then only 27 new Atari operators can be found to go on a trip. Yes I can see Derek's reasoning I would go if I could it off. It is enough to make you want to quit and sell PC software and to hell with them. Well I for one hope you don't quit and I hope enough support is forthcoming to keep PC alive and well."

As usual, thanks for another interesting letter, Bill. Such comments help to keep the old Mailbag alive. I wonder if we'll get any response? We should get at least 27 letters, shouldn't we?

ADVENTURE SOLUTIONS OR JUST HINTS?

From long-time Atarian Eddie Cousins of Southland, Scotland:

"There has been one thing cropping up over the last few issues, and that is the printing of complete solutions to adventures and other games - unless in my opinion depicts the object of the solutions. A programmer may spend months on producing an item of software only to find the solution is published within weeks of its launch. This is neither productive to the software's success. I have often not bought an item because prior to purchase I have seen a complete breakdown in 'How Many Users'. Let's face it, when you're stuck on a problem, it's hard not to peek at the answer. I'm not against hints and tips that may help to solve the common case of solving the game, but surely encouragement is called for. I recently bought 'Thebus' and in the next issue of 'MAG' there was a complete breakdown of the game. Surely just hints would have sufficed? The fun of such software is getting the old grey cells working and feeling good when it is solved, which might only a measure of time if it is difficult, but not complete maps/breaking of specific solutions, please?"

As a well-endowed Adventure addict, I

Mailbag

sympathize with your views, Eddie. The difficulty is, I think in a number of cases of being able to give the right hints appropriate to what an individual has achieved. One hint may in itself assume that the player has already completed another part of the puzzle. There of course, how do you create solutions? I think Indiana had one of the best ways with their "Invited-Guest" booklets. Various questions were printed in blue, but the answers were invisible until you ran a "magic marker" pen over them. Thus you were able to reveal a hint at a time. Indiana also included a number of hot burning questions, so you couldn't make assumptions from reading the rest of the questions but "What do other people think? What would you like the MSX-120 to be?"

SOFTWARE RECOMMENDATIONS

Eddie Coonan also notes that "Walters should not complain about the lack of quality software - there is some super stuff on the market. Tiger Developments and Derek Fern both produce affordable, first class software, some of it no more than a few. I have just bought 'The Citadel' from Neil Ottaway of Paper Development and the two 'Turbo' disks, and they are excellent. Discounts and sound advice with game-play are superb and if you include their other title 'Mister Halpkins' then you are set up for quite a few hours of problem solving without the fear of being suggest to death on the first ten screens. The Tiger Demo also gives you the chance to see some of their titles before you commit yourself.' Tiger also produces some software on cassette. I think Eddie likes these games...

ST SPOT

David Bennett from Cannock asks: "...can you help me with a question about starting up the Atari ST? With the 8-bit diskette, I watch on the disk-drive first but the ST has one drive built in. I have never much conflicting advice about starting up the ST - some say switch on with a disk in others say this will harm the disk on the magnetic field changes in the heads." I'm not an ST owner, but Len Ellingham advises that "...it makes no difference whether you switch on with or without a disk, it just takes longer if there is no-disk on the computer then to read the non-existent disk, something as without a disk guarantees a clear century but no disk booting with a 'virus' disk. If you want to speed up the boot process just make a boot disk by formatting it and write protecting it immediately so it cannot be infected by a virus. Talk about damaging disks in cassette if you think about it. If it were true then every commercial game disk would become damaged since most of these have to be loaded from drive A."

A Birmingham, Crawley, West Sussex has a reassuring tale:

"On 20 March 1983 I purchased from Silver Systems (Slings, Kent) a Visutek Monitor VTY2 with a Atari 1040SPE Basic package. Both items were new, a couple of weeks ago I wrote to Silver Systems asking if they could supply a service manual or circuit diagram for this monitor. I stated that I was prepared to pay for the information. Perhaps I received a reply from SSS stating that unfortunately they do not have any technical information on this monitor. As the monitor was only recently introduced by them, what sort of repair would not pay if the monitor were to malfunction? All I can say is 'Tiger Develops'!"

My reason for requesting information was that I wanted to use the monitor with another computer, so I needed the pin out of its connector at least so as not to have to open it up because the monitor is still under warranty, and I have since been given a colour monitor which I ordered for the 1040SPE. It surely introduced me like the Visutek monitor should have proper technical backing with circuits and technical data to enable quality service and repair to be carried out should the need arise - suppliers please take note!"

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SOUND ADVICE WANTED

Now here's a little more from Daniel Barrett whose letter we featured earlier:

"The Mark Walters' letter in issue 82, I too would like to see an article or even a series on sound sampling. Many great demos (e.g. Riding/Brands) have been produced using samples. I have at least 300 samples and I have managed to work out amazing sound effects that play forever, many using over 50 sectors of a normally formatted disk, the kind of digital clear samples I refer to are guitars, drums, organs, and many, many, many, organs, often sound effects. About 150-200 sectors is equivalent to 2MB, so you can see my playing, e.g. in sample of a guitar at different times, just as Digiprint can do from the MSPLAS system, can even practically a whole guitar sequence using one sample. This could mean other samples can be stored in memory, and on Mark says, sure tracks can be played at once, with the computer only taking up between 100 to 200 sectors, I hope people will write to M&A and other Atari magazines if they wish to see samples more widely used. Can samples, or any utility/program be compressed like the files are on the MSOS-2. Register disks? For some 200 sector files

compressed into less than 100 sectors."

"Well that's an interesting subject for a future M&A article if there's someone out there who can write it. Check out Page 15. Professor finds for some idea of sounds."

MORE NOTES FROM THE NETHERLANDS

In a previous column, I included some extracts from a lengthy letter from Bill Wolters of Eindhoven, Netherlands. Here follows a few more extracts from Bill's message:

"Working language subroutines are often included in page 0 of the Atari memory (0 - 55601500). Without knowing M&A they work, I use them and when using more than one in a program I put each routine in a string and when the actual flow comes to use them, I simply enter the number I need into position from Turbo BASIC, MOVE, ANSWERKEYS, I KUNLENROTTENIS, I find Turbo BASIC more useful. Turbo BASIC's status is unclear. Has P.D. in 87 in Holland and England it is available on P.D. in Germany. It was published by 'Happy Computer', an company could become that way, type it in and use it, or perhaps that was done. No copyright on any of this or any other program that was paid. Should one never be said to be illegal. What is your point of view?"

In the manual of the print program SP&SP (Germany), I encountered the specifications 204, 204, and 204 for print fonts. Can anyone explain these?"

My immediate thought is that I'd suggest fonts designed for 8-pin printers. P24 suggests 24-pin printers and E247 (MSX) as a P series of printers which are popular in Germany, so I would say that the P people refer to MSX printers and the E in Spanish refers to the number of pins. Ed.

MORE QUESTIONS

Roger Kay (I hope I've interpreted your signature correctly) writes from Woodbridge, Suffolk:

"I have already written to you before. Why can't you write back? Also it not got through? Or can't you be bothered? Last time I wrote you to ask you if you could find out how to use my brother's computer camera player to record cassette on. My computer is ZX 80. As I am writing this letter it would also like to know how to record on a disk drive Atari STK."

Steve Hoyle when I look on the post of Mailing Editor I didn't find any previous letter from you in the writing office. In the meantime, you are asking the sort of question which can be answered in many ways,

depending on what language you are writing programs in (I assume that's what you want to record...). The simple answer for the OS/2 with an Atari-compatible monitor 1418/1500A/9C11 or 9C12 is when using BASIC, you use the `OSAVE` or `SAVE` command. Perhaps someone would like to recommend a tool or provide a tutorial for this process on the Classic and the ST?

PRINT BUFFERS AND VISICALC

Another regular correspondent, Ray Freeman from Mansfield Hill, London asks "whether there are any still any printer bug for *Visicalc* available which can be used with the Atari Classic. I remember that there were several available a few years ago. Does anyone know where of any and how much and where from?"

Ray also appears to be a user of *VisiCalc*, since a highly professional response program referenced for the Atari (and other micro-computers) in the early 1980s, he enquires if "...anyone has looked into *VisiCalc* to improve it or enhance? Although *VisiCalc* is now somewhat old, it is still very versatile and easy to use but it would be handy to know if anyone has been able to adapt it to be used with, for example, DOS 3.3 or *SuperDisk* or *MyDOS*, or has been able to bring color to change the color from the boring standard blue and white, use a RAMDisk or the extended memory of a 1300E, and what about variable column widths? Obviously you can't expect *CA SuperCalc* or Lotus 1-2-3, but I think these changes could really improve *VisiCalc*."

Involving suggestions Ray. Has anyone experienced like this, or how about someone contributing an extensive comparison of the various spreadsheet programs available for the Atari Classic? (This here are other ones - see past issues...)

The *Divided Deadline* Dues is hanging over me, so it's time to wind up this month's Mailbag. I've just realized this is my sixth column, marking the completion of my first year as Mailbag Editor for *New Atari User*. I hope you're still finding the column interesting and that you'll continue to keep the mailing effort busy by sending in plenty of correspondence for future issues. Let's raise more questions that the experienced hands of *Atarians* can get their teeth into, and please feel free to send in your comments on anything related to the Atari Classic. By the time this is printed, I may have had the opportunity to meet some of you at AMUG, if I can fit in a trip to darkest England in between other commitments. As the occasion, Merry Xmas and all the best for an *Atari*ful New Year!

CREATING YOUR OWN DRILLS FOR TOUCH TYPING

by Noel Harris

Have you ever found that you're such a good typist that you've used all the files supplied with *Touch Typing*? Would you like to use bits of your typing books so you can test yourself? You don't know how? Then that's no longer as I have discovered how you can create your very own extra drills without the need of any fancy programs to type in. How does this happen? Well, for an exercise, try this. With an Atari file in memory insert the "Practice Test the Advanced Typing" cassette (Page 11 of the pack) into your cassette unit, type `ENTER` and press `RETURN`. You find that you get five other lines of screen but the computer also displays the last line by line. You will also notice that will also work with *Masterfile* files (see page 45 of the *Masterfile* manual for that). Now boot up *Masterfile* (this probably works better with the older cartridge version and try to load the same file, after a few minutes for the book key as the file will overwhelm the memory. Now edit the file and you will notice that the words are all there! And it is this very compatibility with *Masterfile* that is the secret of making your own files. Note that when you make your own files using the method outlined below you should make the files using *Masterfile*.

CONSTRUCTING YOUR OWN DRILLS

When you are making your own files for *Touch Typing*, you must know how these files should be constructed. Each file or drill contains no lines separated by a chosen line or separator to tell the program the end of a drill.

Each line consists of 38 characters plus a `RETURN` keypress and is made up in the following order:

1. The first 36 characters can be letters upper or lower case, numbers or punctuation marks.
2. The last two characters must be spaces followed by `RETURN`.

In the following example important keypresses are in square brackets (□).

EXAMPLE:

This is the end of a line, where `[SPACE]` `[SPACE]` `[RETURN]`

Each file is separated by the separator, this also contains 38 characters, but in the following order:

Four full stops `[...]` followed by 34 spaces and `RETURN`.

IMPORTANT NOTES

Now you can make up your own files there are just a few things to add concerning your new drills:

1. When using *Masterfile* you must ensure the default file at the top of the first page of drills.
2. Each file must only have six lines and be constructed in the manner described above.
3. You must only use characters to create your files as the program cannot read off a disk drive, also use a good quality tape. (This may not be many files as you like/you are the tape as the program only reads one file at a time!)
4. You can only use word processors that have programming capability i.e. can have files loaded into the computer as a program with the `ENTER` command (*Masterfile* would be the best to use).
5. Use the new files only with the Advanced part of *Touch Typing*.

And there you have it, like the *Trivial Pursuit* *Question Master* in a previous issue of *New Atari User* there is a lot of work to do but it does work. If you like you could use your typing booklets in order to test yourself. So, here's wasn't a fun with a program to type in!

PLAYER MISSILE GRAPHICS

PMOs - also called "sprites" or "movable object blocks" are stripes or grids on which pixels are plotted. They are displayed by the Auto chip and the chip redraws the background when they move.

The only difference between a "player" and a "missile" is that players are 8 column blocks (2 32x3 characters) wide while missiles are only 2 column blocks wide. Player/missile height or length can be up to 128 pixels in double resolution (the default setting) or up to 256 pixels in single resolution. The machine allows you define 4 players and 4 missiles (numbered 0 to 3). A 4th player can be defined by combining missiles.

Player missile graphics are very useful in games programming because they work independently of their background (so you don't have to redraw the underlying scene when they move around). Other features of the PMO system include special memory locations which can be read to detect when players meet each other or background objects, and the facility to change the graphics size very quickly on screen. Also containing 3-D effects. In spite of the advantages, some people are put off using players and missiles because it is assumed that a good knowledge of machine language programming is necessary to use the PMOs effectively. However, as the listing shows here demonstrates, you can in fact access nearly all the features of the PMO system without going near machine code. The program defines 2 missiles (player 0 and player 1) and puts them on a Graphics 7 screen. Player 0 moves horizontally and shows properties of the PM system like collisions and priorities. Player 1 moves vertically with the help of a small machine code routine.

SETTING UP THE PLAYER MISSILE SYSTEM

1. Reserve memory for the stripes: The amount of RAM you need to set aside depends on whether you are using single or double resolution. The double resolution mode of two screens uses for every data line four 128 bytes per player while single resolution (one screen line per data line) uses 256 bytes per player. It follows that you'll need to reserve more space for single resolution. Also, one of the requirements of the system is that the reserved memory area must start on a 2K boundary i.e. no remainder when you divide the RAM start address by 2048 for single resolution and a 4K boundary for double resolution modes.

LINKS 80-90 of the listing set aside a 2K area in high memory for the stripes. LINK 100 tells ANTIC where the PM base is by giving the page number of the address where the area starts into memory location 54279. Table 1 shows where the player missile graphics data is stored within the reserved area. The numbers in brackets are for double resolution. You will see

Don't worry if you have never tried player missile graphic programming as Ann O'Driscoll's explanation should make things easy

that bit 0 missiles 0 fits our block Missile 0 uses the first 2 bits of each byte (numbered 0-1), missile 1 uses the next 2, missile 2 uses bits 4-5 and missile 3 uses bits 6-7.

2. Clear out PM areas: It's usually a good idea to get rid of any old bits of program from the player missile area before you start putting in your own data. LINKS 140 to 180 clear the player 0 and player 1 memory areas by pointing the relevant addresses with 0s. We're only using the first two players so we don't need to clear any more.

3. Put shape data into the stripes: You define a player missile shape the same way you design a character.

PM start	Not used
PM start + 768 (384)	Missiles
PM start + 1024 (512)	Player 0
PM start + 1280 (640)	Player 1
PM start + 1536 (768)	Player 2
PM start + 1792 (896)	Player 3
PM start + 2048 (1024)	

TABLE 1: Layout of player missile memory area.

```

02 1 NEW *****
03 2 NEW M PLAYER RETURN ADDRESS M
04 3 NEW M M *****
05 4 NEW M by the ***** M
06 5 NEW M *****
07 6 NEW M NEW NAME NEW M NEW NEW M
08 7 NEW *****
09 8 NEW
10 9 NEW *****
11 10 NEW *****
12 11 GRAPHICS PAPER FOR LINE PAGE FOR, 44
13 12 PAGE FOR FOR FOR FOR, M
14 13 NEW FOR FOR, FOR FOR FOR FOR FOR M
15 14 NEW
16 15 NEW *****
17 16 NEW *****
18 17 NEW *****
19 18 NEW *****
20 19 NEW *****
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96 95 NEW *****
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98 97 NEW *****
99 98 NEW *****
100 99 NEW *****

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TO THE STEP INCREASE IMMEDIATELY, IN
IMMEDIATE NEXT M
101 100 NEW *****
102 101 NEW *****
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200 199 NEW *****

```

except that this time instead of an 8 x 8 grid you use 8 x 128 (double resolution) or 8 x 256 (single resolution). You use 2 x 128 or 3 x 256 for missiles. Of course, you don't have to use up all the available bytes. The data in LINES 280 and 299 define our two robot shapes, each 16 bytes long. LINE 190 defines the data for the first robot into the player 0 memory area six bytes at a time. We can put the data anywhere we like within the stripe - an offset of 80 was used here so that the sprite would be positioned in the top half of the screen. LINE 210 points to the player 1 data in the same way.

On the question of actually defining the shapes, in this case the players were relatively small and simple so the data values were worked out easily enough using graph paper. For more complex shapes it would be a better idea to use a sprite editor. For instance, there's one in the Page 9 Public Domain Library Disk 4354 which lets you draw PM shapes on a grid with a joystick and shows the data numbers alongside each line.

4. Set player colour: LINES 260 and 270 point colour values into memory locations 704 for player 0 and 708 for player 1. Players 2 and 3 use colour locations 706 and 707. Missiles have the same colour as their associated players - i.e. player 0 and missile 0 both use shadow colour register 704, player 1 and missile 1 use colour register 705, and so on. If 4 missiles are combined to make a 5th player then this player takes on the colour in shadow memory location 711.

5. Set player width: You control the width of your players using memory locations \$2350-5 (\$2350 for P0, \$2351 for P1, etc.), while the width of all 4 missiles is controlled by memory location \$2365. Poking in 0 or 2 gives "normal" width, a value of 1 gives double width while a 3 quadruples the original width. This listing uses normal width (LINES 280-285).

6. Tell Antic what you want: This is done by setting specific bits in memory location \$20. We add up the bits that are "on" to get the value to be POKED in to the memory location. The options are outlined in Table 2. LINE 290 points to a value of 58, made up of normal screen (2) plus enable players (8) plus single resolution (16) plus more on Antic (\$20). As double (2 line) resolution is the default setting you don't have to add a value to location \$20 to get it.

7. Switch on the system: LINE 300 switches on the players by poking a 2 into memory location \$207F. Poking a 5 in here would enable the missiles as well, while poking a 1 would switch on the missiles only.

8. Set the priorities: Finally, when players and the graphics display occupy the same screen location we must

decide whether to show the player or the graphics object. This is called "priority arbitration" and we control it by poking a number into memory location \$20. Priorities are given in terms of colour registers and the available options are set out in Table 3. The background colour (register 4) always has the lowest priority and missiles have the same priority as their associated players. Also, when players overlap on the screen, player 0 always appears in front of the other players, player 1 has precedence over players 2 and 3, and so on - we don't control this order.

LINE 400 of the listing puts a value of 5 into \$20, which means that the players will appear behind objects drawn using colour registers 0 or 1 but in front of anything drawn in register 2. Incidentally, location \$20 is also used to control other player missile features - if you're combining 4 missiles to make a 5th player you turn on bit 4 by adding 16 to the priority value (i.e. 4 or 8) if you turn on bit 3 (add 32) to your priority value you get a new colour when player 0 overlaps with player 1 or when player 2 overlaps with player 3.

SCREEN DISPLAY

LINES 500-505 of the listing draw a scene showing a house, a fence, a tree and a box. The house walls and fence are drawn using colour register 2 (COLOR 2) so our players will appear in front of them. The players will be hidden by the tree and box, as these are drawn using registers 0 and 1 (COLOR 0 and 1 respectively).

THE BASIC ROUTINE

Horizontal movement: Each player and missile has its own horizontal position register, stored from memory locations \$2240 for player 0 to \$2255 for missile 3. LINES 508-515 update the player 0 X axis co-ordinates when the joystick is pushed left (\$=7) or right (\$=11), with the "P" statements giving a wrap-around effect. LINE 560 moves the player by poking the new value into its horizontal position register. While you can poke in any numbers between 0 and 255, values of less than 40 or more than 208 do not appear on the screen. The player's vertical position was determined when the shape data was POKED into the PMG area, this won't change in our basic routine.

Collision detection: Altogether there are 16 registers which detect the 4 types of collisions or overlap possible between player/player, player/missile, player/display and missile/display. These are found from memory locations \$2248 to \$2263 and are summarized in Table 4. A separate single memory location, \$2275, must be poked with an operand to clear the collision registers. In this program this is done each time the stick is read (LINE 503) and after every collision (LINES 565 and 566) so that old values don't throw off the PEEK control.

	VALUE
No screen	0
Narrow screen	1
Standard screen	2
Wide screen	3
Enable missiles	4
Enable players	8
Single resolution	16
Turn on Antic	32

TABLE 2: screen specification locations for memory location \$20

	VALUE
All players > all colours	1
P0-P1 > all colours > P2-P3	2
All colours > all players	4
C0-C1 > all players > C2-C3	8

TABLE 3: Priority order values for memory location \$20

The collision effects used are very simple - LINE 3050 gives a low high beep when player 0 passes over player 1 and LINE 3050 gives some low beeps when player 0 goes behind the box (vertical register 1). LINE 3060 also makes player 0 change size by poking its width register with a 0 (normal) or a 1 (big) when it meets register 1. The number (N) goes up by 1 at each collision and normal size is restored for even numbers. Generally speaking, if you move the rabbit into the box from the right, you increase his size while moving him out to the left returns him to normal width.

MACHINE CODE ROUTINE

While everything in the screen so far has been done with Basic, the real problem is that we can't move our sprites vertically - because player missile stripes extend the whole length of the screen, you don't have any vertical equivalents of the horizontal position registers. This is where the bit of machine programming comes in. The code used here was taken from a game called "Blitz" by John Glynne published way back in issue 26 of page 8. The routine is called up each time you want to place something on the screen with

```
CALL $540:$544,Memory location of data to be moved,Memory location of data destination,Number of bytes to be moved
```

LINE: This is the starting address of the memory area where the machine code routine is located. The code was read into memory by LINES 300-306 of the program.

The memory location of the data to be moved. The movement loop places the sprite data on the screen LINE 3100, rolls it out by putting blanks in the same vertical position LINE 3120, and updates the horizontal and vertical co-ordinates LINE 3130-3150 and repeats the process. Therefore, two separate sets of data - for sprite data and the roll out data - need to be moved. Both sets are FORKed into two areas at the start of the player missile base by LINES 3030 and 3040. LINE 3010 of this sub-routine, which is called up before the movement loop comes into operation, clears out the opening 3 pages of the player missile reserved area first.

The memory location of the data destination. This will be writing the 256 byte area from PBASE+1280 to PBASE+1535 because we are moving player 1 this time. The pointer movement routine at 3135-3140 determines the offset (N) from the start of player data's memory area. The pulse of 18 wires used to give a size amount offset.

DISPLAY COLLISIONS

53248 - 53251	Missile 0-3/Display
53252 - 53255	Player 0-3/Display

	VALUE
Collide with register 0	1
Collide with register 1	2
Collide with register 2	4
Collide with register 4	8

PLAYER COLLISIONS

53266 - 53269	Missile 0-3/Player
53260 - 53263	Player 0-3/Player

	VALUE
Collide with player 0	1
Collide with player 1	2
Collide with player 2	4
Collide with player 4	8

TABLE 4: Collision detection registers

Number of bytes to be moved: This is set at 18, which is the length both of the rabbit data and the 'roll out' data used in this loop.

Horizontal movement follows the principles used for player 0, except this time we're updating horizontal position register 32249 (LINE 3165). LINE 3130 shows how to keep the player on the screen instead of using the wrap-around effect used with player 0. Also, an example of 3 wire low state effects used in conjunction with the vertical movement routine, an increment of 3 was used in this section of the program.

ENDING THE PROGRAM

The FORK 3037:0 in LINE 3030 turns off the players and stops you getting vertical lines down the screen when you quit.

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MAZE PRINT

```

00 0 000 *****
01 0 000 0      MAZE PRINT      0
02 0 000 0      BY DAVID LAMONT  0
03 0 000 0 *****
04 0 000 0 NEW STATE ROAD - SEE 000 0
05 0 000 *****
06 0 000
07 00 000 000,000
08 00 000 000 TO 00000 000 TO 00000,000
09 00000 00000 0
10 00 000 000 TO 00
11 00 000,000,000,000,000,000,000,000,000,000
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15 000 000,000,000,000,000,000,000,000,000,000
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17 000 000 0
18 000 000 000 TO 00000 000 TO 000000
19 000 0,00000 00000 0
20 000 000,000,000,000,000,000
21 000 000 000 TO 00000 00000 0
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24 000 00 000,000,000 000 000,0-000 000
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```

by David Lamont

This amazing program plots a maze on the screen that has only one path through it. It is then printed out so you can solve it. I use the ATARI XAMMOI printer so if you have a different one then changes may be needed to lines 0040 and 0050.

An array the size of the Graphics 4 screen is dimensioned. The program then assigns values and plots its way around until the screen is full.

Try changing to a Graphics 2 screen and altering the size of the array.

I am currently working on an idea for a game which will either use screen flipping and several Graphics 2 mazes or a Graphics 4 maze divided into several sections. More about that in a later issue.

Eyewitness Science ELECTRONICS

If I'm not often that we review something that has not got direct reference to the world of the Atari Classic, but here is a new book that anyone who has wandered past from their Atari needs will find fascinating. It is not a computer specific book but covers the whole field of electronics from the discovery of electricity to the present day microchip.

ELECTRONICS is one of the Eyewitness Science range produced by Dorling Kindersley aimed at young persons. Although no age is suggested, it is probably suited to children from nine or ten upwards, and upwards means all the way for this is also a book that will help parents and adults answer all those embarrassing questions when enquiring minds start to wonder just how that Atari computer works and how the other records pictures.

The book is very attractively laid out with a good balance between pictures and text. Each double page spread represents one aspect of electronics and is almost equally balanced between pictures and text. The pictures are wide ranging, and varied and excellently captioned with key elements pointed out by lines connecting the text and pictures. Even the most complicated component is relatively easy to understand.

IN THE BEGINNING

The opening chapter explains just what electronics is with examples ranging from the telephone to a laser pointer so the reader will know what sort of things in everyday life are dependent on electronics. In order to understand how these extremely complex devices work, however, it is necessary to understand the development that went into many things we now take for granted and so we are immediately transported back to 1840 to see how communications and signalling were handled with purely mechanical means. It would not be long before Michael Faraday was to begin his experiments with electricity and magnetism.

Just what a huge leap electricity provided is shown on the next spread with a picture of a video recorder, camera cover and fully captioned, alongside pictures of Faraday and Ohm who discovered the original link between electricity and magnetism. With a starting point established over 150 years ago, we are now ready to begin the journey to understanding the components of electronics such as resistors, transformers, capacitors and the like.

Everybody has heard of the components that go into radios, televisions, computers and the like but how many of us understand how they each work? Eyewitness Electronics will not take you into a scientist but will give you a good understanding of what is going on inside these tiny pieces of equipment that mean so much to our life today. Capacitors, for instance, store electricity but how? As well as giving a proper scientific explanation the procedure is explained by analogy to a balloon being blown up until it can take no more air, either you can have no more in it or it explodes. Useful analogies like this help explain many other components and concepts.

Flip the book open at any page and you will find something



interesting from things that you never thought about to things you use every day. Did you know, for example, that lifts use huge gears to move them and set rails into sequence to give the shortest waiting time? I always thought that they worked like the Grand Old Duke of York, when they were going up they were going up and when they were coming down they were coming down. It was just your luck that you pushed the button on the ground floor as the lift set off for the penthouse level. Apparently not, for lots of electronics are working out how to get the lift to you in the shortest time. Pity nobody has invented a little panel that tells you that it is going to be quicker to take the stairs!

THE MICROPROCESSOR

The things that most youngsters are going to be interested in are towards the back of the book, for it then takes a long time to get where we are today in the world of microprocessors and microchips. The joy of this book is that they can go straight to their favourite part, pull out some intriguing facts, and then go back to see what was happening in earlier days. One of the delights of any good book of facts is when you can dip in whenever you fancy and pull out another piece of information of the old 'you know ...' variety. The Eyewitness guides score highly here and will keep kids and parents entertained for a long while.

The Eyewitness Science guides are available from any bookshop with a good children's section and cost £3.99 each. Titles already published are Electricity, Force & Motion, Light, Matter, Energy, Evolution and Chemistry with the Human Body and Ecology to follow. At £1.0 apiece they are not cheap but they are beautifully presented and designed to last a long while. With Christmas coming up this would make an ideal alternative, or extra, present and will be in use long after the latest computer game has been long forgotten. Try something different that will expand your kids' minds and get you all the book when you can't remember just when the Maxwell and Boltzmann was invented!

A FUNNY LOT

Kevin Cooke takes a very look at Atari owners - watch it you might be in here somewhere!

What is it that makes computer owners become addicted to their computers? Without computers, many jobs would take a lot longer, or would they?

This article will take a look at every type of computer owner. As first it may all seem a little far fetched, but is it? Aren't we all from at least one of these groups?

GAME FANATICS

This is usually the first stage that people go through when they get a computer. Even if you are not yet one, don't you remember playing games for hours at a time? This section of people can be split up into many sub groups.

PLATFORMERS: This group of people must be one of the worst of all the game owners. On consoles, these games consist of running along platforms and occasionally falling off to jump on enemies' heads. On computers, these games involve guiding an unnamed character through numerous levels, performing pool perfect jumps. Do we ever know why we have to do this, and do we really care? And is it really fun? Of course it is, but why? If anyone knows, perhaps they could tell me.

SHOOT 'EM UP FREAKS: These are just as bad as the platformers. Why in the world of these games, are you the only one capable of saving your games from destruction? Probably because of all of the practice you get playing these games all day.

ADVENTURE ADDICTS: Let's face it, the reason we all have adventur areas is because most of us can't seem to do the simplest of these games. We come out with sentences like "So what if your new adventure game has got 5000 locations. My database is capable of holding 5000 records". We then switch on the reports subse puzzle and complete the game that same day. In this way we pretend that our game must have a bug, and use that as an excuse not to play it?

ROLE PLAYERS: These people getting with the adventure adds. They manage to kill the strongest of all the creatures and survive for days, when most of us can't survive for more than half an hour. How do they do it? Ordinary people have to resort to cheat tactics. Have adventure addicts and role players found a secret that the rest of us don't know about?

SIMULATION FREAKS: These people seem to lead a totally boring life. After flying an aircraft for three hours with one hand, they give you an in-depth report of their flight. Does anyone really want to know what altitude they flew over Japan at?

WAR GAMERS: To most people, a computer war game looks like a screen full of different coloured blips and dots. To a war game enthusiast, this same screen is his deadly army of highly trained killers. Perhaps someone should consider manufacturing special glasses that allow normal computer users to see the same thing on their screens. Have you also noticed war games seem almost impossible to play?

SPORTS ENTHUSIASTS: How can jiggling a joystick forwards and backwards as fast as possible be classed as a realistic sports game? Jiggling a joystick while performing a real sporting event won't help you much, so why on earth does it in these games? Football managerial games also seem slightly different to real life. If a football manager's job really consists of the same thing, and is really that easy, then maybe some people are in the wrong job?

LET'S BE SERIOUS

Of course, games players aren't the only people that use computers. Many people use their computers for more serious(?) uses. Here is a look at some of the programs these people use.

WORD PROCESSORS: Why do people use these things, it is usually only after they have written an entire document on the computer that they realize that they could have hand written the document in a third of the time. It may not have been so good, but who cares when your writing a letter to Auntie Phyllis? And why does the letter that you drafted on first on paper, always end up printed as a tiny letter in the middle of an A4 piece of paper?

DATABASES: This seems at first to be one of the good ways of using a computer. It is only after storing your entire list of addresses and telephone numbers on disk, that you either loose the disk or realize that it is quicker to look for the address in an address book, rather than loading the database into your computer?

SPREADSHEET: What a great idea storing your accounts on computer seems. That is until you explore your spreadsheet disk (along with your database disk), and can't access your accounts. Never mind, you can go through the entire process again and again, inspiring that the same thing is bound to happen again. And we all know that it probably will.

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COMMUNICATIONS PROGRAMS: Why not use your computer to receive cinema or theatre tickets? Because you could have made a normal phone call & not come quickly and cheaply to do the same thing, that's why!!

TYPISTS

Of course, the people that create most of these strange computer systems are the programmers that write the programs in the first place. These people can also be split into different groups.

BASIC PROGRAMMERS: These people just aren't understandable. They sit for hours creating and typing in a program, and then either find enormous bugs in it, or decide that they could have written it a lot better and start again.

MACHINE CODE PROGRAMMERS: What on earth are all of those numbers meant to mean? And how are people meant to understand how a machine code program works? Do the programmers know how it works, or do they just type streams of numbers in, among those of us that just don't know how to program in machine code?

PEOPLE THAT TYPE IN PROGRAMS FROM BOOKS AND MAGAZINES: These people are terrible. Their programming ability consists of changing the words in the REM statements and pretending that they wrote the program. What is worst of all is that these people eventually become the types of programmers listed above.

After all of this negative stuff, just why do we use computers? I don't know either but we all use them and we wouldn't be without them, would we?



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COMPUTER GEEK?

I think I've been into the much-debated computer geek. It started with an innocent trip to a computer store, just to look around. As president of a computer users group, I feel it's necessary for me to keep abreast of what's happening in the computer world. But there should be no legal way for me to enter these places, the same as laser shows. I cannot go in either without paying something, or the detriment of my wallet, not to mention my liver.

At any rate, I was looking around the computer store at all the IBM peripherals, which are useless to me with my 8-bit Atari, when I spotted what was called a power center. This is basically a power bar and does the same thing, except that it sits under your monitor and has a lighted rocker switch to turn on and off each individual component of your computer system.

The thing which caught my eye was the rocker switches, each of which had an LED to it. Under each switch was a label, COMPUTER, MONITOR, PRINTER, AUX1 and AUX2. There was also one labelled MASTER. You can imagine my delight when I found that pushing each switch caused an LED to come on.

I guess this fascination comes from growing up watching Star Trek when it originally aired. I miss the red show, with its glorified sets, people who couldn't act and lots of flashing lights. You'd think after 25 years of trying they would have learned how to act, but after viewing Star Trek VI, the only thing they learned was how to go grey and get fat.

Anyhow, I grew up thinking that anything that had flashing lights was awe and exciting and a harbinger of the future. A display of LEDs puts me into immediate ATTRACT/EXTRACT mode. The lights attract my attention and make it much easier for the subsequence to extract the money from my wallet.

\$1 dollars and 87 cents later, I was the proud owner of my very own power center, which I received along as much as the Queen needs another son getting married. This couldn't be considered one of my more subtle moves seeing as how it did the main job in my existing 60-05 power bar, but it sure did look great after I set it up. The problem came in writing it up.

The desk my computer sits on was built by my favorite uncle when I was in Grade 5. It always was a nice desk, but as my computer-geekness grew, I had to build small extensions on either side to house my ever-expanding computer system. Every component you add has it's own power cord. Now that I have a computer, monitor, amplified speaker, two-disk drives, a modem, two printers and a XEROX, there's a lot of wires behind that old desk. And I wasn't forget the power cords which originally caused the problem. It too has its own cord.

I don't know how a perfectly straight cord which you run from the individual items to a wall plug or power bar can magnifically become tangled up with every other cord back there, but it looked like a divergent mating ritual of singularly horny snakes behind my dear departed uncle's desk. The poor old guy would have been shocked.

Given that I couldn't move the desk because of the extensions I built on either side, how was I going to get the wires from the

Ever bought something for your Atari that you didn't really need but for some reason just had to have? Gordon F. Hooper knows the feeling

floor up to desktop level to plug them into the power center? For that matter, what the hell am I going to do when where I have to move? I guess I'll just have to sell the house minus my computer room, and remain locked up there for the rest of my natural life.

Bring a building computer geek. I tried to think of a high tech way to not cut the wires, but ended up using that reversible old wireline, the metal clothes hanger. I uncoiled it, straightened it out and put the plug end of the computer wires onto the hooked end of the clothes hanger to lift them up. I got somewhere along the way when Stephen Jobs used the ubiquitous coat hanger in the process of making the first practical home micro-computer. Probably he ran out of wire at 4 am one morning and pressed the coat hanger to as a substitute. I know I made an emergency electrical repair with one on my car late one night. You don't want to know what the clothes hanger was doing in my car, why I was out late at night, or why I'm now spending time at the library looking for information on ETC's.

After everything was connected and I had glared for half an hour about how impressive the lights looked while pushing the switches on and off, I sat down at the computer to write a letter to William Shuster asking for advice on how to control. When I finished, I wanted to turn off the printer and use the other one, so with a quick glance at the power center, I pushed the switch. Oops. It was the COMPUTER switch I turned off. The hell it hadn't saved it to disk. After cursing for a few minutes, I realized if I had been satisfied with the original power bar this couldn't conceivably have happened. Trust me to come up with a brilliant new way to lose data that costs money. That must be the reason they made me president of a computer club.

Oh well, I guess I'll go out and trade in my glasses for the laser-stained variety and buy a plastic pocket protector so guess won't stain my shirt. Maybe I'll even go whole hog and buy a bow tie so that I look like that ultimate computer geek, an IBM owner.

WRITE PROTECT SWITCHES

Steve Whiteley from Western Australia presents a fairly simple modification to your drive that anyone who can use a soldering iron should be able to do

This project is for anyone who owns an Atari 1050 or 810 drive, and does not have a switch to enable disk write to any disk. I know what a pain it is to have to cut notches in the disk so you can write to the back of it, or write on a disk with the notch covered, so here's how to install a switch to remove the tedious task of cutting or opening notches. I do not accept any responsibility for damage incurred while fitting these switches, but I have fitted them myself without any trouble.

COMPONENTS

The components you will need are:

- 1 D.P.D.T. toggle switch
- 1 small red LED
- 1 small green LED
- about 10 inches of 5 strand wire
- 1 soldering iron + solder
- 1 resistor (colour band - red, blue purple, gold) - for the 810
- other lengths of wire as needed

810 INSTALLATION

I should mention before you begin that you will need to find somewhere to place the switch and LEDs. Work this out first so you will know the lengths of wire you will need.

1. First open up the top of your 810 drive and locate the side circuit board to the left. At the rear of the board locate the two connectors going in. We will be dealing with the first connector, which should be coloured brown. It's also likely you have the wrong one. You will notice that there are 5 wires to the resistor.

2. Now you will have to locate the solder pads on the other side of your circuit board corresponding to the resistor and solder one strand of wire to pad 1 (top), another strand to pad 4 and another to pad 5.
3. Take the switch and solder the end of the wire from pad 1 at the circuit to pin 3 (bottom) of the switch, pad 5 to pin 2 (middle), and pad 4 to pin 1 (top).
4. You now have write enable/disable in your drive. Have a test (try writing with and without a notch in a disk, and make sure that to write to any disk the switch is down. If you wish to continue and fit LEDs come on back.
5. Back so soon? Right, now when I refer to the 'other' pin 'n' on your switch I mean the side that you haven't as yet used.

You will need to solder one end of the resistor to pin 1 (top) of your switch, on the same side that goes to pad 4 - this gives power to the LEDs. Solder the other end of the resistor to the other pin 2 (middle).

6. Solder a wire to the other pin 1 (top), and another wire to pin 3 (bottom), and test your red LED on these wires to you know which way to solder it. To test your LED (turn on the power to the drive if course) simply push the switch down and it should light up. If it doesn't then reverse the wiring to the LED and it should work.

If you still have problems then re-check the previous wiring. Solder the red LED to those wires once you have the correct connections.

7. Solder a wire to the other pin 3 on your switch, and another wire to pin 3 corresponding to pad 5, and test the green LED on these two wires (tick the switch up and it should light up. If it is well, solder the wires to the LED and position it where you want to the drive.

There you have it, one write protect/enable switch fixed with LEDs.

1050 INSTALLATION

For the 1050 you need the same equipment as for the 810 except the resistor.

1. First unscrew and remove the top half of your 1050 the

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837 **CHASER 34** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

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839 **CHASER 36** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

840 **CHASER 37** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

841 **CHASER 38** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

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843 **CHASER 40** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

844 **CHASER 41** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

845 **CHASER 42** - Chase, Action, Adventure, Amplitude, The Maze, Maze, Easy-Action, Amplitude, Maze, Maze

- careful, just fill it up and down until it comes away).
- Locate the connector block which is at the back but just inside the bezelcase. The first two connectors have two wires each and should be blue-white, and white-red (if they are all white don't worry, you can still do this, just do one wire at a time). These are for the white switch (white-red LEDs). What we are going to do with the switch is short out each face out (though, so don't worry) the bottom 80 LED so that the drive thinks the disk has a switch.
 - If you want to do it the easy way then pull out the first connector (blue-white wires), cut the two wires so you have enough extra wire to solder another wire to each. Solder them back together with the additional wire first and cover with electrical tape.
 - Solder the wire you have joined to the blue (or first) wire to the pin 3 (middle leg) of the switch.
 - Solder the wire you have joined to the white (second) wire to pin 1 (right) of the switch.
 - Re-insert the connector and pull out the red one (should be the white-red wires).
 - Cut the red wire, (if the wires are all white, cut the second one, ignore the first wire) and, in the same fashion as before, join a wire to the blue leads, re-join the wires and re-insert the connector. Solder the other end of first wire to pin 3 (bottom leg) of the switch.
- You should now have a working write protect/enable switch so go and test it (this comes back and I'll show you how to fit the LEDs in.
- If you want to do the job without cutting and joining wires,

- you will have to take out the inner workings so you can access the bottom of the circuit board. This solder the wires I told you about previously to the solder pads located under the connector pins. It is easy that's not so hard as it seems, but just a bit more work.
- Back again? Right - you now have a working switch, and want some LEDs to show you what's happening. Solder a piece of wire to pin 2 of the LED near the main power switch in the drive circuit, and the other end of the wire to the other pin 2 on your switch. This will power your LEDs when you turn on the drive.
 - Solder a wire to the other pin 3 (on the switch) and find somewhere to run a ground wire from, preferably from the ground wire attached to the drive mechanism on top, and test the green LED on these wires. Once you have it right then solder them.
 - Solder a wire to the other pin 1, and use the same ground wire from the green LED to test the red LED, then solder them accordingly.
- Finally find a place to mount them (if you want you can work that out) and you should have a good working write enable/disable switch with LEDs.
- Make sure that you study each step before you begin and ensure that you have identified the correct components. You should have no problems with this simple modification but remember that neither *New Atari User* nor the author accept any responsibility should any problems arise. Proceed at your own risk but have fun with it!

A NEW MAPPING THE

With Mapping The Atari long out of print XL/XE programmers have had to struggle for a good reference book but the Tyne and Wear Atari Users Group hope to remedy this situation by publishing a new guide to the XL/XE sometime next year. To whet your appetite we present a few extracts from the book written by Andy Thompson.

Welcome to a few small extracts from the new programming book being created for your XL/XE. The book is not yet titled but is heavily based upon Mapping the Atari - REVISED by Ian Chadwick. It has corrected most (perhaps all) of the incorrect information and errors from that book and, in addition, there is a fair bit of information that is just not covered in Mapping. In addition to the MAP section, you will find an XL/XE Operating System section being with descriptive remarks alongside and there are several appendices that I hope will expand your knowledge and be readily available for future reference. Most of the information in the MAP section that references other sections in Mapping, you will find amongst the appendices.

At the time of publication of this article, the book hasn't been completed but we do hope to have it ready by Christmas if all goes well or early in the New Year. The title and price have yet to be decided but keep in touch with TRUCE or PAGE 8 and you should find out soon enough.

Without further ado, let us embark on the extracts I've presented you.

MISSING INFORMATION

As a simple example of information missing from Mapping, take the following locations:

95,89 58,59 SAVMBC

The lowest address of screen memory corresponding to the upper left corner of the graphics first screen. The upper left corner of the text window is at location 980 and 991. You can check this with:

```
10 GRAPHICS 1
20 SCREEN=PEEK(95)+256*PEEK(96)
30 WINDOW=PEEK(98)+256*PEEK(99)
40 POKÉ SCREEN,51 POKÉ WINDOW,58
```

How is such waste managed? Well, take a look at the following chart:

GRAPHIC MODE	ROWS bit /split	COLS BYTES line line	SCREEN MEMORY	DL MEMORY
0	24 20	40 40	960/960	32/32
1	24 20	30 20	480/640	32/32
2	12 10	30 20	240/480	32/32
3	24 20	40 10	240/480	32/32
4	48 40	60 10	480/640	32/32
5	48 40	60 20	960/1120	32/32
6	96 80	90 20	1920/2080	16/16
7	96 80	90 40	3840/4160	16/16
8	192 192	320 40	7680/7680	322/170
9	192 192	30 40	7680/7680	322
10	192 192	30 40	7680/7680	322
11	192 192	30 40	7680/7680	322
12	24 20	40 40	960/1120	32/32
13	12 10	40 40	480/640	32/32
14	192 192	160 30	3840/4096	252/170
15	192 192	160 40	7680/7680	252/170

Note, that the first number is the Screen memory is the amount of memory actually needed, where the second number defines the amount set aside due to header calculations and boundaries. The first DL number is the amount of full-screen instructions, the second being the split-screen amount. Where the screen clear function is covered the display header clears the memory between the address given by SAVMBC and RAMTOP. The old bag of RAM being cleared above RAMTOP with the Screen-CLEAR function and the scrolling of the text window has now been eradicated, we feel free to (re)use RAM directly above RAMTOP without any worries of it being lost. SAVMBC and RAMTOP can also be used in your own programs to clear blocks of memory fast. This is especially useful in

HE ATARI?

clearing PMC's or strings, as in the following program:

```
10 POKE 85,0:POKE 85,40
20 POKE 108,PEEK(105)
30 ? CHR$(125):GRAPHICS 0
```

This clears all the memory from location 10040-40 * 256 to RAMTOP - 1. Be sure to call a graphics mode afterwards so that the screen write address is returned to normal.

LOADING PICTURES

Here's a useful routine that can be included in your own programs. It will load a picture file into the Graphics mode in use:

```
10 GRAPHICS 15-16:MEM=7880
20 DATA 104,104,104,170,78,80,328
30 FOR I=0 TO 8
40 READ D:POKE 1006+I,D:NEXT I
50 H=INT(MEM/256):L0=MEM-17*256
60 OPEN #1,0,"D:FILENAME.PIC"
70 POKE 849,1:POKE 850,7:POKE 851,PEEK(88):POKE
852,PEEK(89)
85 POKE 855,L0:POKE 857,H:POKE 858,L
90 ?USR(1034)
95 CLOSE #1
```

If you wish to save the picture to disk, then you ... well you'll have to check the book where you'll also find additional instructional information - for all programs, I'm not going to give it all away!

As you can see, all of the XL, XC graphics modes are covered. There are various other locations throughout the book that also support all 16 modes, of course.

CLARIFICATIONS

Another feature is the clarification of many locations by using program listings, such as:

186,187 BA,BB STOPLN

This is the line where a Basic program stopped either due to an error or the use of the Break key, also where a Basic STOP command is misinterpreted or where a TRAP statement occurred. Try the following:

```
10 TRAP 30
20 ?(It is a deliberate error)
30 LINE=PEEK(186)+(257*PEEK(187))
40 ? "Are you aware of error '(PEEK(185))' at line 'LINE'
```

INTERESTED?

TRAP40 hope to be able to publish the book, which is likely to run to 250 pages, at around £12 which is a remarkable price considering the small size of the target market and the limited resources of a user group. If you are interested in obtaining a copy, write to David Bates at TRAP40, P.O. Box 8, Walsend, Tyne & Wear, NE28 4SD to express your interest. Your response will enable TRAP40 to consider the likely sales and so publish at the best price.

80 TRAP 40000

I believe that subjects are best explained with small straight-forward Basic programs, rather than complex, badly written paragraphs of the English language. The TRAP 40000 statement above simply issues off the first TRAPing mode.

SCARCE STUFF

How about subjects that you don't see in the majority of manuals? Well, good fortune that since your way forward here is a description of the hardware owners. Where were these last detailed?

The **HARDWARE-TIMERS** are used to count intervals from time to a jiffy (1/60th of a second). They count down from a user set value until they reach 0 whereby they vector to the appropriate address. These are very handy for many applications including music distortion, game I/O clock, volume alterations, timing, and even digitized speech (see the TOSLDRS.BIT appendix) etc. etc. I've told you one of the applications in the book.

Here's a program that uses hardware timer 1:

```
10 POKE 52768,0
20 FOR I=0 TO 12
30 READ D:POKE 1006+I,D:NEXT I
40 DATA
170,10,270,41,240,141,10,212,141,24,208,104,84
50 POKE 528,0:POKE 529,0
60 POKE 52768,30
70 POKE 16,193:POKE 52774,193
80 POKE 52768,1
```

It's nice and easy when you see the Basic program that performs the task isn't it? Here are the steps to creating a similar program yourself:

1. POKE ALIEXTL with the clock frequency you wish to operate in (548800, 1+1920's and 96+3 76800). The PAL system actually works at 2.917MHz, but it seems that POKE's 847 are stopped to this clock timing circuit! It doesn't seem possible to disable POKE's internal clock for faster processing 847's.
2. Mapping steps to set the channel control register to 52768, to what and why it doesn't say, but when I was fiddling around with it I found that it has no use at all!
3. Place your machine-language interrupt routine into a safe part of memory making sure it ends with a HAL and RTI. Note that if you use the X or Y registers then you should PSH them and restore them at the end of the interrupt.
4. Address your routine with the appropriate Timer-vector.

8. POKE a value between 0 - 255 into the relevant SIDP register. This is the delay (in clock-cycles) before the interrupt routine is re-executed. You should be very careful with this value because if it is shorter than the amount of time your interrupt routine needs to fully execute then you are firing with trouble. The system can CRASH!
9. Enable your interrupt by setting its bit in ICREN at \$D774 and its shadow PORADR at 16.
10. Finally, POKE a non-zero value into STIMER at \$D768 so that your computer (the SIDP register) is reset to the value you coded here in step 8.

I wasn't going to include these steps in this extract, but because things are a little known feature of the Atari, I feel that more advanced programmers might find it interesting.

TRYING TABS

Moving onto another subject, and indeed another set of hardware, we have:

675-689 TAB-DB1 TABMAP

Map of the TAB stop positions. There are 15 bytes (15*8 = 120 bits), each bit corresponds to 1 column in a logical line, when a value of 1 means the TAB is set and a 0 means otherwise. If you wish to clear all the TAB stops then you can enter POKE all these locations with 0 or press the TAB key to load an each tab-stop and press CTRL+TAB. Likewise, if you wish to create a tab then position the cursor where you want the tab stop and press 248*7+TAB or POKE the appropriate bits in. Try the following program.

```
10 DIM C$(8)
15 DATA 128,64,32,16,8,4,2,1
20 FOR I=1 TO 8
25 READ D: C$(I)=CHR$(D):NEXT I
34 FOR J=1 TO 15
40 POKE 675+(J-1)*8:NEXT J
45 FOR TAB=1 TO 150 STEP 5
50 GOSUB 70
55 NEXT TAB
64 STOP
70 BYTE=(TAB-1)/8
75 BIT=(BYTE-INT(BYTE/16))*16
82 V=ASC(C$(BIT))
85 BYTE=BIT+(BYTE)
84 POKE 675+BYTE/16*(8+(BYTE)/16)
86 RETURN
```

You can use this program to set any TAB positions you wish. The CHR\$(8) routine between lines 70 - 86 actually sets any TAB stops given to it by the TAB variable column at intervals 1 - 150.

LOADING/SAVING FONTS

Most about those 8 sector disk fonts etc. that various character editing packages load and save. Well, the routine to save your font is:

```
0 DATA 134,134,134,170,76,68,228
```

```
1 FOR I=0 TO 8
2 READ D:POKE 1308+I*D:NEXT I
3 OPEN #1,":D:\NAME.FNT"
4 POKE 848+I*POKE 850,11:POKE 852,0:POKE
853,PEEK(130)
5 POKE 856,0:POKE 857,+POKE 858,0
6 X=USR(1308)
7 CLOSE #1
```

With this program, having created a font in Basic, you can save it to disk as a 9 sector font file. If you'd like to load it back in, then I'm afraid you'll have to get the book. Damn, isn't it a quill script!

GRAPHICS IN MACHINE LANGUAGE

A nice subject that isn't made clear much is calling graphics modes in machine-language. It's all done with CIO. Just set the various parameters, hit C to CIO and there you have it. Well, you could create your own Display List (DL) and change the DL pointer at locations 580 and 591, but that's the cowboy method. I certainly don't do it that way ... definitely NOT! Here's!

```
10 DIM A$(32)
14 A$(ADDRESS)=INT(A/256):L=A-H*256
20 FOR I=1 TO 32
30 READ D:POKE A+I*D:NEXT I
50 DATA 152,112,112,88,64,192,2,2,2,2
60 DATA 2,2,2,2,2,2,2,2,2,2,2,2
70 DATA 2,2,2,2,88,64
80 POKE A+8:L=POKE A+91,H
90 POKE 848,L:POKE 849,H
```

Don't copy me, here's the PROGRAM method.

```
0180                   "=8000
0190 :
0195 CIO                = 58454
0198 COMMAND         = 804
0199 BUFFER           = 808
0199 AUX              = 842
0199 AUX2             = 843
0199 :
0199                   LDX #0
0199                   LDX #0                   :OPEN
0199                   STA COMMAND,X         :CLS:SCRN
0210                   LDX #04               :CLS:SCRN
0220                   STA AUX,X
0220                   LDX #0                 :MODE
0240                   STA AUX2,X
0250                   LDA #NAME$255
0260                   LDA #BUFFER,X
0270                   LDA #NAME$256
0280                   STA BUFFER+1,X
0290                   JSR CIO
0300                   BRK
0305 :
0310 NAME             BYTE "S"
```

Who wrote that program I (and you) say, can't have been me! Anyway, how about drawing in machine-code? It's nice and easy in Basic because there has supplied us with PLOT and

DEBUTS, but for machine code you'll need further information from the book. Shall I give you a clue...? Nope, it's all to do with locations 84, 85, 86, 88, 8T and 89. You might also need a ROM code 17.

ROM INTO RAM

Location 84817 (DE81) Mapping supplies a good program which turns your ROM OS into a RAM OS. 'Well, how about the internal Basic ROM and the SELF/TEXT package? Here's a program that will turn your ROM SELF/TEXT to a RAM SELF/TEXT:

```
10 DATA 173,1,211,41,127,141,1,211
12 DATA 189,88,133,204,189,48,133,208
14 DATA 189,0,133,203,133,208,189,0
16 DATA 177,203,146,205,208,208,248
18 DATA 230,204,230,206,189,204,201,88,208,208
20 DATA 173,1,211,8,128,141,1,211
22 DATA 189,48,133,204,189,88,133,208
24 DATA 189,0,133,203,133,208,189,0
26 DATA 177,203,146,205,208,208,248
28 DATA 230,204,230,206,189,204,201,88,208,208
30 DATA 104,96,-1
40 G=0
50 READ D:IF D=1 THEN POKE 1536-G:G=G+1:GOTO 40
60 X=LGR(1536)
```

Corrupted SELF/TEXT memory in locations 20480-23527, 25000-8C3FF. You can also do the same to the Basic ROM with this program, as described earlier, but you'll have to use location 54817 for the modifications.

SPLIT FONTS?

Another subject which I believe has not been described in any other source to date, is that of the SPLIT/FONT mode. A very powerful technique that I originally discovered some years ago.

```
10 GRAPHICS 8
20 DL=POKE(2685+256*PRN(367))
30 POKE DL+3,2-32+64*POKE DL+7,2+32
40 POKE DL+9,2-32
50 POKE 54877,4
60 ?
62 ? "Y-Y=2PE*256MSS*YAD11OKAIF"
64 ? "MJDTS=2EDLWDL2ZAmT&4H"
```

I'm not going to tell you what happens, just type in the above program and RUN it up. The book doesn't really go into what you can do with this new mode, but I'm sure the possibilities are endless. Information can be achieved by including HEXCODES on one of the lines.

This covers just a few of the many pages within the **MAP** section of the book, but, of course, every independent memory location has been described. Amongst the appendices there are accurately descriptive tables detailing memory usage of graphics modes and their DLs, detailed timing considerations for both the PAL and MSX systems, various reference appendices including Basic keywords, Turbo Basic keywords, character-codes, system errors, etc. There are a few fully expla-

ny appendices on subjects such as Display Lists (DL's), Display List Interrupts (DLFI), Vertical Blank Interrupts (VBI) etc. Other varied appendices include information on PMOS's, the BASIC process, BASIC memory management, LMR's and MMR's, Business programming, Soundcards, FOREY in STEREO, the list does go on.

THE APPENDICES

If you are a music fanatic, then you'll find a fairly powerful Turbo Basic program in the rotating appendices which will allow you to create good quality music music. The program itself is only 20-25 lines, but believe me, it can accomplish many aspects of channel and timing control. Also you will find that the amount of data needed for complex tunes is very small compared to many simple music routines.

If you are searching for all the information that will enable you to write your own programs to a boot-disk, then consult the **BOOT** appendix, the **HYPER-SPLITTING** appendix will be useful to more advanced programmers, as will be the **MACHINE-CODE** reference appendix. Here, advanced programmers will find some information not listed anywhere before in any book or magazine (at least I know). The reason I've seen in some of this information was in an issue of MSX4 MAGAZINE, an excellent resource for programmers. There was an article on **DL-2048, 0F-C458**, but it missed out some important information. You'll have to see the book for further details.

DOCS 2.0 users will be happy to see a complete list of correct routine addresses, inclusive of DOCS 2.0. Mapping gave a good list for 2.0, but it was not as complete as DOCS 2.0. The **MEMORY** management appendix to Mapping I thought was hard to understand, so after many hours of working out how the **INDEX** does this, I've tried to give a more clear explanation. Another means of reference is the appendix of **FREE BYTES** inside your machine. Here's a detailed description of every free byte you can use depending on the programming environment you're in. Two very informative appendices you might find useful are to do with **GRAPHICS MODES** and, specifically, graphics modes 11 and 12. A good one for graphics mode 12 is the classic game **ROULETTEGAME**, but more about that in the book.

An explained routine, DL's, DLFI and VBI are covered. Three very important subjects for programmers wishing to improve the quality of their programs. The **DLI** appendix brings its power to the average Basic programmer, it's more like a tutorial than anything else. Inclusive of this, there's an additional few pages on overrunning problems with **DLFI**, that will help you get rid of unwanted glitches etc.

Oh that note we'll bring this contact to an end. I am sure that the book will be of use to all levels of programmers, and of invaluable reference, and it might be just what you want to advance your programming. The book includes a vast amount of correct information in one source. All other sources of any quality and accuracy are out of print, so I hope that there will be a market for a new book. This book may be THE book of reference, as was the original Mapping, the Aztec to be sure. If it is not, for Christmas it will make the ideal Christmas present otherwise it will set you up for a year of new programming challenges in 1994.

THE



HEY!

TIPSTER

DOUBLE DISKS WITH NO TROUBLE!

A couple of neat little tips from Patrick O'Reilly from Larry: If you see your disk drive spins down you don't have to flip your disks over to use the back side and if you put a notch on the left side of the disk you can see through the notch whenever you hold the disk!

Just like the good Doctor, the Tipster occasionally undergoes a metamorphosis and I have found myself a renegade and some trendy glasses hoping to bring a new, younger, image to this column. Well I'm over that and ready to go. The letters and tips have been a little flat on the ground this time because I am sure that you were getting fed up with that crumbly old gag in bed (besides I thought I might die if I stayed like that!) But these letters that have come in are, as always, greatly appreciated and, of course you will want to send in more now that I have this nice, snazzy, persona, won't you?

What I do need are people to send me maps and hints for adventure games as I haven't had a complete solution for a very long time indeed. So come on and get sending them in!

Enough of this friendly and on with the bit that counts.

A MIGHTY THREESOME

To start with the codes for **TARKUS AND THE ORBS OF DOOM** are as follows (yes, I know it that only just been released so buy it fast then come back when you are stuck)

- | | | |
|------------|------------|------------|
| B - Bull | J - Bath | R - Dolan |
| C - Screen | K - Crims | S - Green |
| D - Alan | L - Duster | T - Stripe |
| E - Shoes | M - Tower | U - Crate |
| F - Books | N - Brian | V - Bitter |
| G - Credit | O - Rippe | W - Dign |
| H - Block | P - Purple | X - Salad |
| I - Water | Q - Record | |

SIX OF THE BEST

(who's been a naughty boy then?)

Mr L. *Lord of West Dragon* has sent in 6 tips for you to enjoy.

SPEED ACE

When racing games, the pause key either **RESET** or **OPTION** (it's not quite sure) and hold the joystick forward to increase speed. Hold down for 40 seconds, then let go of pause. Speed automatically increases to 100 mph. Do this when you start and when you crash.

GAUNT LET

(Cassette units only). Get as far as you can and ride down the cassette number. When you next play, load as normal, but when the tape starts forward it until you get to the number you last wrote down, see the level one cheat to get to level it. So when the tape loads it will go from the last level you left off at.

SPACE RIDER

(for Jet Park Space Riders) Press **OPTION** and **START** to get infinite energy.

GHOST BUSTERS

To get money easily, start with the cheapest car, the ghost boat, two traps and P.R.E. meter. When you get to **ZULU** move the character to the left hand side of the door. When mantracolour near jumps from the right to the left, push up immediately. You should be able to get both players through the door if this procedure is used.

PROTECTOR

When playing the computer let the computer get all the parts to the bench. When he drops it in his own base pick it up, drop it in your own base then recharge, and kill the computer.

DECATHLON

When playing against the computer in any race go slow as the computer will respond by going slow for you to catch up. When you are near the finish sprint to the line and you will overtake him.

HAWK QUEST

The way to get those easy Eggs is to drop general bombs all the time until you get those Eggs. Thanks go to Sam White from Ontario, Ontario in Cornwall for that tip for Hawk Quest.

Gem Warrior

All right, all right as I haven't got the promised maps but next time I promise - just go to find them - sorry!

Faithful Fortis Codes of Exotic has come up trumps again by providing help with **TARKIN AND THE ORDER OF DOOM**, **SOCCER** (Fortis KMI) and some codes for **THE CITADEL**.

SOCCER by Thers KMI is easier if you get the ball and make sure that you keep kicking in front of you as running with it will slow you down.

The codes for **THE CITADEL** are not complete and as such only go to level 20 (Fortis hasn't got any further - yet)

- | | | |
|-----------|------------|------------|
| 1 - — | 9 - MAGIC | 17 - GENE |
| 2 - SPACE | 10 - ZEBRA | 18 - STORM |
| 3 - CLOUD | 11 - DREAD | 19 - SOLAR |
| 4 - ALPHA | 12 - BLAST | 20 - TRIT |
| 5 - KAPPA | 13 - SWORD | 21 - TIGER |
| 6 - IMAGE | 14 - CYBER | 22 - VIDEO |
| 7 - SUPER | 15 - RINGS | 23 - HYDRA |
| 8 - PANIC | 16 - PLUTO | |

SILENT CITY

Another Kevin has sent in tips but this time its Kevin Callard of Toronto. He's got nine snippets for **SILENT SERVICE** and **ALTERNATE REALITY - THE CITY**.

Can't see the periscope at night in **Silent Service**? Yes you can, if you do the following. During daylight hours, ensure that the periscope is raised. When night falls with the periscope still raised you will find that you can see it whilst submerged, making night attacks even easier! However, don't lower the periscope as you will be unable to raise it again.

Normally in **Alternate Reality - The City** 'indestructible' buildings such as **GRANDS**, **SPECTRUM**, **WINDING**, **HEAVEN** **MOLD** and **BLACK SLIME** can be killed if you use a magical weapon such as a **MAGICAL LONGSWORD**.

Also, if you have the patience, try to find a **MAGICAL FLAME-SWORD** as it's the most effective weapon in the city (there aren't many of these around as I've only come across a handful since playing the game - when it first came out)

To come across a bug in their RPG - if you swallow a weak poison, then a **DEADLY POISON** poison, you cannot be cured - even if you get in a bubble or spill a **CURE POISON** potion, your **HP** **POISONS** continue to drop by 1 until you die, so if you poison yourself from just one poison, it's best to use a bubble, rather than look for a **CURE POISON** potion.

The answer your question, Sir, as to why the publishers stopped producing any more in the series is because they claimed that there wasn't enough support to continue. Haven't we heard that somewhere before?

THAT CUTE LITTLE FELLOW

This cheat from Daniel Davenport of Brighton is for that old favourite **ROCKFORD**. He says that he saw another similar cheat for the game in a previous edition but his one is slightly different. If you start the game by pressing fire or START, then pause it using SELECT, and then press RESET, when you start the game again you will have frozen the clock, allowing for unlimited time to complete each level.

HELP TIME AGAIN FOLKS

Sam White needs help on **ALTERNATIVE REALITY - THE DUNGEON** (he can't answer the Geography questions but more importantly he can't get the Moonstone, I did have the answers all the top of my head but I'm forgotten but I do know that one of you lot there knows the answers so please get Sam out of his misery, I thank you!

FREE CASSETTES!

If you find, fix or help in need by The Tipster you can claim a FREE Cassette from Book company available from The Advisory Board but you won't get one if you don't send something to The Tipster - get typing now!

HOW TO CLAIM

If you see your name in this column, send me a 10p note and my name in ... and I shall give you a Tipster cassette and simply tell us which cassette you would like (give an alternative just in case, we will whip it off to you quite soon for straight money). If you prefer you can always give us a ring instead on the usual number.

IS EVERYBODY DEAD????

That's all the tips that were sent in this time, maybe The Tipster has been so successful that every game ever written for the Atari Classic has been featured in this column - (NO WAY!) There are still ATONS of games we have not covered and dozens of extra cheats, hints and tips on those we have, so if you'd like to see your name in lights or just to print them get your stuff to pronto, I need anything that you've got - maps, tips, hints, cheats, solutions, answers to questions etc., etc. you get the message. Pinner's never been cheaper, only the cost of a stamp, so what are you waiting for get going.

All the stuff you've got comes to me at

**THE TIPSTER
NEW ATARI USER
PAGE 8 PUBLISHING
P.O. BOX 54
STAFFORD
ST16 1DR**



Well, dear, if you would send some tips in to The Tipster, I would do it!

DO IT NOW!

TOKENISED

*David Sargeant
presents a utility
to help you under-
stand the way the
Atari stores your
programs*

BASIC

In issue 57 there was an article called 'Voodoo' by Richard Lewis who wrote about variables in Atari BASIC tokenised programs. This reminded me of my own work on the subject and I would like to share with you this program which deals with an entire tokenised listing.

USER GUIDE

When you run the program you are presented with a menu offering several options for loading and viewing your tokenised program. Remember that a tokenised program is one saved with the command 'SAVE "to filename"'.
The keys accepted are the numbers 1-9, the letter 'F' and the Escape key, although options 2-4 deal with listings from a tokenised program, so they cannot be accessed, and if a file has been loaded into the buffer.

Option 1. You are prompted to type in the name of the tokenised file that you wish to view. If you misspell the file name, you can use the Back Space key to correct it or you can press the Escape key to cancel this option altogether. Otherwise, press the Return key to initiate a small machine code routine which loads the file into the buffer. I have initialised the buffer size at 10000, but you can alter this to your preference by changing the variable `BUFSIZE`.

When the loading has finished you are informed on the screen of the number of bytes that are now in the buffer ready to be viewed. Below you are returned to the menu, the first 24 bytes in the buffer are used to calculate the various offsets into the tokenised program. An explanation of these offsets is given in the above mentioned article.

Option 2. This option just lists the offsets into the tokenised program and addresses of the ROM-based tables.

Option 3. The variables used in the tokenised program are listed page by page.

Option 4. The values of the variables listed by option 3 are displayed.

Option 5. This is the option you choose to list the tokenised BASIC program itself. You are prompted to type a line number from where you wish the listing to begin. At this point press the Return key to begin the listing from the top or type in a line number. Program line numbers range from 0-32767, so any number greater than this is not accepted. Again, if you misspell a number you can use the Back Space key to correct it. If the line number is a valid one the listing begins from there. If it cannot be found you are informed on the screen and returned to the menu.

Option 6. This just lists the last statement in the screen. The line number is 32768.

Options 7, 8 and 9. A tokenised program by itself is impossible to follow. When the computer creates the program it uses tokens from the ROM-based Statement, Operator and Function tables. So to understand a tokenised program you need to know what these tokens mean. These options just list these tables.

F. This is a toggle for the printer. When this is 'OFF' all output is directed to the screen. When it is 'ON' two methods of printing are used. With options 2, 7, 8 and 9 output is still directed to the screen but when each screen is completed you have an additional option of printing it. With options 1 and 3 all output is directed to the printer instead of the screen.

Escape. Exit to a normal Graphics II screen.

Throughout all of these options you should be guided by the prompts on the bottom line of the screen. You can pause between page listings, print data or return to the menu by pressing the relevant key.

The CLASSIC PD ZONE

SHOW ME WHAT YOU CAN DO

This Air Assault flight returns you to the Classic PD Zone! On this mission you'll meet a strange alien lifeform known as 'The alien'. Let us All Wipe That Out...

THE TOP MEGADEMO

Regarded by many as the best demo on the Atari 8-bit for over 8 bit for that matter! **THE TOP** is a "megademo" divided into three separate demos comprising 23 parts. The Top was programmed by The World Federation of Mad Hackers (WFMH) from Poland.

THE TOP 1

THE TOP 1 is a four part demo. The entire demo looks from a single tile CBS artwork. It begins with a brief introductory message and a first digitized "welcome" which leads you into the first part of the demo. A beautifully drawn WFMH logo at the top of the screen. There are rainbow bars above it. In the middle of the screen, a circle draws from tiny white pixels explodes and implodes. In the bottom there is a scrolling message in a large, detailed font. The music is smooth and sedating.

Press **Shift** to move onto part two and you will see a massive scrolling message with words as tall as your TV screen. Each letter is carefully drawn from a first drawing a 1-bit-art language. During the scrolls, WFMH ask "Do you like our second scroll?". As the word "scroll" appears on the screen, the smooth scrolling changes to a jerky movement - an enjoyable touch which gives you an idea of what is to come.

Part three begins with a face dropping from the top of the screen to the middle. It then changes to a skull and a close digitized "music please" comes from the speakers of your TV. This is the cue for some moody Alan Howarth "Halloween-type" music and two more scrolling messages - one from the alien's eye!

The final part of The Top 1 is called "What?". Vector shapes rotate at the center of the screen. There is a plain, click, click, etc. Just press Option to change the shape. I liked this part a lot!

The Top 1 is a wonderful demo and a first class example of what can be done with an Atari 8-bit and a little imagination.

CLASSIC PD ZONE RATING - 84%

THE TOP 2

THE TOP 2 is in a similar mould to number 1. It also looks from a single tile H34 artwork this time! The same style of introductory message tells you that the following demos are "Lame". They were the demos which didn't make it into The Top 1 and weren't good enough for The Top 3. Lame? Hmmm?

The first part of The Top 2 is an impressive digitized music demo which looks out a heavy leaden style drum beat and changing bassline. These are accompanied by a sampled "yeah" and the occasional "bang". There aren't any graphics in this part - only a strange pattern on the screen.

Next up is "Thousand Scrolls", dozens of scrolling message wrap the way across the screen. By reading them all at once and you'll go on to some of the scrolls are in Polish - which doesn't help matters!

Part three is called "Amazing Stories" and begins with some great music. At the top of the screen is a well drawn "WFMH" with a happy face lowering up and down. Two rainbow bars take up most of the screen and a scrolling message unrolls its way through them. The scrolling stories can be found in the scrollies at the bottom of the screen. They're not amazing but, like all WFMH scrolling messages, they do make interesting reading. You will hear that The Top begins on a 8 x 8 tile, telephone dial and why a main screen when the window TV.

The 3 WFMH Demos is a music demo with a four tile "3L-3d" floating across the screen. There are also some more scrolls to read. Press the 1-9 keys for different music tracks. A couple of them are not bad - if you like synthesizer music.

Press Return for the final part of The Top 2. It shows a detailed picture of a space ship with a scrolling message underneath. Smaller space ships fly across the screen to launch out music from ADPCM messages.

Overall, The Top 2 is not of the same standard as its predecessor but they do not lose about telling you so. However, these five demos are still pretty good and hold their own against many other European demos of supposedly superior quality.

CLASSIC PD ZONE RATING - 70%

THE TOP 3

THE TOP 3 was, unfortunately, the last part of The Top Megademo. WFMH kept their best until last before leaving the Atari Classic. It is an eleven part demo with each part loading individually and depending below it runs.

Part one begins with some barbed music and a strange horizontal graphic equalizer which pulsates in the music. A large tile displaying "I'm In" appears above this graphic and begins to rotate. A scrolling message at the bottom of the screen welcomes you to The Top 3. A good start!

Press the Shift key and you enter part two - a wonderful wave to come with a scrolling message of goodwill. No music here due to lack of space.

Part three begins with a large scrollie and moves into a three tile graphic equalizer with four large scrollies, each splitting a line.

Next up is the only weak part of The Top 3. It is an awful demo with a pathetic Brian Noll logo, a horizontal Polish scrollie and a vertical scrollie in English which you can control



with your pointer. How did this piece of trash make it into this demo of all demos?

After a great deal of loading and unpacking, a screen appears detailing information about just five. You are told that 'uncompressed breaks' won't be able to see everything (i.e. if you don't have 128K or more, you won't see the complete effect). The message also tells you that over 444 KB of packed data was used to bring you this part. The decoder works all the time, the demo is in progress. With great anticipation, I pressed the Shift key...

The first music from Ericsson Music from my TV screen and a dancing girl appears at the center of a black screen. The effect is amazing! She is drawn with thousands of tiny grey pixels. Beginning in a slow, rhythmic dance, she glides to the music. After a short while she begins to really let herself go and starts throwing her hands out and waving her head - you can even see her clothes move and her hair swirl through the air! After a couple of minutes, the music speeds up and she begins to turn around and around. It is very likable! At the end of the music, she throws her hands up in the air and freezes, before starting over from the beginning.

You really have to see this effect - it is worth the purchase of a 128KB just to see the extra part! On an 80KB, you only see the part where she throws her hands out and turns her head in a swirl setting. There are also two scrolling messages which scroll vertically and horizontally past the dancing girl. As usual, the words are beautifully drawn in a dot-matrix font.

Should you ever decide to come on from the dancing girl, you will see Video Wars, a cute little demo with a small worm crawling across the screen, underneath a stylized 'VIDEO WORM'. At the bottom of the screen is a superb scrollbar with five 'niche' happy faces rolling along the top of the words. Whenever the scrollbar goes up or down, the words bubble about. In the scrollbar it is explained that the words are to test the heads of people who didn't believe that this effect was possible. Press Shift and the worm finally makes it to the edge of the screen and loads you into part seven, which gives you the WPMH e-mail address.

Part eight is an average demo with a pole position type scrolling landscape. A car is drawn at the centre and a large 'ATARI' can be seen at the top. There are two scrollbars, one in English and one in Polish. The ATARI at the top frequently changes to the word 'TOSHI' - I don't know what they mean by this but I hope it means that all other formats are trash.

and not Atari!

The ninth part is also pretty average by WPMH standards. It being X-1-9 (X1) still at the top, a 'WPMH' and a couple of scrollbars. However, I did like the graphics line which fell from the WPMH and bounced about.

The penultimate part is called Unlimited Data. Some great music is followed by a wonderful effect which shows hundreds of balls floating about the screen making circular patterns. It is very neat! All the balls are the same colour and if you look closely at your TV screen, you'll see the detail involved! Press Start to Select to change the path of the balls. Superb!

The final part is called The Last Scroll and it really like a farewell to the Atari 8-bit from the World Federation of Mad Harlots. Some smooth music plays in the background whilst a slow-moving vertical scrollbar, in a colourful font, gives the last messages and credits.

The Top 3 is a 'must-see' disk which will have you returning to it time and time again just to see your Atari Classic in top gear.

CLASSIC PD ZONE RATING = 81%

IS THE TOP THE TOP?

After seeing *The Top Megademo*, I feel proud that my Atari 8-bit can do so much! Not all of *The Top* is great, but with over a dozen excellent parts it is definitely one of the top three demos on the Atari 8-bit. I think it is the best so far!

The music was taken from commercial games and so is of a very high quality, often repetitive if you own the games! The graphics are generally excellent with great new-looking ideas used to show everything in the most detailed way. The scrolling messages are fun to read and there are plenty of them! The fonts are all beautifully drawn.

This demo is an uncoloured masterpiece which will take its place in Atari 8-bit history. If only the WPMH had stayed with us a little while longer to produce part four! However, the three parts we do have must be cherished and enjoyed. Whenever you feel like showing off your Classic to the local 16-bit top-head, just reach for *The Top* and watch its talent as he turns green! *The Top* is indeed the top!

See-Ya!

Unfortunately, due to low fuel status, we must now return home. Join us next time on our board streper into the Classic PD Zone and go where no Atari has been before! The words of the Atari 8-bit outweigh the words of all other systems! It has, and always shall be... TSM MISC!

Mission #4 reviews have been:

DISK #1 50 - EURO DEMOS 3 (Featuring The Top 3)

DISK #1 51 - EURO DEMOS 4 (Featuring The Top 2)

DISK #1 51 - POLISH DEMOS 2 (The Top 3)

with Stuart Murray as your guide

DIRECTORY HEADER

Looking at the directory of many commercial disks, it can be seen that in many cases the directory contains some form of header. In the case of the New Atari Unit laser disks, the header contained within the directories makes use of characters that cannot normally be used for a file name, therefore to simply save a null file to disk is not sufficient and some other means to create a header is required. A disk sector editor can be used to amend the first directory sector, but this could prove inconvenient and time consuming, especially if the wrong keys were to be accidentally pressed. The answer to the problem was to write a small program to create the header using a more user friendly means and hence Directory Header was born.

Directory Header is capable of creating a header consisting of up to eight lines (that is completely filling sector 30) if required, each line consisting of up to eleven characters.

THE SCREEN

Apart from the title at the top, the screen is split into two sections. The top section is used to display the header as it is being created line by line, exactly as it will appear within the disk's directory. The lower section is used for creating each line and to display the various menus and comments.

USING THE DIRECTORY HEADER

Each line is entered at the prompt (line 1) together with the instructions "Please enter line N" where N is the current line number). Editing a line is achieved by using the DELETE BACK SPACE key, the left right arrow keys in the usual way with CONTROL, and ESCAPE to exit.

Upon pressing RETURN to enter the line, a menu is displayed which again allows ESCAPE to exit. "C" is pressed to continue with the next line or "E" is pressed to end the header creation and to pass on to the next stage.

PREPARE DISK

Prepare disk allows a disk to be formatted in either single or enhanced density. ESCAPE again is used to exit. "Y" is pressed to select single density or "E" is pressed for enhanced density.

*Put away the sector editor
because John Foskett has a
much easier way of adding a
personalised header to your
disk directories*

After entering a destination comment is displayed which requires "Y" to be pressed to continue. Any other key will return back to the previous stage to select the format density.

Upon pressing "Y", the disk which is currently in drive #1 is formatted and the header written into the disk's directory sector 30.

After the header has been written, the option to write the DOS.SYS file is given and upon pressing "Y" the DOS.SYS file is written and loaded.

Whether or not the DOS.SYS file is written to disk, the option to prepare another disk is presented. Pressing "Y" will allow the format density for this disk to be selected. Any other key will exit.

TECHNICAL DETAILS

A small VBI location contains the type of characters used at any time by using one of the reserved locations in page zero, that is location 200. When this location contains a zero, only uppercase characters can be used. This corrects any accidental press of the CAPS key or the inverse video key when selecting from the various menus. When memory location 200 contains a non-zero value, any character can be used. This is the case when entering line details.

Two further locations in page zero are used, 204 and 205 which are used to store the status of the key found from locations 004 and 005 respectively and restoring these after selecting from the menu.

All possible errors are trapped and are displayed on screen together with an appropriate message. RETURN must be pressed to continue.

“Well, I tried my first one when I was 18 and then I just couldn’t help myself”

I haven't always been an adventure junkie. My life was quite normal once. In fact, when I look back at my pre-adventurist life I was an average right-ish year old and I did average-rightish year old things - excessive eating, excessive drinking and maintenance of excessive headsets for most mornings. In between my "normal" activities I engaged the odd adventure upon the frisky old 8-bit, and occasionally I would complete the odd polytechnic assignment with the assistance of Aunt Winona Pils.

THE TEMPTATION

My life was to change and normality was to be lost forever, however, all because of a chance encounter with a computer shop. It was an ordinary day, and I was making my usual lunchtime trip between two conveniently located public houses, when I noticed the small shop that would change my life, and my understanding of the term logic, irreversibly. I was drawn towards the new found shop and, after some deliberation, I stepped inside. My eyes having adjusted to the dimly lit, coffee-like shop, I approached some shelving erected before a large 'Start' sign. I was faced with the all-time familiar sight known to computer worldwide - two open squares devoid of what software. I was just about to retrace my lunchtime itinerary, when I noticed a box, hiding in the corner that sported the 'Atari 2600' label. It was some weird looking game called Adventure Quest. I was intrigued, and decided to add this novel looking game to my software collection.

Some time later I arrived home and set up the old Atari, and started loading the game. After an eternity of beeps and crackles a computer loading, and a screen of text appeared. I felt totally charmed. Where are the graphics? What happened to the sound? I want to shoot something! With some considerable debate I read the instruction sheet, and decided to at least try the game. Many hours later I emerged, binary eyed, extremely frustrated ... and totally hooked!

EFFECTS OF ADDICTION

My life has never been the same since. I have experienced situations that would make the average (big Blaster Head) man wince screaming in horror. My house has been with the van-gens, goblins, orcs, wizards and trolls, along with a whole host of other colourful characters. And, I must admit, I have not always been honest. In fact, now I come to think of it, I have done some pretty awful things. In Moorland I attempted to "eat all", while holding a flag, among other things. As the flag screamed at me to stop I first took a good look, and then quickly grabbed the rest of him down. Even after the terrible deed was done I was constantly reminded of my guilt by the piece of wooden rafters in my teeth. I still feel ill when I talk about it now. In Labyrinth I tried something less than graciously with Gaurance (who wouldn't?) and I received a slap across the face for my troubles. After spending the night in a barn and being woken up by a flock of pigeons with somewhat specific that in the last time I try to become consistently involved with a prisoner I later remember reacting with frustration in one Level 9 adventure, only to have my legs clapped by Mary Whitehouse! Of all the bad deeds I have done in my time, my worst was most definitely to try and shoot Floyd in Starfield. For anyone who has not met up with Floyd, he was a fun loving and business valued, the creation of Steve Merwin by and Indiana.

PERSONALITY CHANGES

My persona has changed over the years, through my many adventures, and many visits to different worlds. In the waking world, my social habits now seem to be excessive coffee drinking in the small hours, and a tendency to mumble heavily softly, as I chew over possible solutions to puzzles still not known. I also seem to spend a lot of time looking over my shoulder and wondering what's hiding behind the bathroom door - mind you, I never forget my towel ... I never managed to completely convince my wife, Linda, of the rewards to be reaped in adventure, and our few attempts to tackle Zork I together have not been totally successful. Still, our first child is on its way so I write this and I am sure it will be a fellow adventurer it is the making. I must take this opportunity to thank Linda for her most understanding attitude. A forgiving partner is essential in this most interesting of pastimes, as every one-hand hander will know. She amazes me with her ability to look interested as I discuss new ideas of her - "It would just get the key of the silver mirror and use it to open the door under the mattress I might be able to tie the string I made out of dog hairs to the handle and use it to pull the other teeth out of the dragon's mouth ... now what can I do with the tooth?".

OUT OF CONTROL

Not all of the problems and frustrations are as a result of intentional puzzles. I have been very close to screaming pitch as a result of inadequate programming which will not accept the most basic of input. Any adventurer who has tried to use the master transporter in Moorland Quest will know what I mean although Moorland Quest, in all other respects, is excellent. Talking of Moorland Quest, that reminds me of another less than heroic deed. In this adventure I had to kill a pygmy



In order to feed his body to a man eating plant, never mind surviving a trip to a waterfall: What have I got against frogs? Another of my particular foibles is the seemingly obligatory maze. Why do they find it necessary to show an adventure clerk by getting a maze in your way? I don't mind a maze if it is a legitimate puzzle, such as the Rainbow Room in Castle of Thieves, or the maze labyrinth (include in their adventures). Mazes lead me on to mapping, I have always made a map of every adventure I have attempted or solved. It is a companion with me now. Even the custom of adventures, with only ten or twelve rooms for my map drawing skills just to work. It isn't always necessary to draw a map, but I like to do it for a sense of completeness. I think this has developed as another facet in my persona, through too many hours of adventuring. Every possible option has to be tried, even the most innocuous. This unfortunate tendency also appears in earlier in my every day life: I can't even read a book without first reading the acknowledgments and preface. By marking the path to adventure proficiency is not an easy one.

ADDICTION TAKES MANY FORMS

I have, over the years, built up a formidable collection of adventures ranging from a level children would enjoy, to the finished. I have tried many different adventure software houses, including Infocom, Level 5, Adventure International, Melissa House, Hayden, Magnate Thralls and Fairchild. Some of the adventures I own are true masterpieces - the highlight is using others is interesting to the thing itself. Of all my adventures, most of my all time favorites are from Infocom, who just couldn't produce a bad game.

My first exposure to Infocom was in the form of *Infidel*, which is classed as 'Adventures' as its level of difficulty (although I found it easier than the two *Wizard* Infocom adventures I have solved since). *Infidel* puts you in the uncomfortable position of an archaeologist, tell by his frustrated outcrying, looking for a lost pyramid. Innumerable cerebral traps abound in this adventure, as you are pitted against pitted clues, secret passages, sand flows, disappearing floors, and other ingenious devices. If you enjoy things such as *Raiders of the Lost Ark* then this adventure is a must. It may often seem based in fantasy of Infocom adventures, but unless you have actually tried one you will be unable to imagine the quality of their products.

SUBMITTING YOUR SOUL

Talking of quality, I must stop for a moment to the content of role playing fantasy games, in order to mention *Alternate Reality - the City and the Dungeons*. For the uninitiated, role playing is a creative but completely different genre of adventure. In a role playing game (RPG) for short you take on the part of a central character, who can usually be moved around with the aid of a joystick. RPG's also work in 'real time' as a speeded up version of it. This means that time passes while you are considering which action to take next. I was amazed by the City when I first obtained it, and I am still impressed every time I load it up. *The Dungeons*, second in the series, is to my opinion even better. Excellent graphics, good gameplay, and a very large variety of characters, spells, weapons, and so on. These pieces of software will keep you enthralled for months, or years. Both of these are still available from David Perry. I would advise any adventures to give them a try, while they are still available.

BUT WHY?

After years of playing adventures, I became interested in finding out how they work. I had to be forever grateful to John White who wrote a three part history on writing adventures, which was published by New Atari then. I finally understood, to a limited degree, how these incredible games such as *Adventure Quest*, were crammed into 512K. In fact, thanks to John's articles, I have since written a somewhat adventure called 'Timeless', which was substantially improved by my friend Paul Harcourt of *Bele Poul*. The *White* may remember my failed submission of last year, still you can't win them all. As I have progressed through my many adventures, I have found my own taste in their style and authorship. My passion is in the titles of high adventure (as you all know by now), as for an authorship in concern, I very rarely look at anything other than Infocom, although the *Level 5* series are my choice. My few all-time favorites are listed below, and I would recommend them to anybody.

Cathroops (Infocom)
Infidel (Infocom)
Stationfall (Infocom)
Zork series (Infocom)
Strange Odyssey (Scott Adams/Adventure International)

Have you ever tried an Infocom? No? Well, if you own a disk drive and would like to try something different then get an Infocom while you still can. Mike Butler Software and David Perry still have a few, and Page 5 have Disk 1. You never know, in twelve months we may be seeing your takes of adventure on three pages.

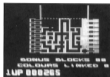
Anyway, that's basically the story of my progression with that classic 'start to do'. It has kept me fascinated (and frustrated) for right years now. I think it always will.

by Mark Stinson

DISK BONUS

COLOURTRIS

by Andy Guillame



A unique and challenging variant of a classic

Another Tetris-like puzzle game but this time with a twist. The object of the game is to form a link from the right side of the play area to the left. On the right side are eight colour pools with their left sides open. Various pipe sections fall down the screen and the player has to position these in the most strategic places to form the required number of links per level. An optimum path from right to left must be formed for the colour to flow through to the receptors on the left hand side. Use joystick left/right to move the blocks and down to drop quickly.

Play continues until a block is placed above the level of the dotted line at the top of the play area. Each colour pool in turn will then release its contents to flow through whatever pipe section is placed next. Player's score for every block that a colour flows through to a long windy path will score more than going straight across. The next 10 pipe sections to come are shown at the bottom of the screen, with the very next one highlighted at the right with a flashing bar around it.

If the required number of links is not reached then the player loses one of his three credits until all are lost and the game ends. There is no in-game pause mode (to discourage blatant cheating) but the game will wait indefinitely at the finishing level screen until the fire button is pressed.

The game features one player and two players simultaneously, and has separate High score tables for both modes. Press **OPTION** at the intro screen to see the High score table, and **SELECT** to define the number of players. In two player mode both players compete against each other to complete each screen. Player one is **RED** and player two is **BLUE** and they share the three game credits, but score independently.

COLOURTRIS is the **BONUS** on the issue 08 disk which also contains all of the programs from this issue ready to use. Disk subscribers will have received their copy with the magazine but the disk is available separately for £2.95 from Page 8. Send a cheque or postal order to **PAGE 8, P.O. BOX 24, STAFFORD, ST16 1PS** or order by phone using your credit card on **0795 213600**

LITTLE MEXICAN

A neat little amusement by Andre Kos written in Turbo Basic

This is a rare dice game I've learned in the pub. In this version you can play with up to 4 friends or against the Azax or against Azax's individual chips! The object of the game is simple - you don't have to win as long as you don't lose! Sounds easy? Well the rules are quite easy as well.

- every round you play for 1 point
- you are not supposed to get that point
- this point doubles every time someone throws a six
- the points go to the person or computer/person who throws the lowest score
- this score is calculated high dice-low dice
- doubles are extra high
- the highest you can throw is a six, which is 2 as 1 1
- if you lose a round you can spin the next one
- the person who spins a round decides how many throws each can have (up to 3)
- when you are stuck with 6 points you are balancing on the edge and about to lose with the very next point!
- when you are the first one to lose it's your job to get the drinks while your mates finish playing.
- only one person can lose a round, on repeat throws you throw again

MEXI is written in **TURBO BASIC** but I suppose that about everybody has a copy of that by now. And if not order it at once! It's available at the Page 8 PD library. You can't compile the program, unless you change the routine that reads in the dice shapes but I hardly ever compile my programs because I very often want to adjust them. With an uncompiled program changes are made and tested very quickly.


```

00 0 000 *****
01 0 000 #          #          #
02 0 000 #          #          #
03 0 000 #          #          #
04 0 000 #          #          #
05 0 000 #          #          #
06 0 000 #          #          #
07 0 000 #          #          #
08 0 000 #          #          #
09 0 000 #          #          #
10 0 000 #          #          #
11 0 000 #          #          #
12 0 000 #          #          #
13 0 000 #          #          #
14 0 000 #          #          #
15 0 000 #          #          #
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17 0 000 #          #          #
18 0 000 #          #          #
19 0 000 #          #          #
20 0 000 #          #          #
21 0 000 #          #          #
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37 0 000 #          #          #
38 0 000 #          #          #
39 0 000 #          #          #
40 0 000 #          #          #
41 0 000 #          #          #
42 0 000 #          #          #
43 0 000 #          #          #
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45 0 000 #          #          #
46 0 000 #          #          #
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91 0 000 #          #          #
92 0 000 #          #          #
93 0 000 #          #          #
94 0 000 #          #          #
95 0 000 #          #          #
96 0 000 #          #          #
97 0 000 #          #          #
98 0 000 #          #          #
99 0 000 #          #          #

```

```

00 000 FROM ROOM
01 070 FROM 100 TO A STEP -0.1
02 000 FROM 0,0000,00,0
03 000 FROM 0
04 000 FROM 0
05 000 FROM 0
06 000 FROM 0
07 000 FROM 0
08 000 FROM 0
09 000 FROM 0
10 000 FROM 0
11 000 FROM 0
12 000 FROM 0
13 000 FROM 0
14 000 FROM 0
15 000 FROM 0
16 000 FROM 0
17 000 FROM 0
18 000 FROM 0
19 000 FROM 0
20 000 FROM 0
21 000 FROM 0
22 000 FROM 0
23 000 FROM 0
24 000 FROM 0
25 000 FROM 0
26 000 FROM 0
27 000 FROM 0
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29 000 FROM 0
30 000 FROM 0
31 000 FROM 0
32 000 FROM 0
33 000 FROM 0
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35 000 FROM 0
36 000 FROM 0
37 000 FROM 0
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39 000 FROM 0
40 000 FROM 0
41 000 FROM 0
42 000 FROM 0
43 000 FROM 0
44 000 FROM 0
45 000 FROM 0
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50 000 FROM 0
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72 000 FROM 0
73 000 FROM 0
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83 000 FROM 0
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85 000 FROM 0
86 000 FROM 0
87 000 FROM 0
88 000 FROM 0
89 000 FROM 0
90 000 FROM 0
91 000 FROM 0
92 000 FROM 0
93 000 FROM 0
94 000 FROM 0
95 000 FROM 0
96 000 FROM 0
97 000 FROM 0
98 000 FROM 0
99 000 FROM 0

```

continued

LITTLE MEXICAN

M1 1170 REED REED
 M2 1180 SP ROOPER
 T1 1190 POSITION 12,FRONT "TWO" "REED"
 " "
 M3 1200 REED "REED"
 J1 1210 POSITION 12,FRONT " "
 " "
 P1 1220 IF REED-1220 THEN REPORT
 P2 1230 REED
 T2 1240 NEXT 2
 P3 1250 REED
 C1 1260 REPPRC
 M4 1270 ---
 M5 1280 FREE LAGATE
 M6 1290 LAGATE
 T3 1300 NEXT 2
 M7 1310 REPPRC NAME
 M8 1320 FOR 121 TO 12
 M9 1330 IF 1220(12) THEN 1230
 THEN 1240(12) "12"
 T4 1340 NEXT 2
 T5 1350 REED STANDOFF
 M10 1360 UNTIL 121
 M11 1370 121(12) "12"
 M12 1380 121(12) "12"
 M13 1390 IF 121(12) THEN 121(12)
 "12" "12" "12" "12"
 M14 1400 REPPRC REPPRC
 M15 1410 FOR 121 TO 12
 M16 1420 REED 121
 T6 1430 NEXT 2
 M17 1440 REPPRC REPPRC
 M18 1450 FOR 121 TO 12
 M19 1460 REED 121
 P4 1470 NEXT 2
 T7 1480 FOR 121 TO 12
 M20 1490 121(12) "12"
 M21 1500 POSITION 12,STRAIT 121
 M22 1510 FREE 2
 M23 1520 POSITION 12,STRAIT 121
 M24 1530 FREE 2
 T8 1540 NEXT 2
 M25 1550 121(12) "12"
 M26 1560 FREE 121
 T9 1570 IF 121(12) THEN 121(12)
 M27 1580 REPPRC
 M28 1590 ---
 M29 1600 FREE 121
 M30 1610 POSITION 12,STRAIT "12"
 M31 1620 POSITION 12,STRAIT "12"
 M32 1630 POSITION 12,STRAIT "12"
 M33 1640 REPPRC
 M34 1650 ---
 L1 1660 FREE 121
 M35 1670 REED 121
 M36 1680 REED 121
 M37 1690 POSITION 12,FR
 M4 1700 IF 121(12)
 L2 1710 P "12"
 M38 1720 121
 C2 1730 P "12"
 P5 1740 REED
 M39 1750 121(12)
 M40 1760 REPPRC
 M41 1770 ---
 C3 1780 FREE 121
 M42 1790 121
 M43 1800 IF 121(12) THEN 121(12)
 L3 1810 121(12)
 M44 1820 IF 121(12) THEN 121(12)
 M45 1830 IF 121(12) THEN 121(12)
 M46 1840 REPPRC
 M47 1850 ---
 M48 1860 FREE 121
 P6 1870 POSITION 12,12 "12"
 POSITION 12,12 "12"

M5 1880 REPPRC
 M6 1890 121 121
 M7 1900 121(12)
 P7 1910 UNTIL 121 AND 121
 M8 1920 POSITION 12,12 " "
 P8 1930 POSITION 12,12 " "
 M9 1940 FOR 121 TO 12
 M10 1950 POSITION 12,12 "12"
 "12"
 M11 1960 POSITION 12,12 "12"
 M12 1970 REED 121
 M13 1980 POSITION 12,12 " "
 M14 1990 POSITION 12,12 " "
 M15 2000 ---
 T10 2010 NEXT 2
 M16 2020 IF 121(12) THEN 121(12)
 M17 2030 POSITION 12,12 "12"
 " "
 M18 2040 POSITION 12,12 "12"
 M19 2050 REPPRC
 M20 2060 121 121
 M21 2070 UNTIL 121 AND 121
 M22 2080 IF 121(12) THEN 121(12)
 M23 2090 POSITION 12,12 "12"
 " "
 M24 2100 POSITION 12,12 "12"
 T11 2110 NEXT 2
 T12 2120 REED
 M25 2130 REPPRC
 M26 2140 ---
 L4 2150 FREE 121
 M27 2160 POSITION 12,12 "12"
 M28 2170 POSITION 12,12 "12"
 M29 2180 REPPRC
 M30 2190 ---
 M31 2200 FREE 121
 M32 2210 121(12)
 C4 2220 REPPRC
 M33 2230 121
 M34 2240 REPPRC REPPRC
 M35 2250 FOR 121 TO 12
 M36 2260 REED 121
 M37 2270 POSITION 12,12(12) "12"
 M38 2280 ---
 T11 2290 NEXT 2
 M39 2300 121(12)
 P9 2310 REED
 M39 2320 REPPRC
 M40 2330 ---
 M41 2340 FREE 121
 M42 2350 121(12)
 M43 2360 121(12)
 C5 2370 IF 121(12)
 M44 2380 121(12) "12"
 M45 2390 121
 P10 2400 REED
 M46 2410 121(12)
 M47 2420 121(12)
 M48 2430 121(12)
 M49 2440 121(12)
 M50 2450 121(12)
 M51 2460 121(12)
 M52 2470 121(12)
 M53 2480 121(12)
 M54 2490 121(12)
 M55 2500 121(12)
 M56 2510 121(12)
 M57 2520 121(12)
 M58 2530 121(12)
 M59 2540 121(12)
 M60 2550 121(12)
 M61 2560 121(12)
 M62 2570 121(12)
 M63 2580 121(12)
 M64 2590 121(12)
 M65 2600 121(12)
 M66 2610 121(12)
 M67 2620 121(12)
 M68 2630 121(12)
 M69 2640 121(12)
 M70 2650 121(12)
 M71 2660 121(12)
 M72 2670 121(12)
 M73 2680 121(12)
 M74 2690 121(12)
 M75 2700 121(12)
 M76 2710 121(12)
 M77 2720 121(12)
 M78 2730 121(12)
 M79 2740 121(12)
 M80 2750 121(12)
 M81 2760 121(12)
 M82 2770 121(12)
 M83 2780 121(12)
 M84 2790 121(12)
 M85 2800 121(12)
 M86 2810 121(12)
 M87 2820 121(12)
 M88 2830 121(12)
 M89 2840 121(12)
 M90 2850 121(12)
 M91 2860 121(12)
 M92 2870 121(12)
 M93 2880 121(12)
 M94 2890 121(12)
 M95 2900 121(12)
 M96 2910 121(12)
 M97 2920 121(12)
 M98 2930 121(12)
 M99 2940 121(12)
 M100 2950 121(12)
 M101 2960 121(12)
 M102 2970 121(12)
 M103 2980 121(12)
 M104 2990 121(12)
 M105 3000 121(12)

TUTORIAL TIME

LIST YOUR VARIABLES

For this issue I have a utility for BASIC programmers. If you are writing long programs it is quite easy to lose track of all the variables you have used and you may raise a name that has already been allocated. This can cause problems that are difficult to trace. With this little subroutine you can quickly list all the variables that are currently in use including the line variables used by the subroutine itself. The list can be quite long - BASIC allows you 120 variables in a program!

THE LISTING

The line numbering in the subroutine starts at 30000 so that it can be LISTed above your developing program. If you are already using numbers as high as this you will have to renumber it closer to 32767 - the highest line number that most BASIC will accept.

Line 30100 dimensions a string **WORD%** which will contain the individual variable names. I have chosen 50 as a sensible maximum number of characters in a variable name. You can change this to a higher or lower number to suit the length of variable names that you use.

Line 30110 looks in memory to calculate the starting position of the variable name table, and line 30130 does the same to give the address of the end of variable table + 1.

Line 30150 sets the counter **I** to 1 and starts a **FOR** - **NEXT** loop through all the characters in the table.

Line 30160 prints the current position in the variable table and removes the value of the character in variable **CH**.

If the character value is greater than 127 it signifies that it is the last character of the variable name. All the last characters of the variables are stored as inverse characters so that BASIC knows where each variable name ends. Line 30170 looks for these end of word characters and if one is found it is replaced by 128 to send it back into a normal character. It is then added to **WORD%** as the last character and **WORD%** is then printed to the screen. If you want printed output just change the **T** to **LF** (or **LFPRINT**) and it will go to your printer.

If the value which was read in line 30160 was less than 128 it represents a normal character. This is added as the 2th character of **WORD%** in line 30180. The counter **I** is then incremented by one before the **NEXT** in line 30170 causes a loop back to find the next character.

USING THE ROUTINE

To use this routine with your developing BASIC program it must be LISTed in disk or tape and ENTERed to join up with your program. It can be invoked by typing **GOTO 30000** or

```

10 30000 END *****
20 30001 DIM * WORD%, 1000 *
30 30002 DIM * LIST YOUR VARIABLES *
40 30003 DIM * BY *
50 30004 DIM * Ian Finlayson *
60 30005 DIM *-----*
70 30006 DIM * NEW ATARI USER - 800 90 *
80 30007 DIM *****
90 30008 DIM WORD%
10 30009 PRINT WORD%
11 30010 PRINT WORD%
12 30011 END FOR
13 30012 END
14 30013 END
15 30014 END
16 30015 END
17 30016 END
18 30017 END
19 30018 END
20 30019 END

```

G 30000 and will then print your variable list. Remember that the variable list will contain the variables from the subroutine. They are **WORD%**, **V1%2**, **Z**, **CTR**, **CH**. The position of these variables in the list will depend on when they were added to the listing. If your program was complete before you ENTERed the variable subroutine these variables will be on the end of the list, but if you then type in more program lines any new variables will appear before these variables in any subsequent list. To put it another way - the variables are listed in the order that they were added to the listing, not in the order they appear in the listing. Once you have finished development of your own program the lines from 30000 onwards should be deleted.

One slight snag with this routine occurs if you do a **GOTO 30000** a second time without a **END** or **END** command in between. The variable **WORD%** is already dimensioned and will therefore generate an **ERROR 5**. There are two alternative ways to get round this. Either use **GOTO 30110** for all calls to the variable lister after the first, or add an extra line 0 as follows:

```
0 GOTO 30000
```

This allows you to type **END** and use the variable lister in many times as you like before your own program. Line 0 is easily deleted by typing **0** and **RETURN** when you want to run your program.

I hope you will find this straightforward routine a useful tool for use during your own program development. If you have questions about it or other BASIC programming issues please write to the enclosing **S&A** for a reply and I will try to help. My address is

Ian Finlayson,
60 Roundstone Crescent, East Preston,
West Sussex BN16 1DQ

TARKUS & THE ORBS OF DOOM

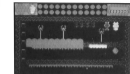
This time from Tiger Developments we have the sequel to Tarkus and the Crystal of Fear - titled **TARKUS AND THE ORBS OF DOOM** - together with a mind-boggling puzzle called **THE CHAINS**. And all for under a fiver!

In his last adventure Tarkus uncovered the crystals of evil that which helped to make the world a happier place. Unfortunately the evil wizard on planet Dogon V has now constructed magical orbs of doom and is threatening to cast a deep depression over the otherwise cheerful inhabitants of Earth. Once again Tarkus

and his pet chicken, Aquatarkus, are called upon to save the day ...

On each level of the game your objective is to locate a magical orb and take it, along with Tarkus and his feathered companion, to an exit point near the top left corner of the screen. The spine has huggers joystick control between the two characters, who have differing abilities. Tarkus can run and jump but his energy is depleted by contact with water. Aquatarkus is quite content in the wet but sadly unable to jump. By combining the actions of the two heroes and utilizing life, switch and doors, you must work out the correct sequence of events to solve each level. Access passwords are given after each screen to avoid frustration. Overall Tarkus II is a fun, addictive and challenging game.

In case you tire of Tarkus



and his chicken, The Crystal is provided to give your brain an additional work-out. In the same style as several recent German puzzle games, the player's aim here is to guide a character to an exit position of a room viewed from overhead. This isn't easy since there are ladders, bombs, pits, blocks, levers and other intriguing problems to contend with. There's also contact time pressure, though speed and dexterity are not vitally important - each screen can only be solved by carefully considering (or experimenting with) the

possibilities to find the correct procedure. Graphics and sound are generally appropriate, with some nice special effects in several places.

In a previous review I suggested that Tiger Developments improve their standards with every release - this opinion is certainly confirmed by their latest software. As well as forming the double, each game is available as a separate package. However, I can't think why anyone would want to miss out on either of these delights. Great stuff! Let's have more more please!

Title: TARKUS II: THE CHAINS
Publisher: Tiger Developments
Price: £4.99 (MS-PP worth)
Format: Disk
Reviewed by: Paul Rice



Tiger Developments, who are well known for producing original games such as Tarkus and Liked, have recently chosen to expand their range with imported titles from Polish software house RSP. One to be particularly commended the Polish text is now being translated for the company hope that Atari users will overlook the small intricacies and appreciate the good quality of the software. A far greater source of frustration, in my opinion, is the relatively little remaining with

wire protection systems (see Bull review). **MIECZE VALDGIRA** is an arcade adventure with the usual mix of objects, mazes, platforms and logical strategy. The story - albeit rather a weak affair - involves the Emperor of Lithuania who seems to think his life is in danger because a prophet has told him that a Prince will arrive with the sword of Valdgebra and use it with enchanted companions. Strangely, he's not you in fact the sword he there may be more than one

MIECZE VALDGIRA

...and thereby ensure that this monster can't become wacky.

In all you go - leaping along the wacky walls, up stairways, through passages and rooms - in search of useful items to help you complete the mission. The screen flip is the top half of the screen as you wander around whilst a large status block below keeps you up to date with your inventory, strength level and occasional messages. Pressing one of your seven carrying 'slots' is warded, you can collect an adjacent object by simply pulling down on the joystick. To use an object, you again pull down on the stick and then select the required item from the status block - if the item can be used, it will list the descriptions are provided to guide you as to where and when things should be used, though unless you have a Polish phrase book handy

there may not be as useful as intended! An added problem is that almost every screen is actually occupied by a variety of strange flying nasty-monster. This drains your energy in contact so it's a good idea to spend time blasting a clear path ahead.

So far I haven't made too much progress with Miecze Valdgebra, so it's difficult to quantify feeling appeal. The graphics and music certainly can't be criticised and the only negative feeling stems from the fact that some screen messages need to be understood - Tiger Developments may issue a translation sheet to alleviate this drawback.

Title: Miecze Valdgebra
Publisher: RSP (Poland)
Price: Tiger Developments
Price: £4.99
Format: Disk
Reviewed by: Paul Rice

KULT

Two challenges to one game! The first is, in fact, a security system common to all of Tiger Developments' latest software and intended to eliminate the temptation of unauthorised copying. To gain access you must have an A4 printout containing two grids of alphabetic characters and multi-coloured graphics symbols respectively. A paper template must be aligned over the first grid such that two characters displayed by the software on lead-up bars visible through one of two holes in the template. The other hole reveals four symbols on the second grid which must then be input to the

program via the joystick. If this proves time consuming, fiddly and more than a tad frustrating... you're correct! According to the view, Dark Forces are gathering in a quiet corner of the Earth and the threat has been escalating steadily in order to spread a veil of evil over the planet - the usual stuff. Being one of the unfortunately guest guys, it's up to you to zap the threat's armies into oblivion.

KULT is basically a 3D-style shoot 'em up featuring high resolution single-coloured graphics, varying weapons, numerous enemies and the usual jiggling of special effects. Press the fire button and you're all set for 'Bang Bang!' (that's right, in King's-English translation - but it's closer to actually just a profanity). Your attack helicopter appears to the left of the horizontally scrolling playfield whilst status panels above



and below indicate your current weapon selection, fuel level, ammunition, lives and more. Your helicopter automatically fires a continuous stream of bullets so the only controls of interest are those adjusting your vertical and horizontal position, with a view to avoiding the dangers of buildings, trees and incoming projectiles.

Expired buddies often leave a bonus in their wake - collecting this can earn you extra points, energy or weapons. Pressing the fire button alternates the weapon selection so

you can choose one best suited to each particular wave of adversaries. It's important not to allow fuel levels to fall - to replenish your reserve will result in loss of life. Before you can progress to the next level, an incredibly stubborn monster must be vanquished.

Shoot you up bullets should be more than pleased with the arrival of Kult. The graphics are detailed albeit rather dull, sound adequate, music plentiful, weapons extensive and overall playability well above average. Shatter about that damned security grid!

Title: **KULT**
 Publisher: **TEG (PROM)**
 Developer: **Tiger Developments**
 Price: **£4.99**
 Format: **Disk**
 Reviewed by **Paul Dixon**

NIGHT MISSION PINBALL



Mission Pinball and most long-standing 3-berry's think immediately of the brilliant Flight Simulator II, but this is by no means the only 'classic' game they released. NIGHT MISSION PINBALL is another golden child from the specialist division.

You only have to peep inside the box to realise that this is a game from a bygone age, when packaging was thought to be an important as the software it contained. Housed in the sturdy, silver style box you'll find a twenty-five page 'adjustment

manual, quick reference playing guide, hi-score disk label and various advertising sheets for the Flight Simulator II products. Quality stuff this, but what about the game?

Night Mission Pinball, no named on its theme is a World War II night bombing run, can be viewed as both a straight-forward arcade game and an advanced simulator. In its basic form the game involves an aerial ground machine with weapons, stand-up targets, radars, optically and similar features. First you insert quarters (press Q) to

give yourself credits, then hit the start button (press B) to play. Two joysticks are required - even in single player mode - to manoeuvre the right and left flippers, launch sticks or position and release mechanisms. Keyboard inputs can be used instead but are not recommended for maximum playability. Hitting a key on the left side of the keyboard simulates bumping the machine on the left side, and a similar effect applies to the right. Careful not to TILT the machine though!

Advanced players should turn their attention to the adjustment manual which, as well as discussing such matters as machine features, resistances and suggested practices for quality, maintenance and adjustment, describes some forty parameters which may be modified to suit the player's personal style. These range from tilt sensitivity and

ball speed to sound effects.

The intricacy of the graphical design demands the highest resolution scores made and, therefore, an unavoidably more expensive. There may be extra colour through the existing technology, which is effective only on American EGA's. Nevertheless, the speed and realism of ball travel is most impressive - those gritty algorithms used here takes some working, and focused is noticeable and makes use of the internal speaker on pre-53 machines.

If you enjoy pinball and haven't encountered Night Mission before, the appearance of such a low price is a real treat!

Title: **NIGHT MISSION PINBALL**
 Publisher: **Babbage**
 Support: **Page 4**
 Price: **£7.95**
 Format: **Disk**
 Reviewed by **Paul Dixon**

THE ACCESSORY SHOP

ISSUE 65

CHRISTMAS PRESENTS!

NIGHT MISSION PINBALL



The ultimate pinball simulation with five bumpers, seven start-up targets, four rollovers, two spinners and twelve more. So realistic you'll have to wonder if you're before you can play! And that's the fun you can have with the computer! Night Mission Pinball offers the different modes of play for 1-4 players. Every coin adjustable parameter allows you to create your own custom games or challenge any player made to your own specifications. Beautifully packaged and with an excellent manual, Night Mission Pinball will keep you playing by keeping you away from the streets!

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This is the time of year when you can stock up on software that you have wanted to buy during the year. Now the Accessory Shop pages to make and deal or to uncles and aunts and you might well end up with some great new games for Christmas. Of course there is no reason why you can't treat yourself for the New Year is there! And remember that the Accessory Shop is an essential part of New Atari! User helping to keep your favourite magazine going - support us to help us support you.

MAKE THAT COMMITMENT

DRUID



Another wizard in which, as part of the Great Druids, you wander through the Dungeons of Aps-Dra with your mighty spells to your side on a quest to destroy the four demon princes. As you delve deeper into the dungeons you will find objects containing spells of formidable power to aid you and Potions of 1/20 which will heal and revitalise you. It contains graphics and superb gameplay have made this one of the best wizard adventures on the Atari.

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FOOD FIGHT



Charley loves to eat. One day he visits the carnival and finds amongst the food stand right across the way Dr. Frank's horrible concoction of laboratory food of disgusting taste. Spinach, bananas, tomatoes, watermelon will be thrown about as you try and make the units retreat. You are after the great big green juice that awaits if you make it across the screen. Enjoy the fight ... and the meat!

ROM

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HARDBALL

All the skills of American baseball are in yours as a batter or pitcher in the ballparks. 90 ballparks, 500 ballparks, along the left field line, down the right field line or join the manager in the dugout. Look over the pitcher's shoulder as he throws the ball to the next ball. You control all the action of the ballparks, pitchers and batters as you try and battle your way to the top of the league. An exciting game for kids or ball players.

ROM CARTRIDGE
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ARCHON

A unique battle combining elements of battles with the strategy of the chessboard. You may represent the forces of good and evil and when they reach occupy the same square the 100-1 battle begins! Use the spells, Sorceries, potions and poisons. Use your spells, throw flames, even take all your other's strength and capabilities. You can only be killed on the Dark either alone or with another player. A totally unique game.

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BALLBLAZER

The year is 2021 and you are the commander in the most dangerous, fun and try to be the most popular sport in the universe. Jump immediately into head-to-head action against a friend or beat your skills against a computer. It contains 100 Drunks. Other ways, sports in for the state of the century! Realistic graphics and split screen action have made this one of the Atari classics.

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THE COUNT

One of Scott Adams's famous graphic adventures in which you awake in an antique brass box in a dark, desolate castle. It soon looks like you are going to meet a certain trouble. Frankenstein's Count who gets by the name of ... Count! Will you escape or become one of the living dead? An adventure with full graphics, moderate level for ages 10 to adult.

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PLASTRON

Take your place in a small fleet of planes out to shoot down loads from the biggest corporation in the galaxy. You must guide your shuttle well along the surface of the planet Plastron as you can't mark fuel as you call from the heavily defended base comes and then trouble starts with the supply tank at the end of each level. Plastron got a good review in New Atari User and has some excellent graphics.

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You are a spaceship which has fought hard battles before than you may need to learn more skills to do battle at all. Battlecruiser gives you the opportunity to capture your opponents during three 15-15 minute Green Battles and Red Battles in the Battlecruiser. It contains 1000 British-French-US and German ships. There are 10 classes of ships in combat in every aspect of famous battles is recorded. An extensive manual plus details of all the ships and guides you through every aspect of it.

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More new software

ROCKET REPAIR MAN



Strive for power in the underground maze of caverns of the planet Lander. Use essential components of your laboratory. Get into your space suit, strap on Jet Pack and begin the most terrifying descent imaginable. You must collect pieces of a rocket in which you can escape but beware the dreaded Machine Ghosts and the Quark Phantoms out to stop you. Another great game from Red Hat.

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The E factor represents the amount of time the energy source on the planet in our galaxy will last. Many planets need emergency fuel supplies delivered if they are to survive. You must find the intergalactic energy source and guide your craft through the quanta field with obstacles such as space mines, star fighters and spinning asteroids. Can you complete a mission and deliver your energy source in time another planet dies in your universe?

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You are alone in a deserted city surrounded by alien robots about to rain from every direction. Your movements are monitored but you haven't given up. If you are to survive you'll have to concentrate on where the shots are coming from otherwise you'll be caught in the CROSSFIRE. One of those fun-to-escape yet highly addictive games.

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Go out tonight in which Mr Dig has to dig for buried treasure. You can play the game with the real players. You can play the game with the real players. You can play the game with the real players.



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Defeat alien forces. You can play the game with the real players. You can play the game with the real players. You can play the game with the real players.



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Scooter needs your help to get through the eight levels of his excited building, inventive traps and unusual graphics around what sounds like a race track from the new building and the construction site are spotted. What could it be? It's your job to move Scooter up through the eight levels to find the reward. But don't think it's going to be an easy task!

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LASER HAWK

Your Laser Hawk helicopter is ready to go, but are you? To destroy the evil Free Trade, your ship will have to subtly or blast away its incredible defense systems which include an opponent, smart missiles, falling asteroids, heat rays and high level bombers. Eye stunning graphics and unrelenting non-stop action make this game a winner!

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SEA BANDIT

Challenge the mysterious forces of the deep ocean as you search for glittering lost treasures. There are concealed seas which are launched from the sea ocean floor and you must activate your ship before they explode. Quick reflexes are needed if you want to get through all 11 levels of this underwater voyage.

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ARKANOID

One of the best adaptations of all time. Take the simple but highly addictive concept of Breakout and add dozens of variations, bonuses, mazes and extras and you have one of the best computer games of all time. It's a highly addictive and mind-boggling ball game for anyone who has not yet experienced the addictive nature of the world of Arkanoid.

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KNOCKOUT BOXING

Challenges for the heavyweight championship of the world by boxing your way past your opponent's punches and dodging opponents. You will need speed and skill to deliver body weakening punches and block, parry and counter punch. You will need to be a real boxer to win. You must remember to keep your guard up as the referee will warn by counting you out.

CASSETTE ONLY
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JUNO FIRST

A fun and furious space shoot 'em up translated from Asterix's early classic masterpiece of the same name. Dozens of alien and jet ships from all sides and you must be quick to shoot them away and save your spaceship. If you find that you are going to die then you can take the ship to safety and start away through a corridor of enemies. This is a variation of the first game you do not appear to see another game feature.

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TRIVIAL PURSUIT

The classic board game translated to the Atari with added questions. Now you can answer your facts, presented with music and graphics as well as straight text. The ideal family game or one you can play on your own. Over 2,000 questions and all the questions on the game board are all by the computer. This has never been so interesting and fun before. This edition better to this point!

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PANZER GRENADIERS

In this exciting action strategy you take the defense for a regiment of the Panzer Grenadiers. You have the Panzer Grenadiers, Panzer, Tiger tank, Sturmovik, and Panzer. The Panzer Grenadiers is divided into the computer which will usually challenge you to win. You will need to be a real Panzer Grenadier to win. This has never been so interesting and fun before.

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Take command at the Battle of El Alamein. You can lead either side in this exciting simulation from the creator of First Blood tape.

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An aerial combat simulation set in Korea with 30 graphics, sound and animation. Different and looks and much more.

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SOMETHING EXTRA

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Exciting story based around the trucker the Top 100 flying game. We no longer have the ROM cartridge but the video can be yours at this cheap price.

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The Sun Star is the fastest and best powered with one ball and you must play it to master beyond from the side and it slightly different game.

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Fight Night brings you all the thrills of the boxing ring as you face the most brutal fighters ever in five separate battles. 1-2 players.

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SPEED HAWK

One of Atari's best games for the 8 bit can now be yours at budget price! A smooth, snaking arcade game in which you must defend the ring walls of your side against four planes.

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A masterpiece of German armoured infantry on the Eastern Front. Five historical situations, with levels, context colour graphics.

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HIBBLER

Striving through an unknown and hither toad realm in an indifferent world of constant change, do time games that his body grows longer and he keeps cutting into himself. Can he survive?

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JINXTER

An adventure from Magnetic Scrolls, the team that set new standards in adventure design. Features 1000 or 40000 titles.

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JEWELS OF DARKNESS

Three superb, classic, adventures with full colour graphics. Choose from Colonial Adventure, Adventure Game or Dungeon Adventure as you take on the challenge of the mythical world created by Lord's. The Premier collection costs postage with a 64 page book.

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LANCELOT

Lancelot recedes the tale of knights and the Knights of the Round Table in a three part adventure spanning the complete saga of the quest for the Holy Grail. Superbly researched and superbly written, this best adventure is full of atmosphere and highly recommended.

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ZORK 1

One of the most famous adventures of all time. Classic humour in the dialogue and packaging. A masterpiece.

DISK SUPER PRICE £2.95!!

US FOOTBALL

American Football is more a big game in this country and you can now play at home. Outmanoeuvre the defence, make tackles, select plays and more.

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EASTERN FRONT (1941)

The classic war simulation by Chris Crawford that introduced war gamers what it was to be. Based on Operation Barbarossa on the Eastern Front.

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SUPER BREAKOUT

Breakout was the original simple yet totally addictive game and this enhanced version will provide you with more challenge too. Needs paddle.

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ONE ON ONE

This basketball with two of America's top players in this great 8000 simulation which features realistic offensive and defensive moves.

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CAVERNS OF MARS

Winner of one of the first Atari programming competitions, this was one of the first vertical shooters, and remains much sought after. LAST FEN WITH IT OUT BOX BUT WITH IT ALL ORIGINAL MANUALS.

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A simple yet challenging puzzle game which will get you totally hooked. In fact this game is one of our best to be had.

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FROM ST TO XL/XE AND BACK AGAIN

*Peter Hall has a set up
that works*

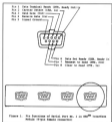
Thanks to your continued support for the Atari Classic, I have been motivated into writing my first article to hopefully contribute towards your magazine and help other Atari users planning to transfer files to and from ST and XL/XE using an Atari 800 interface.

After reading the letter from Mr Des. Duvonckx in issue #1, I studied the cable connections he listed and they did not look correct to me. As I have successfully been transferring files for the past two years or so, I managed to find the centre that I made when I was making up my cable and found that my suspicions were correct. The cable Mr Des. Duvonckx had made up was constructed up a different way to my own.

I then checked my P.D. collection to see if I had the same terminal software as he mentioned so that I could test my cable using the same software. I found Ultima on ST USER cover disk for June 1991. After making a working copy I set it to work and, after a little playing around to get to grips with Ultima so that I could set it up correctly, the big moment came with fingers crossed I checked the mouse on the ST and then pressed return on my 800XL. A few seconds later the test file was written to my ST floppy disk in drive B. I then set up the two machines to send the file back to the 800XL and the file promptly returned from wherever it came.

I have also tested the cable with other software since to make sure the cable was compatible with other P.D. software.

My ST is a 1040507 so I have included a diagram of the pins on the modern port (DS 210) and a diagram of the 800 interface RS232C port #1 to use the 25C in different to my STP. As far as I can tell from the menu on 800 EXPRESS software it does not have recognised as an INTERIM. Also my mouse cable is approx. 2 metres in length this may be allowed for Mr Des. Duvonckx.



THE SETUP TESTED

ST software:

ST TALK like one I used, INTERIM, VANTERM

800XL - 850 Interface:

850 EXPRESS terminal software (Public Domain)

I set both machines to use the following settings:

2400 BAUD
 KNOCKEM TRANSMISSION
 8 DATA BITS
 PARITY NONE
 1 STOP BIT

CABLE CONNECTIONS

ST	850
PIN 2	----- PIN 4
PIN 3	----- PIN 3
PIN 4	----- PIN 6
PIN 5	----- PIN 7
PIN 6	----- NOT CONNECTED
PIN 7	----- PIN 5
PIN 8	----- PIN 1
PIN 20	----- PIN 2

MAKING MUSIC WITH YOUR ATARI

*John S Davison's
guide to ST music*

A few issues back we looked at Yamaha's TG100 General MIDI compatible sound expander module. One short-coming I noted at the time was the limited amount of voice editing you could do from its front panel. What is really needed was a dedicated editor program running on the ST to enable you to get at all the voice-generation parameters hidden deep within the card. Well, the good news is that Yamaha have released such a program, known as TONY. Even better news is that it's FREE! Yes, all you do is pop into your local Yamaha main dealer and ask for a copy, or call Yamaha themselves on 0800-365700 for more details.

It's a public-domain program written by T.MXT Application Design of Germany (apart from the name conversion part), with Yamaha as its main distributor. There's a documentation file on the disk which explains its features, and also tells you how to obtain a detailed user's manual from the authors for a "small fee" (amount not stated). It appears to need an ST with 1MB memory and a high-resolution monochrome monitor to run, although it didn't mention this in the documentation. Naturally, for it to be any use at all you also need a Yamaha TG100 attached to your ST via MIDI.

Tony's main role in life is to provide comprehensive voice patch editing facilities, but it also acts as a voice librarian enabling you to easily store and manage your collection of TG100 voices. Voice editing can involve the manipulation of a large number of parameters, so editing software needs to be carefully designed to make it easy to use. Tony scores highly here, as its numerous functions have been given their own screens or windows and virtually everything is mouse-driven. It also uses menus, toolbars, buttons, sliders, dialog boxes, and all the other widgets of a good graphical user interface.



The main editing screen



SOMETHING FOR NOTHING

The screens are all fairly intuitive to use, but there's an online help facility available should you get stuck.

THE LIBRARIAN

After loading the program you're taken straight to the librarian screen, so let's look at this function first. It displays the contents of up to ten 64 patch voice banks, plus a scrollable window showing the voices contained in a selected voice patch library file loaded from disk. The library has infinite capacity depending on disk space available, of course so you can store as many patches as you wish. You can load up to 8000 voices into memory at once, but presumably only if your ST has maximum memory fitted.

Voice banks can be loaded from disk (there's even one supplied containing a set of ten voices) or from the TG100, and the voices edited using Tony's Voice Editor. They may then be put into the library and stored back on disk, or copied to any position in a bank for downloading back to the TG100 for immediate use.

You can also categorise any voice in the library by assigning one of Tony's nine predefined attributes to it, and later search for voices having a particular attribute. (By you can't) define your own categories though. You can also search the library by voice name or string of characters; for voices containing a particular waveform; and by number of voice elements in the patch. In other words it's easy to find the voice you want even if you can't remember its name.

Other functions allow you to rename voices, sort the library



Level editing using the mouse to drag the graph



by voice name, automatically remove duplicate copies of the same voice; print a listing of the library contents; and save and load library files to/from disk.

You can also easily audition any voice...Just select it then click up the microphone icon (labeled and 'play') in the software MIDI interface and with modulation or pitch bend applied if required by clicking on the keys with the mouse pointer. This is great for quickly identifying the right sounding voice from amongst the hundreds stored in your library.

THE VOICE EDITOR

Voice patch editing from the TG100's front panel is very fiddly, as the unit is physically very small. Scope is rather limited too, as a software editor is really the only answer if you're into serious patch creation. Once again Tony delivers the goods, allowing easy editing from your PC. Having selected a voice on the Macintosh screen you can then switch into voice edit and modify any of its parameters displayed there. Selecting a voice also causes it to be downloaded to the TG100's edit buffer, and when you alter a parameter causes the change to made directly to the voice in the TG100. This means you can hear the effect straight away without having to perform a separate download operation.

A TG100 voice can be built from one or two 'elements', each based on a chosen waveform type. This allows you to create basic sounds using just one waveform as its source, or more complex voices using a mix of two-different waveforms. The edit screen has a display window for each element plus one for parameters common to both, allowing access to all the variables needed to change a sound to your liking.

In addition there are other parameters that can be edited graphically. For instance, element volume is controlled by a graphical slider, which you drag up or down with the mouse. Similarly, you can set the left/right stereo pan position of each element using a horizontal slider. Various 'envelopes' used to shape different aspects of the sounds, e.g. the pitch envelope, can also be edited graphically. Each envelope is defined as a string of numbers, but may be more easily visualised as a graph, so Tony actually displays them in line graph form. To alter them you just drag the graph line into the shape you want, and this automatically changes the sets of numbers accordingly - much easier and quicker than keying stuff in.

THE MULTI EDITOR

The TG100 can store complete multi-instrument setups. These are definitions of how the TG100 will be configured to perform a particular piece of music. It's possible you'll want a different multi set up for each MIDI song you play, but creating them is a bit of a chore - unless you have Tony, of course.

The main Multi Edit screen is really an overview of the complete 16 channel setup. It shows which voice is assigned to each channel; the volume of that voice; its left/right stereo pan position; and its key range (displayed on a miniature keyboard). Then for each voice pan you can set a variety of additional parameters, including such things as velocity sensitivity, pitch bend range, level of reverb, and so on. You can also set the reverb type to be used for all voices, and overall reverb time and level.

Tony also has a few other screens for specialised functions. These include a Drumset Editor for setting the volume, pan position, and reverb effect of each drum sound; a System Edit screen, which allows you to set the TG100's overall system parameters such as tuning, transposition, volume, etc. There's



Voice editor screen showing a two element voice



Drum kit editor window



Minefield - a bonus game for light relief

also a Global Preferences screen, which controls the way Tony's internal functions work. For instance you can specify how the mouse buttons work, set key click and menu blink, and turn MIDI thru on and off. And should you get tired of all this editing activity there's even a link to game to provide a little light relief! It's called Minefield, a light game requiring you to locate all the mines randomly hidden under the squares of a grid without accidentally exploding one.

Tony created a few years during use, but I'm willing to forgive this under the circumstances. In fact, I just can't believe something as good as Tony is available for free. Yamaha should be applauded for supporting their hi-tech music kit and the ST10 by releasing free utility software - other manufacturers please take note! There's more where this came from too, as Yamaha also have free ST version of their SYNTHED, and MIDIPI editing software for use with ST10 portable synth and PDS100 software units respectively. If you are any of this lot I suggest you contact Yamaha or one of their dealers right away for further details. After all, it's not every day you can get something for nothing!

CRAZY DAZE!

QUALITY COMMERCIAL GAMES FOR £2.99!

Dave Marketing have just released for Christmas six of, arguably, the best games to come onto the ST market in the last year or two. The most amazing thing is that they are only £2.99 each direct from Dave themselves so you know that you are getting quality and excellent value for money. You've got to hurry because this offer won't last for ever and you'll look yourself if you don't get these games at these genuine prices.

You'll find a summary of the games at the end but here's a hint by way of an example of what you'll get for less than three quid. Remember, all of these games have been previously been available at top-shock prices of around £20 - £30 so there's another reason for buying them.

Enough of my drivel what are they like? No answer said this one!

STORM MASTER

You are the new Grand Magister of the island kingdom of Eolia hunting assassins from the nearby island of Sibarbastia, against whom you are fighting a war for reasons long forgotten, who have murdered the old one so there just despatches remain. With this new responsibility you must defend the kingdom from the Sibarbastians and, using all the resources at your disposal, defeat the seven opposing cities and win the war for your country. Your country and the opposition have both found it business the power of the strong winds that blow across your countries to build and use flying ships and bring messages to your enemies.

Through the Council of Nerves, who control the main resources of your country, you control the game by looking after production, control, religion, trading, leisure and entertainment, intelligence, science and the research of your armies. Each of these areas needs to be managed wisely because they all affect each other in some way. For instance if you don't trade you can't get supplies to build ships and if you don't build ships you can't raid the opposing cities.

It takes a true politician and inspirational leader to get the right mix and win the game which is intricate but yet immensely playable as you experiment with a new ship which then explodes or take off, back to the drawing board! The graphics are superb and make playing with the game very enjoyable as some of the games of this type get boring after a while. This arcade version of building flying ships gives the gameplay up and the second, as always with a Simons's game, is new with complex and to good effect.

This isn't a game you can play in a hour or two. A day or two

perhaps, but if you like strategy get the money in now, and if you are new to this type of game you should try it at this price, you might well like it.

BOSTON BOMB CLUB

If you liked Lemmings and all the other types of puzzle games that are currently available then you are going to love this. Basically you play one of the scenarios in the Bomb Club who have invented a game where they roll bombs across a table full of boards and your job is to make sure that the bombs are extinguished by the bucket of water at the end and that they don't fall head of the dangers of the table. You can rotate pieces of the table and block areas off, you can also use springs to catapult the bombs right across the table. All the time the other scenarios are looking on and sometimes they change certain pieces just to make your life hard. Oh, and by the way you mustn't let two bombs touch as they then both explode.

The graphics are good and so is the 1600's style music. The game play is relaxing and the difficulty level is perfect above right. This is a game for those of you who like to do nothing but then spend a couple of hours getting your 'win' against the computer. A definite inclusion in any puzzle's box.

METAL MUTANT

You think that it's hard to play a game with one type of hero ship, then how about three? All with their own moves and weapons that are effective against different types of the 40 aliens that you are up against! This should keep you on your toes a bit! There are 120 different weapons to master through and many different weapons that can be picked up and used against the aliens, all of which must be destroyed on each level. The bonuses of puzzle elements of the game mean that this will keep you coming back, not time after time but occasionally over several months as changing from one item to another is a skill to be mastered. The graphics are very good, drawn by an artist from Harvard who drew the 2-Mex in name just one. The sound compares nicely of sound effects, but overall there's very well done. The usability of this game is perhaps limited in that you don't have passwords or level select, only difficulty selection. It should last you as long as £2.99 gives really. Definitely one for the arcade shop! I think.

STARBLADE

Storm Walker has a price on his head, set by Queen Gwendolyn who believes that if she catches Walker she'll crush the rebellion against her. Now play Storm Walker in this adventure set in 3001. You must use your abilities to track, fight and resolve mind bending puzzles in a vast game. The game is fast paced

and doesn't leave you laughing around for something to happen. It isn't an easy game to play as you must think about your actions and how to solve the puzzles set against you. This is a game that is going to take several days to complete but you can save your progress to disk which makes it all the more bearable.

Graphics are not up to the standards of the other games in this offer but they are not distasteful just average. The sound also is very sparse with spot effects and 'reading' noise for doors and such like.

This isn't one of the best games in this offer but you will find that it will keep you happy for a good few days as you battle to stay alive. Again this is the sort of game that the puzzle orientated person who bought Boston Bomb Club would like but with more action as well.

CRYSTALS OF ARBOREA

You've heard of Isaac and Lelah 2, this is the game that started it all off. You must gather together a band of happy warriors to search for the Crystals of Harmony that, when united, will banish Megala, Lord of Chaos and all round rascal, who has snaffed all the other lords of the earth. You're in town, will you be able to stop him in time?

You start off knowing very little about what you must do to complete your task but you can talk to people and read notices and so learn of quests and things to do. This game set the standard for what was to come as it has 10,000 locations, sampled around throughout an 8 Meg masterpiece and the ability to save to disk.

The graphics are superb and for a game as complicated as this you usually find the graphics lacking but these are missing. You control the game from a bar at the bottom of the screen by buttons for directions and selecting characters. The use of this is intuitive and needs little explaining. This is a game that when it was on sale for nearly £30 a got over 100% rating in most things and now that it's only £2.99 it must be worth 80 - 100% just by the virtue of the price. Same FD is more expensive than this and it's only half as good!

Check your pocket, do you have £3? Good, pick up the phone and get this game now, it's brilliant. What more can I say?

SUPERSKI 2

Here is a game that is not just one but six games in one. As with such games you must compete for gold medals and glory in an Winter Olympic sports. This is the only one of the games in offer that doesn't come from Simutronics, but this doesn't mean that it's no good - far from it.

The game has you in the Giant and Special Slalom, Downhill, Bobsleigh, Moguls and BM Jumping. You can practice each event separately which is most advisable as some of the controls, especially for the ski jump, are difficult but not impossible to master. They all take different skills and temperaments.

The graphics are good and the look on the guy's face when you fly off the top of the bobsleigh run is very funny. Sound is the normal soundbity music, I'm afraid, but still very good. Latency is high because of the time needed to truly master the controls and playability is there in bobby levels. If it wasn't for the long loading times it would be even better but they're not too bad when you get used to them.

There's something here for everyone, and at 30p per game it's very good value for money. You won't be disappointed.



CHRISTMAS PRESSIES!

Remember you can only get these games direct from GSCC Marketing until New Years Eve 1993 - then they're all down the pub apparently.

Send your cheque or postal order (we very much prefer cheques) to give them a ring to:

**GSCC MARKETING, 1 CANNFIELD ROAD, LONDON, W9W 3BT
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THE ALL TIME BUDGET BARGAINS

From Simutronics
CRYSTALS OF ARBOREA
STARDRAKE
METAL MUTANT
BOSTON BOMB CLUB
STORM MASTER

From Microdisks
SUPERSKI 2

And there may well be one or two more by Christmas - check with P&W

J
V
I
E
E
B
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W
O
C
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M
S
P
E
O
FI

ST PUBLIC DOMAIN



ROUNDUP

Education doesn't always have to mean learning your tables or reading a chapter from a ratty old school book! As you'll see, it *CAN* be fun...

CAN YOU SAVE THE WORLD?

ROBOT ATTACK is an interesting program which will help improve the multiplication skills of young children. After a colorful title screen and some bonus music, you are asked to select a difficulty level from 1 (easiest) to 5 (hardest).

Robot Attack is basically a colorful version of *Flingers* with multiplication items replacing the leaves for letters. The main play screen consists of four platforms each with a box at the end. Robots appear on the screen and try to reach these boxes before you can successfully answer the sum presented at the bottom. You must use the keyboard to enter the correct answer.

If your answer is correct, the number of stars remaining (shown at the top left of the screen) will drop by one. The level 1 you must solve five sums. This increases to six on level 4. The current level is also shown at the bottom of the screen along with your score (you get 20 points for a correct answer).

If your answer is wrong or you don't answer before a robot reaches a box, the feet of a giant alien robot will appear to the right of the main play area. Further wrong answers will mean the appearance of more robots! There are two to all - 2 feet, 2 legs, 2 body parts, a neck, two arms and a head (which looks like it's been stolen from a Cyberman). Needless to say, if the head appears, you have lost the game!

If you successfully answer all the sums on a level the robot's head appears you are shown the final page of *The Times* from the year 2015 with the headline, "The World is Saved!" There is also a little cartoon showing yourself destroying the enemy robot!

However, should you fail at your mission and allow the alien robot to reach completion, the headline in *The Times* will read "Wobles from NWO" and the cartoon shows a giant robot destroying mainframe!

Robot Attack is good fun and will help with basic multiplication. All of the problems are from the 1-12 times tables. The overall gameplay and ease of use will appeal to younger children who are just beginning to learn multiplication.



Hey, this colouring is fun!

point appearing off over the fence. I suggest you take a look at *ST Coloring Book*. It is an impressive piece of software from the magazine which brought us the *Cyber* art series.

NO MORE MESSY WALLS!

Released by the now defunct American magazine *Artist*, **ST COLORING BOOK** is an excellent PD program which simulates that old friend of children... the colouring book!

With *ST Coloring Book*, there will be no more ink on the carpet and walls. All of the painting is done on-screen! There are five pictures on the disk: a lorry, house, steam, football and teddy-bear.

Press Help to see the Help Menu. Hit the spacebar to move onto the Main Menu. Here you can choose from eleven different options: Paint Pictures, Erase, Line, Page Forward, Page Backward, Undo, Load, Save, Erase, Clear and Quit.

Most of these options are self-explanatory. The one you'll use most of all is Paint Pictures. Click on it to begin colouring (the lorry picture works best with the program). A paintbrush icon is used to identify the area you wish to paint. Select a colour from a choice of fifteen at the top of the screen and click on the area you wish to paint. Hey presto - it's quickly turned to that colour and best of all, there's no need to worry about creating the lines! Very soon you'll have a colourful picture.

If you want a quiet afternoon without having to worry about coloured ink and

ME, ME, ME!

ME FIRST is a quality educational program involving identification and graphic writing. A set of four pictures must be placed in the correct sequence by clicking on them with the mouse pointer.

There is a selection of 34 picture sets on the disk (2 x 12). Each set is accessible from the main play area by clicking on the selected area. A hand will play and the four pictures from that set will appear. However, they have been mixed-up and require sorting!

The sets include an apple being eaten, a child dressing for school, a picture being painted and a ballerina catching a fish. The second set of twelve are a bit tougher to work out and also includes some basic arithmetic.

You must use the mouse pointer to place the four pictures in what you consider to be their correct sequence. As soon as you click on a picture, it moves smoothly down to the bottom left of the screen. The others move alongside it as they are placed.

If you get the sequence right, a face will play and the magazine sequence will be shown as a cartoon at the center of the screen. This cartoon can be played to

either control or double size by clicking on the right mouse button to begin play. The kids will enjoy the double size!

If any of the pictures are in the wrong place, you must try again. However, this time the computer gives you the first picture to get you started. If you are still confused up, the computer gives you the second picture. This continues until you get it right.

Mr First is a great program with some excellent graphics. Some of the 24 requirements are quite complicated and you can add more by registering the disk with the author (only \$5). With the wide range of difficulty, Mr First will be of benefit to all age groups!

As an added bonus, you also get a demo version of **KIDSPHONICS PROGRAM**. **SONAR VELD** on the disk. Although the Save and Print options are disabled, you will be able to get a hands-on look at this impressive DTP package aimed at young writers. Features include a 100-page notebook, a simple word processor, a drawing program and a set of flow lines. By registering the disk (\$20), you should will be able to gain access to the complete version and print out professional-looking homework.

BEAT THAT SPELLING TEST

Even if your school days are a distant memory, you will no doubt still remember that terrible thing known as the spelling test! Well, **LET'S SPELL (FIRST 100 WORDS)** is here to help the kids of today improve their spelling skills and pass any spelling test their teacher might spring on them!

The Macintosh version of Let's Spell gives you access to 100 of the 100 words available with the registered version.

(\$10). A like screen leads to a selection screen offering 20 picture icons all in glorious colour. Unfortunately, only the four icons in the second column are available in this version. These are the Grouchy-ore Sheep, Whitefoam, Playhouse and Farm. Approximately 100 words are available over these four screens - more than enough to keep the kids busy!

After picking a screen, let's say the farmhouse, you move on to a lesson table showing pictures with lots of objects scattered all over the place. A bell will sound whenever you move the mouse pointer over an object that you can spell. In the farmhouse scene these objects include a bath, toothpaste, toilet paper, etc.

Click on an object (e.g. the bath) to enter the Spelling Screen: the place

where all the work is done! Here you will see a lower case character set, a 'Word' box, an 'oops' box, two Macintoshes, the British and French flags, a thermometer and a friendly dragon. You'll also see a large picture of a bath at the centre of the screen.

To spell the object, you must use the mouse pointer to click on the lower case letters at the bottom of the screen. As you click on a letter, you'll hear it in clear, digitized form, i.e. if you click on the 'b', you'll hear 'buh'. A professional sound! If you make a mistake whilst entering the letters just click on the 'oops' box to delete a letter. Click on the 'Word' box when you're finished.

If you manage to spell the word correctly you will hear 'Well done!' and a lower will play. Also, the dragon will smile! However, if you get it wrong, he will be very cross, show you the word and make you try again.

By clicking on the British and French flags you can change the Spelling Screen to French. It makes a good French dictionary!

The Macintoshes are used to set the level of play. The small one is for ages 4-6 and the other is for 6+. You can also use the thermometer to alter the difficulty. By clicking on it you will be shown if you are hot (i.e. close to the correct letter). Another difficulty setting can be selected by clicking on the eye of the dragon. This is called 'Look, Correct, Spell and Check'. In other words, you see the word for a period of time, it is then covered up and you must spell it. Finally, the word is checked for accuracy. The authors of Let's Spell claim that this is 'a well validated learning method and is adopted in many schools.'

There are many more features in Let's Spell! I liked the ability to display or print a table of results. Great for parents after a week session (and don't forget to add a gold star and happy face alongside your child).

This program will undoubtedly help children to improve their spelling skills.

The disks featured in this review are all available from the Page 6 ST Library. Check the latest ST catalogue and update or phone 0785 213828 for further information. Disks featured in this issue are ST775 - LET'S SPELL, ST725 - MR FIRST and ST290 - COLOUR BOOK

LET'S SPELL is one of the very best education programs for the ST and well worth registering.



It is also interesting enough to hold their interest for a reasonable length of time with colourful graphics, funny music, happy faced dragons, digitized speech, etc./ True interactive learning.

By registering the disk with the authors you will gain access to another 400 words, keyboard input, an editor, etc. The registered version of Let's Spell (First 100 Words) is priced at \$10 - no small price for money considering it could quite easily sell for over \$15 in the High Street! Check out the Macintosh version and I'm sure you'll agree! You'll also get 100 words to keep the kids quiet for a while before they start scratching the IT screen with a plastic 'Tyrannosaurus Rex'!

Education can indeed be fun!

ROUNDUP RATINGS

Let's Spell	85%
Mr First	86%
ST Color Book	84%
Robot Attack	78%

ROUNDUP conducted by Stuart Murray

ZOO L NINJA OF THE Nth DIMENSION

Can you imagine 127 Ore, too way home Zool start a large blobby thing and want to investigate. Next thing for know was that he was stuck on a world made of sweets to complete a challenge to become the "Average Ninja Ninja!"

Well that's the hype and story over and done with but in the game that very rarely didn't make it to the ST any good? Well, I can honestly say its amazing! Gemini said it wouldn't be fast enough or playable, how wrong could they be.

You play Zool, obviously, the Ninja Art from the 8th dimension (somewhere near Tardbridge Wells) and you must simply get from the start of the level to the end. Sounds easy? Not a bit of it, as you have got killer jellyfish, bearish bats, wolves, walking dinosaurs, porcupine-like volcanoes, snakes, shells, chain saws, tanks, balls, roller apples and bananas to contend with across six dream worlds. First Street World then Music, Fruit, Food, Toy and finally Fairground World. If the battles weren't bad enough there the end of level guardians are, they range from a banana and island clock to a giant roller baller!!

Once you pass the screen sized "back-bonus" after being for a certain number of hits (happily you'll get round to the important bit. Missing the game isn't stay as there's a easy protection that will beat any would be pirate in that its the best I've seen, apart from the legendary Linc-Loch which was a pain the real deal, but better than any since. In the normal type it is a letter from a console but with a text. Once you've got past this you enter the game proper and the option screen stands between you and the way home. The level difficulty can be changed from hard to easy, the music is also alterable from just several effects to funk, rock, jazz, or 'green' whatever that means. Lyrics can be set to stop Zool dead or let him slide cozy to a ball. You can set the number of continues that you have, 0 for the beginners, 0 for experienced Ninja's,

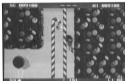
and finally you can set the speed to two different settings, normal or fast. It's absolutely static on the fast level!

Useful weapons have been not listed around the levels to aid Zool in his quest. The obligatory sword (only with, when not locked, drops off of the enemies on the screen, most useful when things get hectic. "Dynamo" gives you a shadow (idea that makes him a Shadow Ninja?) which follows close behind you and fires just like you as giving you double the fire power but remember it won't last. Jumping to make a bit easier by getting the jumping Zool, heavily enough, but it doesn't last. Shields will give you protection for a while and usually pick up just before you need them. You can tap up as time with a time bonus, speedily enough, and a TUP will give you another life. If you are lucky enough you'll get a nice battery (hint) that will recharge your battery for another fight when you jump on a enemy.

You can collect at different points in each of the levels by punching different objects on each level, a sign, a half buried banana, a half buried remote control, and again a sign on each of the last two levels. Each of these, when activated, will save you starting the level from the beginning again.

There are four hidden levels that have to be found. If you watched GameMaster many moons ago you would have seen that when Zool was in development they included a hidden GameMaster screen where you can collect the words of the title. I haven't found this yet but I intend to play many more hours until I find them.

The graphics in Zool are very, very good indeed with enhanced colours being used on an STC, but the STMP version is still very, very playable. The lack of colours doesn't detract from the game in the slightest. The backgrounds are superbly drawn with plenty of detail and "subtlety", and the variety of the six worlds means that you are not left with the same old rock graphics all the time. The



characters are, again, superb. Zool for instance must have over 100 frames of animation in total, but he has about there are 12 or more possible poses for the Ninja art to be in. The battles are an exception other, each of these has its own unique way of moving and plenty of smooth animation of course.

Playability is where Zool excels. It's totally addictive. Forget boss or Miro, get Zool and be content that you have the most addictive thing since the last most addictive thing is little Pythagoras (but what was I supposed to say, wasn't?) The slides, coverings, balloons and anticipation of Zool and correct balancing of difficulty and pick-up-ability make this a winner!

Don't expect this one to be put to the back of the cupboard for a long while yet, it's too good. You'll be there into the early hours trying to beat that end of level Guardian on the Fairground World so don't expect to get any sleep with this one. One thing that was disappointing is the fact that there is no password facility that allows you to go back to where you last started from, you have to start from the beginning of the time. Another thing is that the game isn't transferable to a hard drive which, considering the almost perfect protection, is unfortunate but if you have a second drive like me it will pick up that you have it, and use it.

If there is one game you should get now before the pre-Christmas glut, it has to be Zool. It'll still be high in the charts before, during and after Christmas, so get your copy today before it's too late!

Now if you'll excuse me I've a Ninja and wanting to beat the living daylights out of a (desire almost) and find a way home - he'll still get a long way to go!

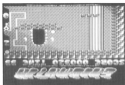
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