

# ATARI USER

Vol. 4 No. 2

June 1988

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How to conquer evil  
monsters in the caves of  
*EIDOLON*

GO  
clay  
pigeon  
shootin'



CONVERT  
HFM files  
to Ascii

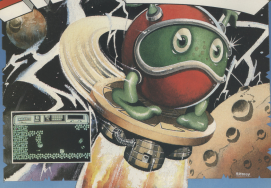
CREATE  
autorun  
discs

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# Starquake



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Bubble-Bus' Starquake is one of the biggest-selling games for home micros, due to its incredibly-addictive gameplay and cleverly-animated graphics. It has received

such accolades as Game of the Month in Computer and Video Games, and was awarded a Crash Smash.

● What reviewer Bob Chappell said about the Atari version:

'Starquake is top-notch fun... quality dripping from every byte'

Don't miss out on this tremendous offer... fill in the coupon on Page 58 without delay

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Vol. 4 No. 2 June 1988

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✓ **Get it right! II**

All major listings in this issue are accompanied by sheets used to help overcome typing mistakes. For full details of how they work, see the article on page 23 of the November 1987 issue of Atari User.



Add TEN new commands to Atari Basic with this latest package from Atari User.

**SEE PAGE 32**

Link your Atari to the outside world with...

# MicroLink

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Fill in the coupon and send it to the address below. You will receive full details of services, and costs, together with an application form. Complete this and within days you and your Atari will be able to use all the services of MicroLink and Telecom Gold.

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Send to: MicroLink, George House, Addington Park, Addington, Mertonhead SA78 4BP.

## Learn how to break the bank

THE odds on breaking the bank at Monte Carlo are looking up — games specialist CDS Software is on the verge of releasing Casino Roulette for the Atari.

The game caters for up to eight players, with the computer handling the shores of wheel spinning and table ruling — all players have to do is place their bets.

CDS (0202 27134) has also added features to help would-be system testers.

A statistical analysis is maintained of the fall of the ball on each of the 37 wheel numbers over the last 320 spins, and the instructions include half a dozen established betting systems for players to experiment with.

Price £9.99 cassette, £14.99 disc.

## Bond's back

THE classic 1973 James Bond film *Live and Let Die* has re-emerged on the Atari.

A spokesman for Dornak (01-862 9623) — whose earlier movie titles include *A View to a Kill* and *The Living Daylights* — promises that the game is a winner.

Price £9.95 on cassette, £12.95 on disc.



## Show attracts record crowds

A RECORD turnout for the latest Atari User Show saw more than 17,000 visitors converge on Alexandra Palace over the three days.

This was by far the best attendance since the series started and was double that of the previous event held at the Hovells.

Such was the demand from Atari users that organisers Database decided to extend the final day by an hour to avoid disappointing latecomers still queuing outside.

All 70 exhibitors reported business as being at an all time high, with many having to send back daily for additional stock.

Yet the real bonanza was for the visitors who were soon appraised for the delays experienced in getting in by the bargains

awaiting them. Schoolteacher George Roberts saved the equivalent of his return fare to Glasgow within half an hour of entering the Great Hall.

"I must now be the best kitted out Atari 8 bit user in the country", he said. "My wife thought I was mad when I told her I was travelling all that way to a computer show. It will give me great pleasure to make her eat her words."

Even organisers Database Exhibitions admitted to being surprised by the overwhelming response.

"It could only be described as fantastic", said Michael Meakin of Database. "This has now firmly established the show as one of the premier exhibitions in the machine specific market."

## Guide to top Atari gear

THE hunt every Atari 8 bit owner has been waiting for has arrived on the scene. A definitive guide to all the best software and hardware available has been published — and it's free.

Atari specialist retailer Slice Shop is behind the 80-page catalogue which took six months to compile and covers every possible category — cassette, cartridge and disc, home, business and education.

Slice Shop spokesman Tony Deane said: "The publication grew out of widespread consumer opinion that the Atari 8 bit market was not being supported."

"The typical end user has been feeling unloved for a long time — this is our attempt to put matters right".

Issued free with this month's *Atari User*, the guide contains 32 pages of 40 and 80 products — plus a special 8-page section on 50 rom cartridges.

Also included is a comprehensive 4-page list of peripherals and accessories such as modems, monitors, printers, joysticks and controllers as well as books and manuals. The accompanying 16-page price list contains 1,200 items.

## Jackpot for Atari adventurers

ADVENTURE games fans are going to hit the jackpot as a result of a new joint agreement.

Mandarin Software, the exclusive new entertainment software house, has joined forces with the renowned Level 9 programming team.

And the end product is the

release of the acclaimed *Time & Magic* trilogy for the Atari 8 bit market.

The text-only adventure encompasses three award-winning titles from Level 9 — *Lords of Time*, *Red Magic* and *Price of Magic*. Price £14.95.

Also opening soon under the Mandarin label from

Level 9 will be a game set in the Middle Ages, codenamed *Caracol*.

And in addition to enjoying the adventure for its own sake, players will be able to take part in a real time tour for a silver "gros" worth £2,000 to the bank.

The news of both titles was announced at the offi-

cial launch of Mandarin Software held recently in London.

"Caracol is a new concept in adventures", said Chris Payne of Mandarin.

He added: "And with Level 9 arguably the world's leading adventure games company, Atari users have a treat in store".

# THE LATEST AND



**ARCHON - ROM - \$14.99** 1-2 players  
A battle between the forces of light and darkness. You can't take a nap, you have to fight for it.



**BALLBLAZER - ROM - \$14.99** 1-2 players  
Can you shoot the fragments through the moving goalposts while piloting your Roadster for one or two players.



**RESCUE ON FRACTALUS - ROM - \$14.99** 1-2 players  
You have to rescue your friends from Fractalus - but the evil egg aren't going to make it easy.



**TWILIGHT WORLD, CARTRIDGE - \$14.99** 1-2 players  
Battle your way through eleven dungeons and evils, with one million odds and hazards.

Atari have always had the greatest arcade games in the galaxy, now they're adding even more winners to the collection. From the high speed skills of handling a Wild biplane, to the brain-aching Archon battle of wits. Whether

you're landing the punches with Fight Night or using the awesome power of Thunderfox to blast the enemy, Atari give you the best combination of graphics speed and skill this side of Alpha Centauri.

**ALL GAMES SHOWN ARE COMPATIBLE WITH: ATARI XE GAMES SYSTEM, ATARI**

# THE GREATEST.



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**THUNDERFOX CASSETTE, £4.99** Unrated  
The Cyberfox was machine to compete. Can you beat the ingenious skills in your Thunderfox?



**COMPILATION CASSETTE, £4.99** Unrated  
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# Mini Office II

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**Business Program of  
the Year – 1985 AND 1986**  
Popular Computing Weekly  
**This package is  
incredible value**  
Say, Mr. Home  
Computing Guide

## WORD PROCESSOR

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Build up a versatile card index, use the flexible print-out routine, the powerful multi-field sorting, perform all arithmetic functions, link with the word processor – and more!

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## LABEL PRINTER

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## ORDER FORM

Please send my Mini Office II for the Apple II/III/SE/IIx/IIx+ (48k required), on 5 1/4" disc for £19.99

I enclose cheque/make payable to Database Software, or debit my Access/Visa card:

£     £     £     £     £     £     £     £

Exp. date

Signed .....

Name .....

Address .....

.....

**ORDER HOTLINE:**  
**TEL: 0635 879938**

SEND TO: Database Software, FREEPOST,  
Macclesfield, Cheshire SK11 7TB.

In its drive to increase sales a few years ago, Atari started to give away free software with all its computers. Those of you who bought a disc system will have received a copy of the Home Filing Manager - HFM for short.

This is an excellent program for storing all sorts of general, everyday information but it does suffer from certain limitations and one major disadvantage - you can only print one page of text at a time.

While this is fine if all you have on your data disc is a list of telephone numbers, it can be very frustrating if you have long lists of, for example, books, magazines or even recipes you require printing. It means that you have to load each one individually before printing it out.

It was from this frustration that this utility was born. It allows you to read in the information stored on a HFM data disc and convert it to a format that can be accessed by a word processor program such as Atari-Writer or Mini Office II.

When first run you are asked what device you want the information transferred to. Your choices are the same drive, a second drive or the Ramdisc created by Dos 2.5.

Once this has been chosen you are prompted for the filename - a maximum of eight characters is allowed - that you want the data saved as. When this has been entered you are prompted to insert your HFM

# Get more from your manager

Now you can convert HFM files to word processor files with this useful utility from GORDON SINCLAIR

data disc into drive one. Depending on the amount of information stored on a data disc, the program will read it and write out several files adding a default extension of P11, P12 and so on. Once this process is complete you can load in your relative word processor and enter the newly-created files.

Comprehensive error checking routines are built into the main program and every action is accompanied by full on-screen prompts, so you can't really go wrong.

One word of warning: Write-protect your data disc in case of an accident.

```

1 ROM 000000 1712000 000000
2 ROM 00000000 00000000
3 ROM 00 000000 00000000
4 ROM 00000000 0000
5 ROM 00 00 000000 0000
6 ROM 00000000 00000000
7 ROM 00000000 00000000 00000000 00000000
8 ROM 00000000 00000000 00000000 00000000
9 ROM 00000000 00000000 00000000 00000000
10 ROM 00000000 00000000 00000000 00000000
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96 ROM 00000000 00000000 00000000 00000000
97 ROM 00000000 00000000 00000000 00000000
98 ROM 00000000 00000000 00000000 00000000
99 ROM 00000000 00000000 00000000 00000000
100 ROM 00000000 00000000 00000000 00000000

```

Turn to Page 58 to

## PROGRAM BREAKDOWN

20-50 Read sector read routine  
60-70 Read all keyboard entries  
130-140 Check to see that it is a HFM data disc  
150-210 Setup variables and strings  
220-230 the main program loop. Drawn the CTR screen  
240-240 First number of pages on the disc disc and the start sectors  
250-250 Save the newly created data to memory or disc  
260-260 Finished writing to disc routine. Also tell you how many files were written  
270-270 Print a message to tell you that these isn't a HFM disc to the drive  
280-280 Print all HFM data retrieved on to the screen, within the confines of a window





It doesn't take long for a new disc drive owner to discover Dos 3.3's Autoran.SYS facility. As its name suggests, it is a disc file which automatically loads and runs when the computer is switched on.

Without going into the technicalities — they were covered in detail in *Alan User* by Len Gidding in April and May last year — an Autoran.SYS file can be any renamed machine code program which runs from the Dos 3.3 menu option L.

Unfortunately, if you are a Basic programmer like most of us, you can't take advantage of the facility because the Autoran file must consist of binary code, and simply renaming a Basic program will not work.

This is where Load'n'Run comes in. It allows you to create a machine code Autoran.SYS file which will run a specified Basic program. Before you can use Load'n'Run you must type in Program 1, making sure you correct any typing errors with Get it Right!

Apart from a few control characters — see the typing hints in the February 1988 issue of *Alan User* — the listing is quite straightforward, except for the horrendous machine code string in line 810.

If you feel brave you can try typing it straight from the listing, but we recommend you start by entering and running Program 2 to create the file as a disc file in Basic LIST format. To read it from disc, type MRW then ENTER "D:\BASICLIST.B". Type LIST to verify that the file is in memory and then type in the rest of Program 1.

When the program is first run you are prompted to enter the set of commands you want to be made into an AUTORUN.SYS file. Just enter the file exactly as you would in Basic — remembering to separate individual commands with a colon.

For instance, there is nothing to stop you displaying an eye-dazzling welcome message on the screen while

# Getting Basic on the run



**MICK RANDLE takes the toil out of auto-running your discs**

your Basic program is loading. Just type in a command line at the prompt like this:

```
IMPRINT TO:PROGRAM 1,PRINT ALL;MRW  
D:\AUTORUN.SYS;PROGRAM.BAT
```

You can even use wildcards in the disc filename. The following will print a message, flash the screen and run the first Basic program on the disc:

```
IMPRINT TO:PROGRAM 1,PRINT ALL;MRW  
D:\*.*;MRW D:\*.* TO (BASIC) (LIST) & MRW  
D:\*.*
```

The only restriction is that your command line is limited to 120 characters. The last example just about fits it, but you can squeeze more in by using standard Basic abbreviations like ? instead of PRINT and POS. Instead of POSITION, if you

make a mistake or change your mind as you type your command line, you can exit it using the Delete key to erase previous characters.

Load'n'Run operates by adding your commands to a machine code Autoran file which patches into the Basic editor so that Basic thinks it is waiting for you to type in your commands. Instead, the Autoran program sends your Load'n'Run command line, which Basic duly executes.

Finally, the editor is restored to retain control to the keyboard, and the Basic program is loaded and executed.

There are two things to remember when you use Load'n'Run. The Autoran file loads into Page 0, but as its sole function is to execute your loading commands, you may do anything you like with that memory after your Basic program has loaded. Just remember not to alter it with your Load'n'Run command line.

The second point is much more important. There can only be one Autoran program on a disc, so any existing Autoran.SYS file will be erased and replaced by the new one. If you want to keep the old file, copy it to another disc before using Load'n'Run.

So that's how you can autoran a Basic program easily from your disc. A useful application for this is to write a disc menu routine that displays a disc directory and then allows you to load programs with a single key press.

## PROGRAM VARIABLES

**BINARY CODES**

Contains the Autoran machine code file  
Contains Load'n'Run command line which is merged with BASICLIST

**COL COUNT**

Screen column position of cursor  
Number of characters in command line  
Value read from data statement

**DATA**

Keyboard status

**I**

Console key status — Start, Option and so on

**KEY**

Altkey value of keyboard input

**Q**

General purpose variable

**ROW**

Screen row of cursor

Year	1990	1991	1992	1993
1990	1990	1991	1992	1993

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

```

00000000 *****
00000001 *****
00000002 *****
00000003 *****
00000004 *****
00000005 *****
00000006 *****
00000007 *****
00000008 *****
00000009 *****
00000010 *****
00000011 *****
00000012 *****
00000013 *****
00000014 *****
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00000095 *****
00000096 *****
00000097 *****
00000098 *****
00000099 *****
00000100 *****

```

[illegible]

There is now an abundance of programs more available than ever. The information on

MicroLink

```

1000 CALL CLEAR
1010 INPUT "ENTER THE NUMBER OF STUDENTS: ",N
1020 DIM A(N)
1030 FOR I=1 TO N
1040   INPUT "ENTER STUDENT NAME: ",A(I)
1050 NEXT I
1060 FOR I=1 TO N
1070   INPUT "ENTER STUDENT MARK: ",M(I)
1080 NEXT I
1090 FOR I=1 TO N
1100   PRINT A(I),M(I)
1110 NEXT I
1120 END

```

0000 0000  
 0000 0000  
 0000 0000 Field name: Row number: 1 1 1 1  
 0000 0000  
 0000 0000 0000 0000 0000 0000 0000 0000

[illegible][illegible]

### PROGRAM BREAKDOWN

**18-32** Disable the Break key but still allow disc access. Pin 14B/D is used to switch off the screen.

**100-100** Flips the screen display. The poke in line 100 re-enables the screen, which was disabled in line 50. This dodge speeds up processing for graphics.

**280-290** Build the command line. This routine handles the positioning of the cursor and the construction of a string containing your instructions.

004-006	Give an edit prompt and waiting
000-008	Print an informational message
500	Open a new subarea file
000-000	Create the Automan program: The length depends on the length of your command line as the machine code string cannot be DIM'd until line 500. Your commands are added to the string in line 010

Print a message telling you that the program has done its job.

**123** Contains a useful feature to detect key-board input: Location 764 always contains a code for the last character typed – not the ASCII number, but a special internal code in which 255 means that no key has been pressed.

By adding 354 with 255 in line 510, the program will loop at line 500 until one is entered.

**2080-2090** Has a home-made cursor. Changing the question marks in lines 2080 and 2090 will change it to whatever character you wish.  
**2090-2140** Line trap; Location 185 contains its number. Although there are several possibilities, the most likely are:

- Attempting to delete and replace a locked Autocut file (1437)
- Attempting to write to a non-Dos or an unformatted disc (1442)
- Attempting to write to an empty disc drive (1444)







# Mind your language...

**RUTH JAMES assesses four cassette-based Eurospeak courses for the Atari**

WITH the holiday season upon us panic looms in homes up and down the land. The hotel is booked, so is the flight and Mrs Smith at number 28 is going to look after the goldfish for the fortnight you're away.

But you're just remembered something: You can just about manage to speak the English language, never mind any other.

Fear not, help is at hand in the shape of Langman's Conversational French, German, Italian and Spanish language tutorials. They're comprehensively written programs for any Atari home computer owner with a cassette deck. Recommended for use by people 14 years old or over – and it doesn't matter how much over you are – who want to learn a language from scratch.

Each course is split into 10 units spread over five cassettes. Each tape contains several basic programs as well as the necessary audio material to help you understand pronunciation and accents.

As well as the cassettes you are provided with a very informative course booklet which explains every detail of the individual units you are working on. Each one is split into two or three learning phases which can be categorised as study, practice and

activities. There is also a grammar and vocabulary summary after each.

The best way to describe the course is to explain each unit individually. I'll use French as an example, as this is the language I am most fluent with – although I have a working knowledge of them all. So, here we go:

## About you

The first section deals with telling you how to greet people, introduce yourself, state your nationality and so on.

All sections are accompanied by a drawing of a man or woman who talks to you. Words or phrases are displayed on screen as they are played or spoken through the TV speaker.

This is a very useful feature as it enables you to see what a word looks like as well as what it sounds like. You can repeat the word and thus develop your accent.

There are a variety of exercises ranging from the straight repeating of words to think, choose and repeat where you have to select the correct answer from a choice of four. You can even listen to a conversation between two people then answer questions

about the subject they discussed. While all this is going on various graphics are displayed to add to the mood. For example, a TV set and sofa is drawn with two sticks people sitting down as different questions about the surroundings are asked.

The most demanding section is the making up sentences exercise where you choose one word or phrase from each of four lists. The end sentence must make sense and be grammatically correct.

A correct answer is rewarded with a fanfare and sometimes, a title flash. A wrong answer gains you what can only be called a computerised raspberry.

Don't worry if you don't grasp an exercise straight away because you're given the option to repeat it.

The accompanying course book complements the tape exercises, explaining what is happening all the time and teaching you the correct grammar to use – such as masculine and feminine endings, the use of *de* and forming the negative verb.

## Yoursell and others

Here you are shown how to ask how someone is, how to reply when someone asks you how you are and various other courtesies.

This section follows the style of unit one with the same kind of exercises. However, it does have my favourite imitation of the whole course: "Look, listen and take the man's part!"

Most of the tape time is used up on oral comprehension. You listen to a conversation and then answer a multitude of questions about it. As this style is repeated the exercises get more and more complex.

You have now reached the stage where you must learn to count up to nine in your new language, make requests, reply to requests and ask permission to do something or ask someone to do something for you.

Most examples used are to do with hotel situations and booking in and out of your room – an extremely useful feature for a program that will be predominantly used by holidaymakers.

A grammar section is included in the course book for this section and it takes a little look at verb endings, but nothing too frightening.

Polite replies also feature strongly, if you don't finish a sentence with thank you it's marked wrongly.

## Finding the way

The thing that unnerves me the most is getting lost in an unfamiliar place, and worse than that is getting lost in

## From Page 18

an unfamiliar foreign country. So I was very pleased to see a section showing you how to ask directions and giving an adequate number of examples in doing so.

It also compares can I with could you so you can learn to recognize if someone is asking or offering things to you and the all-important and liberating phrase please again more clearly is mentioned.

The next unit is succinctly entitled Where and is designed to teach you how to ask where people are or where they have gone. On other sections of the course writing answers are simply ignored, but this unit points them out to you and asks you to remedy them.

It would have been nice to see this put to use consistently throughout all 10 units. How are you supposed to correct a mistake if you don't know what it is?

However, the section does fall prey to the dreaded answer syndrome - if you accidentally select the wrong answer there is no way to erase it and enter a new one. This can be frustrating at times.

Graphics are put to full use in this exercise and onscreen text is constantly erased in a new and neat way all the time.

Unfortunately, as the exercises get harder the grammar gets more involved - luckily it's well detailed in the course book.

## When

Next we move on to deal with telling the time and how to refer to a particular time within a conversation. To help you with this you are required to revise numbers, spelling and pronunciation. As with the other sections it's incredibly thorough - you learn to say a'clock, quarter past, quarter to, half past and lots of permutations of different times using them.

To help you revise the maths part a little game is brought into use - in it you have to add up some very simple figures. At least the authors don't doubt your mathematical literacy.

Some particularly useful vocabulary is now introduced: Open, close, arrive, leave, embark and train are all comforting phrases to know.

After using the question I was pleased to note you can now remove a wrong answer and insert the correct one by pressing the speaker. What I don't understand is that if this section has been it - why can't the others?

## Describe it

When you have studied the next unit you should be able to say what things

are, describe them and say if things - or people - are good, bad, cheap or expensive.

You are also shown how to ask what something is. For some reason mainly a food vocabulary is used - maybe they were getting hungry when they wrote it.

Again, good use of graphics accompanies the text and audio work, and in one of the exercises sound is brought into play. Most of the grammar deals with this and that - basic words used in constructing sentences.

## I like

In this one you learn how to say what you do and don't like, why you like it, what other people like, what you prefer and inquire what other people prefer.

A new verb - to like - is introduced and is used in a variety of situations. Its common usage gets across what a useful word it is.

It's interesting to note that all the vocabulary used in this unit - and all the others - is of the everyday kind you would always hear in a bar or restaurant in a foreign country. For instance, why and because are introduced for you to use in the construction of sentences.

Within the realm of creating sentences a very original game is used - the fruit machine. A random selection of words is displayed on the reels and after they have finished spinning you can judge them to form a sentence.

Once you're happy it's grammatically correct you can press Return. If you're right you win and coins appear to drop out.

Grammar in this unit consists of agreements - a, an and zero - which are tagged on to the end of a word to indicate whether it's masculine/feminine or singular/plural.

It's all kept very simple and, as it is continually stressed, easy to employ.

## I want

I want doesn't get, except in this program. You're shown how to ask if something is available, what you do or don't have and how to say what you do or don't want.

After using this section I felt I could buy or eat food anywhere in Europe - the exercise is very comprehensive and covers every little detail.

Using the same style as before to ask questions, the program goes on to test you to the limit and uses graphics and sound effects to give the whole thing a feel of Italian.

One of the exercises of this unit totally bemused me as it deals with of and of the or I should say oh, de la, du and des. As usual, you are given the option to repeat the exercise, and I

did and I eventually got it right. However, this section isn't very well documented, and will be very difficult for a novice to grasp.

Lots of new verbs are introduced - such as want, have and prefer - and some really important vocabulary must be learned - chips, bread and beer.

After completing all the exercises you will be able to have a simple conversation in your chosen language with ease.

The party piece of the unit exercise is a rather difficult crossword - questions are in English and you have to answer them in your new foreign language.

## Actions

This final section shows you how to ask someone what they are doing, and allows you to tell people what you are doing. For example, Je suis in journal means that you are reading the paper, and many other examples of actions are given.

As with some of the other units, this one gets a little excessive with its revision and I must admit to getting bored with it. The grammar section deals with verb endings and both present tense and past - as in a previous unit.

## The last word

All the units contain a high spoken content - conversations and quick repeats make them very interesting and fun to use.

Supporting the tapes and the grammar exercises are several activities in the course book. Like the tapes themselves they have a heavy holiday bias and range from writing letters to pen pals to filling in hotel registration forms.

They're all very useful and well worth spending plenty of time working on.

One major complaint I have is that your tape must be left with the play box depressed all the time. This can lead to a frustrated pinch wheel and future trouble for you and your recorder.

All in all, the Langman tutorials are excellent value for money and a must for all prospective holidaymakers. GCSE/A level students will find them very useful as a medium to revise from - they certainly taught me a thing or two.

Happy studying, and bon voyage!

**Publisher:** Longman's Conversationals  
**French, German, Spanish and Italian**  
**Price:** £3.99  
**Supplier:** Alan Watts, 11 Farnell Street,  
Manchester M4 3DL  
**Tel:** 061 838 0841

HERE I am again, harpless from the Lost World of Wazir, having just recovered the stolen Stone of Socrates and returned it to its rightful owner, the Mahab of Salsay. And very appreciative he was too, gave me enough supplies to fill my real bucket.

However, I had to politely refuse his offer of 1,000 goats, the lounge is already overcrowded with the herd of Chinese cows the Wizard of Change gave me last week for rescuing his pet pomegranate from the slimy pits of Ptolema.

And so to your letters. Simon Grieve of Kidderminster, like other readers, has been wrestling with Taras – not literally of course – in Mordor's Quest. He is stumped by Taras's riddle and also wants to know if there are any hint sheets available for this adventure.

The solution to the riddle and another problem is revealed below, but so far as I am aware there are no hint booklets for it.

My thanks to Darren Teather of Bradford and Mrs Jean Gifford of Rayleigh, Essex, for help with this part of Mordor's Quest. In return, Jean would like to know the password at the Adamantium door. Similarly, James Townsend of Harrogate wishes to know how to pass the portal.

Darren has completed this adventure and has promised to send in a complete solution soon. However, in the meantime he has kindly offered to answer reader's queries on Mordor's Quest directly if they care to write to him at 21 Kestrelcliff Drive, Thornton, Bradford, West Yorkshire, BD13 3BA. Please remember to enclose a stamped addressed envelope.

The next reader has omitted to sign his or her name – I'll call him Mr X – but comes from Harwood Close in Headington, Oxford, so will know who I mean. Mr X has stuck his neck out and nailed his colours to the mast – there's a relaxed metaphor there somewhere – and sent in a list of his 18 favourite adventures, the top 18 of which appear in the panel.

Good to see Hitchhiker, Starcraft

## MR X's RAVES

- 1 Snowball
- 2 Hitch Hikers Guide To The Galaxy
- 3 Starcraft
- 4 Colossal Adventure
- 5 The Pawn
- 6 Adventure Quest
- 7 Return To Eden
- 8 Worm In Paradise
- 9 Dungeon Adventure
- 10 Leather Goddesses of Porn



## Colourful by Rouloc confusion...

and Celestial Adventure near the top, together with a goodly dollop of other Level 8 adventures.

Must say that I didn't enjoy Logic Philosophorum (18) all that much, but Mindshadow (19) and Dallas Quest (18) were quite enjoyable as I read.

Although he hasn't included them in his top 18 as they are strategy games rather than traditional adventures, Mr X rates the two Alternate Reality games highly. Now let's hear from some other readers on the subject of personal favourites.

I have been caught out by Mr S. D. Paskin of Worthing. He is the only one to have written in saying the statement I made concerning my name in the December issue of Alan's

doesn't stand up. I said that Rouloc was simply the word colour written backwards but, as Mr Paskin astutely spotted, that would spell Roulco.

The truth, as many of my regular readers will know, is that although I am pretty clever at clambering around dungeons and quite a dab hand with a broadsword, I am a bit of a mope when it comes to magic. Yes, you've guessed it, members of the jury – I am a rotten spelller! And there, your honour, I rest the rather pathetic case for the defence.

Many thanks to Paul Suttle of New Eltham, London, Paul Murlough of Ramoth, Hants Hagenstrum from

Turn to Page 58

4 From Page 37

Masterfermak in Sweden – your command of the English language is superb Hans – and J. Swenney of Nottingham for their stimulating letters and generous help with *Alternate Reality: The Dungeon*. A selection of *Dungeon* hints is published here.

Paul Suttle says that if readers with *Dungeon* problems wish to ring him on Exmouth 362945 before 10am or after 4pm most days, he will try to help. Another reader in Sweden, Matsias Andersson from Forsman, would like a few hints for Scott Adams' *Mission Impossible*. Happy to oblige, Mathias.

Next month I hope to tell you have a fair-sized portion of tips for *Ultima IV*, culled with the aid of expert assistance from C. Seymour of Liverpool, Hans Hagenstrand – again – and Brian Standing of Port Talbot.

Until then, keep your sword sharp and your lamp trimmed.

## HINTS AND TIPS

### Alternate Reality: The Dungeon

- Do not exchange Mergand's tunic for the mirrored shield as it regularly restores your hit points while wearing it. Instead, find a pair of latex suicide shoes or a leather jacket for the horse.
- To defeat the Desecrat, don't carry too much. Learn the Temporal Pique spell and use it with a weapon such as razor ice.
- Version 2.0 is bug-ridden. If you find Death's Door right after meeting Aunimiri, that's one of them. So save your game after dealing with him, then power off. Restart and you will be safely returned to the Dungeon entrance. You must visit Aunimiri three times. The real Death's Door is down on the third level.
- To get past the three doors, go through the middle one, take the first door on the left twice then take the middle one twice. You should now be in a large hall.
- Try crossing the River after midnight but before 1am and giving copper to the boatman.



### Morden's Quest

- If you look at your map, you might see that a certain part of it resembles a Kermit-like creature – and there's your answer to Tarran's riddle.
- Sacrifice the jade amphibian to the waterfall to pass through the cascade.

### Mission Impossible

- Search the safebox.
- Throw the recorder through the window.
- Return to the chair and press the white button.
- Kick the door of the control room.

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# 5 LINERS



## PATTERNS from James Cox-Davies

AFTER working out how to draw circles on my Atari, I decided to write a program to draw interesting circular designs by rotating a line around the circumference of a circle.

As the program stands, a multi-made of different patterns can be created by inputting four values for size (M), style (N), radius (R) and speed between the next plotted point (P). Here are some interesting numbers for you to enter:

M	N	R	P
120	80	80	50
200	120	80	80
120	120	80	60

The first two inputs can be from 0 to 99999999 with the third from 0 to 60 and the final point can range from 00 to 200 - remember to press Return after each.

More shapes can be created by changing the formulae held in the brackets on line 100, for example by changing it to read:

```
PLN1: H=H*(20+H*H)+I*(H*20+H*H)
```

The program can be expanded to incorporate more complex drawing routines or you can make it random-

ise inputs and so create an ongoing database of your favourite patterns.

### PROGRAM BREAKDOWN

- 1 Prints a message to prompt an input for the four main variables and sets a Graphics mode 0 screen.
- 2-3 Set the background and character colours. Prints the values for M, N, R and P then sets the X, Y coordinates.
- 4 Start of the FOR...NEXT loop.
- 5 Ends the loop and then goes to line 100 to get new inputs.

```
10 PRINT "ENTER VALUES FOR M N R P AND Q"
11 GETEND=0:GOTO100:END:GOTO100
12 INPUT M,N,R,P:PRINT:GOTO100
13 PRINT "M N R P"
14 PRINT "120 80 80 50"
15 PRINT "200 120 80 80"
16 PRINT "120 120 80 60"
17 GOTO100
18 FOR I=0 TO 200:STEP 100:GOTO100
19 NEXT I
20 GOTO100
21 GOTO100
22 GOTO100
23 GOTO100
24 GOTO100
25 GOTO100
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27 GOTO100
28 GOTO100
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100 GOTO100
```

✓Get it right!

10 WING (H)  
20 WING (H)  
30 WING (H)  
40 WING (H)  
50 WING (H)

## ROTATE from Frank Neale

ONE thing Atari home micros have that other computers don't is the GTIA custom graphics chip. Its superb features allow you to create some very interesting visual effects, especially in the low resolution, high colour GTIA modes - 8, 16 and 32.

While experimenting with these modes I found that it is easy to create the effect of rotation on screen by simply POKEing to the colour registers very quickly. To enable the program to run fast enough a machine code routine is used to alter the registers and produce a stunning visual display.

### PROGRAM BREAKDOWN

- 1 Sets the Graphics mode, holds the machine code string and sets the colour registers.
- 2-4 Draw the circles on the screen using SM and CGS curves.
- 5 Activates the machine code routine using the USB command.

```
10 GRAPHICS 8:GOTO100:GOTO100
20 GOTO100:GOTO100:GOTO100
30 GOTO100:GOTO100:GOTO100
40 GOTO100:GOTO100:GOTO100
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990 GOTO100:GOTO100:GOTO100
1000 GOTO100:GOTO100:GOTO100
```

✓Get it right!

10 ATC (H)  
20 GSC (H)  
30 AWW (H)  
40 HCR (H)  
50 BLU (H)





THE Atari story begins in California, USA in 1972 – the days when powerful computers filled entire rooms and the most sophisticated video games were test adventures on mainframes. Three friends – Ted Dabney, Larry Brian and Nolan Bushnell – wanted to develop and market a computerised game that would be commercially viable.

Each decided to put \$100 towards the project and then spent some time trying to find a name for their new venture. During a search through a dictionary they came across the word *Syzygy*, meaning the straight line configuration between three celestial bodies. They decided on this.

Soon afterwards Larry Brian pulled out of the project leaving Dabney and Bushnell to fight on alone. The two started in earnest by opening a shop in Santa Clara, California with capital of \$200 each. Shortly afterwards they invented the very first arcade machine called *Pong* – a tennis-type ball and bat game.

They installed it in local bars and pool halls, and after a while started receiving calls saying that their machines had broken down. On investigation the fault was found to be the machines becoming crammed to overflowing with coins because the game was too popular.

Dabney and Bushnell decided that *Syzygy* was too good a name to give up as they applied for the rights to incorporate a company with that name. Unfortunately, the name had already been taken and the holding company, although not operating, was not willing to lose it. So back to the drawing board.

### Atari gets its name

Still looking for inspiration they sat down to play Go, a Japanese board game. They decided to make a list of suitable Go game words to choose one to adopt as a company name. The list went like this: *Sente*, meaning the upper hand, *Atari*, the Go equivalent of check in Chess, and *Hansu*,

# Micro empire that was born in the arcades

Atari's route to success mapped in detail by RICHARD HAWES

meaning an acknowledgment of an over-taking move.

The list was submitted to the Californian Secretary of State Office and only one was approved – *Atari*.

Having chosen a new name, they designed a new logo to include the S of *Syzygy* and the A of *Atari*. It was not until much later when Atari really started to take off that an advertising agency designed its current logo and trademark which they dubbed the *Stylized A* design. This design is now more commonly known among Atarians as the Fuji symbol.

### All change

By 1974 Atari had released a home version of their arcade hit, *Pong*. This crude single-game machine was also a hit, and by 1975 Atari's sales had reached \$40 million. In 1976 Atari started to find problems with the competition, and Bushnell and Dabney sold the company to Warner Communications, the leisure industry giant, for a mere \$28 million. At this stage, Bushnell remained a figure of major influence within the Atari management.

It wasn't until 1977 that Atari

produced its first programmable home machine, the 2600 VCS – Video Computer System. At that time the only other machines that could be used on home televisions would only play one or two different games, like Dabney and Bushnell's own *Pong*. The 2600 was one of the first to allow you to plug in a cartridge and have a totally different game. Sales for the year reached \$100 million.

Due to clever licensing deals and use of Atari's widespread coin-op titles, the VCS – which is now over 12 years old – has now sold between 25 and 40 million units worldwide, more than any other home machine. As a measure of its ahead-of-its-time design, it still maintained sales of a million units last year, 100,000 of them in the UK.

By 1979 through the sales of its computers and games cartridges, Atari became the single largest buyer of rom chips in the world. The VCS also spawned an industry of add-ons and, almost for the first time, third party software houses – an estimated 150 million games cartridges have been sold for the 2600.

Nolan Bushnell left Atari in 1979 as it started losing money again and Ray Kassar was brought in by Warner to head the company. He managed to bring it back into the black.

It was late in 1979 that Atari first showed the 8000-based 400 and 600 home micros. They had a shaky start in the UK but did well in Europe and the States, taking sales to a new all-time high in 1980 of \$418 million.

The 8 bit Atari 800 came into the UK at £449 for a 16k model. Basic cost an extra £39 and a 16k memory expansion was £69. Adding 512k to an 87 now costs around £100. In 1981 Atari became the fastest growing company in the history of America and dominated the video game market with a massive 80 per cent share.

By 1982 17 per cent of American



The early Atari logo



The present Fuji logo

households owned a video game machine, Atari's sales in the 1982-83 period reached a new peak of \$2,000 million. It had by this time sold 18 million 2600 games consoles. It was also at this time that it released the 1600XL in America and subsequently withdrew it again before the middle of 1983. The bubble was about to burst again.

1983 was a very bad year for the old Atari company. The holding company - Warner Communications - lost more than \$270 million as other games machine manufacturers such as ColecoVision reduced Atari's share of the market to 40 per cent. In March 1983 Atari sold 1,200 employees from its payroll and in June 1983 products such as the 1600XL, the 1600XLD and the CX16 XL expansion were shown but never released.

The war between the home computer companies began to hot up after Commodore's huge success with the Vic 20 and then its release of the C64. In July 1983 Atari president Ray Kassar resigned and in September James J. Morgan came from America's tobacco industry to take over. At that stage, only the arcade coin-op machines division was profitable.

By November the home computer was reaching a peak and Texas Instruments, among others, was gaining from the home computer field. Atari's staff levels now reached 3,000, and it announced its greatest ever losses of more than \$532 million for the 1983 fiscal year. It made desperate attempts to regain a market share by introducing a revamped range of 8-bit machines - the 800XL and the 8000, based on and compatible with the 400 and 800 computers. But Atari continued to lose money.

### The new Atari

By the end of January 1984 Jack Tramiel had quit Commodore Business Machines, the company he had started 25 years earlier by buying typewriters, repairing and then reselling them. Many said at the time that he had left over disagreements with Commodore's chairman, Irving Gould.

He disappeared for four months and most assumed he had retired, made rich with Commodore's billion dollar success in the calculator and home computer fields.

By June of 1984 only 1,200 of Atari's 8,000 staff remained and rumours were flying around about a sell-off of the Atari Corporation to Philips, another giant in consumer electronics trying to make an entry into the home

computer field. Jack Tramiel had meanwhile set up a company called Tramiel Technologies Incorporated.

It was this new company that in July of 1984 popped up and bought Atari Computers - the Atari consumer products division - for a cool \$340 million, leaving Warner Communications with the profitable division of Atari coin-op machines.

In November of 1984 Jack Tramiel held a press conference to announce the birth of the new Atari company - and it certainly was new as little of the original staff remained. Behind the slogan of *Power without the price* Jack Tramiel streamlined it to the core - Atari UK went from over 180 staff to less than 25. Even now, a much more successful company still employs around 30 staff in the UK.

Having cut expenditure to the absolute minimum, Jack Tramiel then set about building the new Atari image and product line. He had, in effect, bought a worldwide computer distribution system and was now gearing up to use it to its best effect.

Many of his followers at Commodore came across to help him, convinced that Jack would make Atari a prosperous company once more. In addition, he employed two of his sons - already industry-renowned figures in their own fields - in key positions within the new Atari. Sam Tramiel became President of the Atari Corporation and Leonard Tramiel became Vice President in charge of software development.

The new company needed money, so it started life by reducing the prices of the stock it had obtained as the 800XL fell to \$119 in the US and £129 in the UK, giving a more competitive edge on the Christmas 1984 computer market.



Jack Tramiel... \$340 million takeover

### The new product line

In January 1985 Atari launched the first of its new lines. At the CES show in Las Vegas it unveiled six new machines: Three 16 bit computers called STs and three 8 bit machines still based on the XL. All were ready for manufacture after only six months under Tramiel's rule.

Based on the 800XL, the 8000 and the 1300X were the 8 bit machines launched, and a portable XL was announced but never saw the light of day. It was around this time that the 800XL, already becoming much more popular in the UK than the previous 400 and 800, was awarded the Home Micro of the Year award at the British Micro Awards.

In 1985 8 bit owners were treated to a new cassette deck, the XC11 which

Turn to Page 24 >



The Atari 1300X computer

## 4 From Page 22

colour-matched the XE series. This player replaced the by now aging 1010 recorder which matched the XL series. It was fairly quickly replaced by the XC12, as there seemed to be some problems with supply and reliability.

In March the Atari following was such that for the first time a dedicated user show could be held. Database Publishers staged the first Atari User Show at the Novotel in Hammersmith and it was an immediate success.

More high-level changes were taking place in Atari's management during the middle of 1986. Max Brambridge, the then general manager moved to the Far East to cover manufacturing, and Bob Gleadow left Commodore to rejoin his old boss at Atari.

It was speculated that Max Brambridge was being ousted as being unsuccessful at running Atari UK. However, Jack Tramiel said that he felt Max Brambridge had done a lot of work in getting the ST off the ground, and it was now time for a marketing man, Bob Gleadow, to build on that base.

At the end of 1986 Atari tested the

waters for a dedicated games machine by introducing the 7800 pre-system. This was subsequently withdrawn and has since only been sold in the US.

The 1088E - 128k micro - and the 880E - 64k micro - are still available. The 1088E is priced around £180 with a cassette deck and the 880E is priced at around £180 with a tape deck.

Atari has continued its policy of supporting the 8 bit range. The latest machine to be released is the XE Games Console, similar in idea to the 2600 but controlled by a 6800C CPU like the XL/XE home ranges. It comes

with 64k of memory and can be upgraded to 128k by adding a keyboard that has 64k built-in.

As such it is an advanced games machine rivaling those from Nintendo and Sega. However, it is much more than a mere games machine - as the in-depth review published in the December 1987 issue of Atari User reveals.

Software previously written for XL and XE micros is fully compatible with it, so a wide range of games, educational and business programs are already available.



The Atari 7800 video game machine

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# Software

## SCENE

### Keeping on the right track...

**Product:** *Grand Prix Simulator*  
**Label:**  
**Price:** £19.99 (casualist)  
**Digestion:** Code Masters, PO  
 Box 200, Bantock, Devon  
 EX4 6DQ.  
**Tel:** 0529 814132

AROUND this time of year, BBC 2 screens a sports program with a very catchy signature tune – written by Fleetwood Mac themselves.

It has to do with a bunch of formula one racing cars spinning around a track at tremendous speeds. And its commentary is by a person who gets over excited very easily. Yes, you guessed it, the *Grand Prix* season has started.

So it's no coincidence that Code Masters has released its latest offering for the 8-bit Atari – *Grand Prix Simulator* – at this time.

The game uses an overhead view with up to three cars driving around the 12 different, and very difficult, circuits – very similar in style to *Super Sprint* on the Atari ST.

Each circuit is cunningly designed to make life as dangerous as possible for

you as you drive under bridges and through all sorts in an attempt to beat the computer, your opponent, or both to the finish.

The digitised speech used throughout the game is of a low standard when you compare it to other games. There again this is a budget title.

You control your red car using a joystick plugged into port one. Pressing fire accelerates it and then all you have to do is steer round the hairpin bends and try to avoid crashing into everything.

Remember that a head-on steering technique is employed, so push left to go right and vice versa.

The game supports simultaneous two player action with the second driver controlling the yellow car via a joystick plugged into port two. The purple car is the computer controlled one and drives a pretty mean race.

As with the TV series, the game employs a catchy signature tune but, this one isn't written by Fleetwood Mac. All the same, it's quite nice. There is a section on

the cassette inlay describing a racing driver called Johnny Dumbles who has played the game and endorsed it. He says it's an exciting and fun simulator to play. All I can say is *Johnny what?*

The graphics are very good, even though your car looks like a brick on wheels going around a track. The circuits are well depicted with splendid use of colour.

At times the sound effects leave a bit to be desired but you are restricted in what noises you make within a car game – the revving engine and screech of tyres are all that spring to mind.

*Grand Prix Simulator* is very enjoyable and tremendous fun to play, especially when in two player mode. It's a good laugh to watch your opponent crash into the barriers or get stuck under the bridges and not be able to find his way out.

The only thing I can criticise is the steering – it's just as well your car bounces instead of axiodesides when it hits a wall or bridge, because that's what I spent most of my time doing, if



you like car games but are a little bored by the head-on perspective given this one a try.

Superb playability and excellent value for money far out weigh the criticisms I can level at it. At £19.99 you can't go wrong.

Ruth Pattison

Sound	B
Graphics	F
Playability	F
Value for money	B
Overall	F



Be quick off the mark on track one



Shave off at the start

# Software

## SCENE

### Boulderdash is back

**Product:** *Boulderdash: The Arcade Game*  
**Price:** £2.99 (casual)  
**Supplier:** Mastermind  
 (MALE), 8-12 First Street,  
 London EC3N 4JN  
 Tel: 01 337 8880

OVER the years several games have created a cult following among Atari game players. However, none have had the same lasting effect as *Boulderdash*.

It is, because it has an addictive quality that everyone loves, or could it be that the hero - Rogdod - is the coolest little rockman you have ever seen?

Now MAD Software has released *Boulderdash: The Arcade Game*. It's a conversion of *Arcade Systems'* classic coin-up game and the cassette intro tells you that you have just bought the greatest piece of game software ever released. Play on to find out.

The game is set on five worlds Rogdod has to explore. On each he takes a different identity in his bid to collect items of treasure. His guides are comfrob,

hammer, spaceman, dealer and shal - I wonder if he takes rock cakes?

The various treasures are the Pharaoh's gold masks, spoils of eternal youth, Indian gemstones, suns and hearts. To collect one all he has to do is walk over it.

Each world has four levels and each level has four screens. According to my maths that makes 80 screens in all - plenty to keep you busy.

Wandering about collecting the treasures sounds very easy, but in *Boulderdash's* world life is rarely this simple. You must avoid falling rocks that tumble down as you eat the earth or move a treasure from beneath them.

Deadly monsters inhabit these strange subterranean labyrinths. Some move in preset patterns, simply there to make your life difficult while others will chase you.

Yet another type explodes when killed, creating treasures as they die. You may have to do this in order to finish some levels.

Once the required number of items have been retrieved from a set of caves, a door -



Explore level one with Rogdod

which looks like a beehive - will appear for you to go through.

Some of the rooms have *Boulderdash* traps and puzzles to work out. For example, some are known as Torch Rooms but these only occur on the night-time level. In them you carry a torch that only allows you to see segments of a room.

Some have a key that you have to put on. To accomplish this you must find a tap and turn it on, then push the water to the fire.

Of all the puzzles and devious traps I encountered, the most annoying were the walls that glow. If you remove a boulder or treasure in the wrong order the wall will follow you, making it very easy to pin yourself in.

Although the graphics are not as good as the original game - and remember no other computer format has been able to emulate the quality of the old Atari version - it does have that certain classic touch to it.

*Boulderdash* is still animated in its old way - if you stand around too long doing nothing the stars to get a little

nervous and begins to twitch and shuffle around.

The sound effects are lacking when compared to the original but, they are superior to other games currently on the market and they do add something.

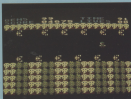
It's nice to see *Boulderdash* back on my TV screen again, even if it is in such unusual surroundings.

Compared with the original version, the on-screen action seemed a little slower and there was a tinge of a delay in joystick response - but I could be comparing it to the old version too much.

If you are a fanatic of the *Boulderdash* game and love to see that cute little rock terrmite fly around the screen, then invest in this game - at £2.99 it's an absolute bargain.

And if you get bored with it you will find a free copy of *Crystal Master* on the B side.

**Keith Pattison**



Boulder the adults on level three

Sound	7
Graphics	8
Playability	8
Value for money	10
Overall	8



# Software SCENE

## Compilation bonanza...

**Product:** Atari Compilation  
**Price:** £4.99 (suggested)  
**Supplier:** Atari Corp. (UK),  
Atari House, Parkway  
Tavara, Slough, Berkshire  
SL1 5RT  
**Tel:** 0753 33366

IN the early days Atari produced several great games and now it has re-released five of them on a compilation tape – Type Attack, Missile Command, Centipede, Baseballs Tennis and Star Raiders.

In **Type Attack** you defend eight missile bases from attack by aliens, each marked with its own key-board character. Every time you press the relevant key an energy bolt from the base will destroy the marauding alien hell-bent on your destruction.

Basically, the game is a simple keyboard tutor that has a graphical representation of each key so as to relieve the tedium of finding your way around a query keyboard.

Each successive wave gets faster and you need to be quick off the mark to hit the correct key before the alien gets you.

Admittedly this isn't the best game ever written for a home micro, but it is great fun for the kids and very useful if you just want to brush up on the old keyboard bashing.

**Missile Command** puts you in charge of a missile also as you defend seven cities against attack from incoming ICBMs (Intercontinental Ballistic Missiles) and MIRVs (Multiple-Warhead ICBMs) which drop killer satellites and enemy bombers.

The attacks come in waves and last from 30 to 45 seconds each. As the enemy projectiles descend, just move your targeting sight and press the fire button. This will launch one of your

AMMs – Anti-Ballistic Missiles – that will hopefully destroy the enemy weapons forming in on your cities.

When a wave is over, your remaining cities and missiles are used to calculate a bonus, and this is displayed with your current score.

When you are about to run out of missiles your target sight will change shape. At this point make your missiles count – don't waste them or you could end up with no cities at all.

The graphics are very simple as are the sound effects, but overall the game is a classic and great fun to play.

In **Centipede** you live in an enchanted mushroom patch also inhabited by bothersome bugs which possess magical powers. Your job as Bug Blaster is to destroy all the creepy crawlies before they get you.

The largest of the nasties in the garden is the centipede – hence the name – that marches down the screen in a military manner. If it bumps into a mushroom it changes direction and travels at an even greater speed. To destroy it you must blast each of its segments.

Other nasties to watch out

for are the jumping soldiers, the headless flea that leaves a trail of mushrooms after it and the scurrying scorpion which is deadly if it touches you.

This is another conversion of an Atari arcade game that had a cult following years ago. I remember putting pounds into one of these machines in my younger days.

The first time I played the home micro version I had just bought it on rain car-bridge and it was as much pleasure to play then as it is



Missile command!

now and at about a third of the price.

**Centipede** is a state of the art game and very addictive – worth the compilation price on its own.

Your view of **Baseballs Tennis** is from above at a shallow angle, giving an

illusion of depth to the game. Added to this, the ball's shadow makes everything seem very realistic.

I still class this as the best tennis simulation I have seen on an 8 bit machine. The graphics, animation and sound effects are well put together. As with **Centipede**, it's well worth the price of the package on its own.

The final game on the tape is **Star Raiders** a legend among Atari owners worldwide.

You are at war with the evil Zylon empire which is attempting to take over your Galaxy and as a Starfleet pilot you must do battle with it as you zoom around in your twin ion-engined star fighter.

As the game progresses you must stop your star bases being surrounded and eventually destroyed. When the warning buzzer sounds you bring the galactic chart on to your screen – press C – and hyperspace to the relative sector and destroy the enemy vessels.

If you sustain a lot of damage, hyperspace to a star base that isn't under attack and dock with it. A repair drone will leave the station, repair all damage, and return your fighter.

If you ever wanted to be Buck Rogers or Luke Skywalker this is your chance. Another game well worth the price of the compilation on its own.

Many years ago these games would have cost you more than £100. Now you can get them for just £4.99. What a bargain.

Chris Jones



Game, set and match

Sound	8
Graphics	7
Playability	8
Value for money	10
Overall	8

Figures are an average rating for all the games

# THE FIDOLON

MONSTERS by *BRYAN STEVENS*

LAST month we gave you a nudge showing the levels to the superb graphical adventure game from Activision.

Now we introduce you to the strange and demonic creatures that inhabit this subterranean labyrinth.



## BATFLY

Level: 1, 2, 3, 4, 6, and 7  
Disposition: Easy meat  
How to kill it: One red fireball will dispatch this one.



## BITEBIRD

Level: 1, 2, 3, 4, 6 and 7  
Disposition: Easy  
How to kill it: Three red fireballs do the trick.



## TROLL

Level: 1, 3 and 6  
Disposition: Easy  
How to kill it: Three red fireballs will kill the first one but more are needed on higher levels.



## GREP

Level: 2  
Disposition: Easy  
How to kill it: This creature will be pushing up the daisies if you hit it with three red fireballs.



## BOTTLENOSE

Level: 3  
Disposition: Moderate  
How to kill it: Turn this one into a puff with three red fireballs.



## PUFFERBIRD

Level: 4 and 6  
Disposition: Moderate  
How to kill it: This creature can deplete your energy rapidly. So dispatch it quickly with three red fireballs.



## MUNCHER

Level: 4 and 6  
Disposition: Dangerous  
How to kill it: This monster will chase you, so move backwards as you are shooting it. Kill it with nine red fireballs.



## SINGING MUSHROOMS

Level: 5  
Disposition: Moderate  
How to kill them: When you approach them they will come to life and sing you a tune. Hit each one of the group with a green fireball. The last one will then change into another creature. Kill it with a red fireball.



## "T" (unrepeatable)

Level: 7  
Disposition: Extremely dangerous  
How to kill it: Ensure that your energy is at full before attempting to get this one. Awaken the beast with a blue fireball. This freezes it temporarily and gives you a chance to let off a volley of red fireballs. If your energy gets too low, run away! Collect more fireballs and go back for another go. It takes about 15 red fireballs to dispatch it.



#### LEVEL 1 DRAGON

Jewel: Red  
Fireball: Red



#### LEVEL 4 DRAGON

Jewel: Red and green  
Fireball: 6 Blue



#### LEVEL 3 DRAGON

Jewel: Blue  
Fireball: 5 Green



#### LEVEL 6 DRAGON

Jewel: Red and blue  
Fireball: 8 Blue



#### LEVEL 5 DRAGON

Jewel: Green and blue  
Fireball: 7 Yellow



#### LEVEL 7 DRAGON

Jewel: Red, green and blue  
Fireball: 9 Red



#### LEVEL 2 DRAGON

Jewel: Green  
Fireball: 4 Yellow



#### LEVEL 8 DRAGON

To kill it you have to shoot it with the same colour and same number of fireballs as used in the previous seven levels – and in the same order. Start off with three red, four yellow, five green, six blue, seven yellow, eight blue and finally nine red.

**ATARI  
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[illegible]

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Toolkit automatically boots in from cassette or disc and makes use of a normally unused area of memory.

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annoying  
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off simply.

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single or  
block of  
unwanted  
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quickly.

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renumbers  
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programs in  
one line  
increment.

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directory of  
any drive  
without  
having to  
enter Dos.

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between  
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# Your HINTS & TIPS

We welcome letters from readers giving their help with games on the Atari that they would like to pass on to other readers. The address to write to is:

Hints and Tips  
Atari User  
Europe House  
Addington Park  
Addington  
Maidenhead SL10 4MP

## Fort Apocalypse

THIS helicopter shoot-'em-up appeared on the market many years ago and is still the best of its kind. For those of you who are having trouble with it here are some very useful tips:

- Attack the missile carriers only when they are moving away from you — they're easy meat.
- When engaging enemy helicopters attack them from above. You can drop bombs on them but they can't fly upwards.

- If you shoot the moving blocks you will reverse their direction.
- Keep an eye on the Raytran scanner at the top of the screen. It will indicate when a rogue helicopter is heading your way.
- Try not to shoot off the screen. You may kill one of the men you are attempting to rescue.
- If you get killed you start at the last landing pad. So, land on the pads — usually flat white surfaces — as often as possible. Especially in the lower levels where it gets a bit hairy.

Bryan Stevens, Andover, Hants.



Helicopter  
appears in  
Fort Apocalypse

## Alternate Reality: The Gargoyles

IN the March 1988 issue of *Atari User* we gave you some tips for this excellent adventure game. Also included was an incomplete list of quests. The following shows the ones you can undertake:

### QUEST ONE

To free the prisoner under the palace you require a silver key. This can be obtained by defeating a Master Thief. Once freed, the prisoner will teleport you to the Riddle of the Three Doors. Beyond that, follow the passage to Acriminal's tomb and give him the staff piece that the prisoner will give you. This will complete the first quest.

### QUEST TWO

To complete this one you must kill the goblin and troll kings. Then take the two ring halves to the dwarf

smiths who will reforgo the ring. Next, simply take it back to the Oracle.

### QUEST THREE

Take Morgana's lure to the clothes horse who will exchange it for a mirrored shield.

### QUEST FOUR

To cross the river Stone wait until a few minutes after midnight, then enter the River Station and offer the boatman five copper pieces. He will take you across.

Once in the realm of the undead you must go to the palace of the undead king. Before you get there you must defeat six undead knights to improve your stats. The undead king will give you a staff piece for Acriminal.

### QUEST FIVE

This is the Great Dragon's quest — he wants the bloodstone. First go to

the gargoyle and answer the three riddles. He will teleport you to the basilisk. You must fight it with your bare hands as weapons don't affect it. Once you have defeated it you can take the bloodstone and return to the dragon who will give you a staff piece.

### QUEST SIX

When you have taken all the staff pieces back to Acriminal he will give you the Portal Access Card (PAC). Go to the Cauldron and get through its death's door. Use the PAC and walk through. You will be teleported to level four.

Use the mirrored shield as a secondary weapon and follow the metallic corridor round. You will come to the alien control room. Go in and an alien will then shoot at you with a laser.

The blast will reflect off the mirrored shield and destroy the control room. You will then go out the other side of the room. Walk forwards and you will find two doors. One takes you back to the elevator and the other is the Gateway to Revelation.

Neil Loughborough, Cleveland

## Spy Hunter

If your car is forced into the water wall you pass either the bridge or the rest of the land and pull hand right away from the island and get as close to the bank as possible. You can then get back on to the land as fast as possible with no problems.

Once you have collected the SAM missile don't hit any of the civilian cars or your car will blow up.

The smoke screen is the only useful weapon to use. The oil slick is pretty useless as it leaves a straight broken trail that can be easily dodged.

The helicopter won't always attack so don't instantly shoot it and waste a missile.

Andrew Patterson, Basingstoke

## Two discs crammed with the most popular programs from your favourite magazine!

These two exciting compilations bring together some of the very best listings from the pages of Atari User.

Whether you like games or prefer more serious pursuits there's something here for you - and you can also learn a great deal from examining and modifying the Basic listings.

### Ten of the Best Games

- Chopper Rescue** - Take control of a helicopter to rescue lost soldiers.
- Don Delfo** - Rescue Esmeralda by regaining the dangerous diamonds.
- Spacemaze** - Fly your spaceship through the deadly dangers below the lunar surface.
- Muskmunch** - Guide your munchy monster around the maze, avoiding its deadly vibrations.
- Moonpunch** - Collide up all the enemy but beware of the under space.
- Frank the Fruit Flair** - Help Frank eat his favourite food in this platform game.
- Back Quash** - Clash, sound and clash up all the ducks before the store hits the farm.
- Frogjump** - Direct the frog across the busy road in this classic arcade game.
- Doctor Bark** - Help the doctor build the new hospital but watch out for mad Noodles.
- PLAN** the latest Get it Right! program to help you correctly type in listings in Atari User.

Quaster was the game you liked best of all. Now, in **BOUNCE PLAN**, we've made it even better - with 333 exciting new screens to test your dexterity. Bounce up and down on the springy trampolines to hit the many targets while avoiding the balloons. (L1 and R1 only.)

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- DiscIndex** - Master index of those basic disc numbers by turning them into words.
- DiscEdit** - Modify those helpful writers with this superb utility.
- DiscView** - Take a look at all the useful information stored on your discs.
- Dump 16** - Make copies of your favourite pictures on your Epson or Apple II/II+ printer.
- ArtView** - Load your AtariArt pictures and draw your own fantastic artwork.
- AutoDirectory** - Gain instant access to disc directories without going to Disc.
- DiscScheduler** - Summarise your Basic listings with this useful AutoDisk program.
- Pedigree** - Print out any resident character set in full to an Epson printer.
- DetailIndex** - Manipulate data with ease whether on disc, cassette or in memory.
- 80 Columns** - Generate a very impressive 80 column text display on your screen.
- PLAN** the latest Get it Right! program to help you correctly type in listings in Atari User.



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Spacemaze



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TO ORDER PLEASE USE THE FORM ON PAGE 53



# Ready... steady... PULL!

Test your marksmanship with  
**STEPHEN WILLIAMSON's**  
fast-action game

THIS game simulates the sport of clay pigeon shooting where you use a shotgun to try and shoot down clay discs, or pigeons as they are known.

After typing in the program save it to disc or tape before running it. A mistake in the data statements could result in your Atari crashing and you losing your work.

When the program has been initialised it will display a menu of options which affect the gameplay. The clay pigeons can be small or large and played at a slow, medium or fast pace.

The number of pulls — 10, 20, 30 or 40 — affects how many sets of pigeons are launched. You can even choose the weather conditions — fine or cloudy.

An arrow points to each option and a joystick is used to move it up or down. Pressing the fire button selects the particular option you require.

When Start is pressed the message PULL WHEN READY appears at the top of the screen. If you move the joystick backwards, two clays will be launched or pulled into the air.

Your shotgun only fires one barrel at a time with the second one firing when a pigeon has been hit or the barrel has left the screen.

Your score depends on how high the pigeon is when hit — the nearer the top of the screen, the lower the score. To hit one requires fast reactions and a good eye.

The figure at the top right of the screen shows the number of pulls remaining. When it reaches zero the game is over and you will be returned to the main menu.



```

10 REM CLAY PIGEON SHOOT
20 REM BY STEPHEN WILLIAMSON
30 REM COLUMBIA 6000
40 REMILES 0
50 PULL 10,0
60 FOR CND TO SHOOTING CLAY PIGEON TERN+1,0
NEXT C
70 FOR CND TO TAILING CLAY PIGEON TERN+1,0
NEXT C
80 GOTO TAILINGCLAY 2,1,12,10,10,0,0
1,0,0
90 REM CLAY PIGEON, SPEED=0
100 REM WEATHER=0,0,0,0,0,0,0,0,0,0,0,0
1
110 SPEED=0,0,0,0,0,0,0,0,0,0,0,0
120 SPEED=0,0,0,0,0,0,0,0,0,0,0,0
130 L SPEED
140 WEATHER=0,0,0,0,0,0,0,0,0,0,0,0
150 L SPEED
160 SHOOTING CL PULL 1,0,0
0,0,0,0
170 PULL 10,0,0 CLAY PIGEON SHOOT
180 PULL 2,0,0 THIS IS GOING TO BE
A CLAY
190 PULL 2,0,0 BY STEPHEN WILLIAMSON
200
210 PULL 2,0,0 TAILINGCLAY... 0,0
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
220 PULL 10,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
230 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
240 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
250 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
260 REM CLAY PIGEON
270 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
280 REM CLAY PIGEON
290 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
300 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
310 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
320 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
330 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
340 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
350 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
360 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
370 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
380 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
390 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
400 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
410 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
420 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
430 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
440 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
450 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
460 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
470 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
480 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
490 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
500 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
510 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
520 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
530 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
540 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
550 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
560 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
570 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
580 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
590 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
600 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
610 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
620 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
630 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
640 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
650 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
660 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
670 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
680 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
690 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
700 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
710 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
720 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
730 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
740 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
750 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
760 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
770 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
780 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
790 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
800 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
810 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
820 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
830 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
840 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
850 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
860 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
870 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
880 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
890 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
900 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
910 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
920 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
930 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
940 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
950 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
960 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
970 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
980 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
990 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1000 PULL 2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0

```

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# MUG

## THE INDEPENDENT MicroLink User Group NEWSLETTER

### Prime mover

It has happened! The old MicroLink computer, a Prime RM, has been honourably retired and a new Prime 9915 with brand new software eased in to its place. It is traditional that such undertakings never go entirely smoothly, and this one was no exception. On the morning of the Friday the old machine crashed (was it walking?), and only managed to wait for about an hour before being turned off for good. It was a long weekend for many MicroLink subscribers.

The system got a severe test on the Monday evening, as everyone came on to find out how much better things were. Of course, with so many people on line the effects were somewhat diluted, but as things have settled down, things like directory searches are much faster, logons take less time and some of the really bad delays of old should just be memories. Not all commands show equal improvement, however.

It's early days yet for the new computer, but even the next month MUI will be comparing the performance

of the system with the old figures. As MicroLink expands, we'll need all the speed and space we can get...

### The moving cursor writes...

...but on the bulletin board you can always DELETE one of your own messages. Some people have complained to MUI about blank messages, which look like someone has REPLY'd to an entry by mistake without meaning to say anything.

It's a good idea if you do this, to go back on to the bulletin board and read through until you find your message. After reading it, typing DELETE will remove it as if it had never been sent.

### Not just a number

BEFORE the upgrade most people were known on the system by just their account numbers.

New MAILMIB isn't the most memorable way to address someone, as it was possible to have your name added to the system directory as that other users could send mail to you in a slightly more natural manner.

However, the way to get this done was never documented, and most people didn't avail themselves of the facility.

Since the upgrade, things are much better. Everyone now has a name, and by using the FIND command it takes a few seconds - again, a vast improvement over bygone days - to locate someone's ID by name.

And whereas even if you did have a name in the past it was backwards (as in GORDWINSBURPT), now it's a more legible FRED-BLOOM. Which should go some way to making mail easier to address.

There's now even an opportunity for anonymity, as those who had their names before keep the original format.

So on any list of users the old hands stand out from the crowd, backwards but proud of it.

### Online alternatives

THE last MUG newsletter mentioned the bulletin board. This is unique to MicroLink, but other Telnet-based systems have similar areas, one of which MicroLink shares. That's the

Norfolkboard, and it differs from the bulletin board by being much more basic - it's impossible to SCAM or REPLY to messages, for example.

But lots of different systems on Telnetnet Gold can use it, so it's a good way to converse with someone who isn't a MicroLink subscriber but does use Gold. Typing >NOTICEB will reveal both the good and the bad points of the area.

Also on MicroLink is the Messagepad. This is yet another shared message system, with different categories in the BB and fewer options. Once you've tried both it and the BB it becomes clear why the former isn't used very much!

### Garbage...

...or, as we British say, rubbish. Between your modem and the MicroLink computer are many opportunities for strange characters to introduce themselves into your call. For many, the problem is no worse than the occasional spiggly bracket having up in a mail message. But sometimes the problem is persistent and debilitating. MUG has received some queries on how to solve this.

Firstly, if at all possible, try your equipment (especially the modem) on someone else's telephone line. Then try different telephone numbers for MicroLink. This all helps to assess proof to give to the BT engineer when he calls to check your line.

If the problem won't go away, then slower speeds can help. It's unlikely that a line which is unusable at 1200 baud will miraculously become crystal clear at 300, but for cases of intermittent corruption, dropping the baud rate can make a big difference.

## Time, gentlemen, please

EVEN with the new computer, the speed at which commands are processed can vary considerably. Knowing what the factors are which govern this can lead to faster service and thus a reduced bill; something few MicroLinkers are aware of.

The biggest single Prime knobbling factor is the number of users on the system at the time. You can find this out by typing >USERS, and the more

people are about the slower things will be.

Peak time for MicroLink is from about 7 till 11 in the evening, as most non-business users take advantage of cheap telephone and MicroLink rates. But if you can hold out until midnight, then things ease up a lot.

From about two in the morning security backups are made - copies of all the data that's been added to the computer by users since yesterday. This is the other big

slowing factor, and many a small hours user has been surprised by a sluggish response when there's nobody else about.

The very best time to use MicroLink is between five and seven in the morning. More often than not you can be the only person using half a million pounds' worth of computer and network, and the speed of response is only matched by the feeling of power and the nagging need to sleep.

# Connections in high places...

**ANDRÉ WILLEY**  
takes a look at a  
neat and compact  
replacement for  
the Atari 850  
interface box



MOST Atari 8-bit owners start out with a simple, relatively low-cost, cassette-based system with the idea of upgrading to disc drives, printers and other add-ons once they've mastered the basics.

The open design of the special peripheral bus, which allows you to connect the various devices in a long chain, makes this approach both simple and fairly versatile.

The main disadvantage of this method is that it means you are limited to using Atari's own somewhat limited range of peripherals, or at least ones which use its connector system. To use anything else such as standard Centronics or RS232 protocols you must buy an often rather costly interface unit.

ED's P.R. Connection supplies both

a Centronics and two RS232 connections—for about two-thirds of the price and a fraction of the size of the old Atari module. This has been achieved by the use of a custom designed microprocessor known as the PRC885-II—a computer in its own right.

If you compare the P.R.'s layout to the maze of circuitry in an 850 you'll see just how much work this single chip must handle.

The interface is attractively packaged in a small grey plastic box which perfectly matches the 1000E. It draws its power from the micro, thus eliminating the need for yet another power supply to clutter up the desk, and connection is made via a included standard 100 cable. A socket is thoughtfully provided to allow you to add further

items to the chain if you so desire.

The other three sockets follow the protocols laid down by the 850. The Centronics port is a 15-way D Connector and the two RS232 lines are wired via a pair of 5-way D Connectors, the same type as those used for joysticks. Operationally the P.R. Connection is almost identical to an 850, except for the lack of two of the latter's four RS232 sockets.

Any cable designed for the 850 will work with this unit, but full pin diagrams are provided for those who want to make their own leads. Both modern and printer cables are available from Frontier at £14.95 each and discounts are available for buying the complete kit.

The printer is accessed by using the standard P. device or via LPRINT from Basic, and it also functions correctly with every piece of commercial software that I tried. If you find that your particular type of printer requires an extra line feed character after each return, a DIP switch inside the interface provides this facility.

Additionally, a second switch allows you to turn off the P. section of the interface—very useful if you're already using a direct-connect Atari printer and only require the RS232 mode.

The RS232 ports are accessed via the R1 and R2 handler which autoconfig on power-up. If you are using a cassette system you will hear

*Centronics refers to a common system often used to connect printers and other items which are likely to be fairly close to your system. The RS232 allows data to be sent over longer distances, but requires more work by the computer to sort it all out again.*

*These standards need to be provided by Atari's own 850 module for between £700 and £130, but this is not now easily available.*

*Many companies have helped fill the gap by developing straightforward Centronics printer interfaces, most of which come in the form of a cable which plugs into*

*your 850 chain at one end and the printer at the other.*

*Unfortunately this leaves no option to add any further Atari-type peripherals to the end of the chain, since there is no provision for a second socket.*

*One company—Miracle Technology—released an RS232 interface cable designed only to work with its own software and modems. Atari Office 8 now provides a more sophisticated text communications package which will work with this lead, but most other communications still requires an 850—until now.*

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an additional high-pitched beep just before the READY prompt appears as the driver code is automatically loaded from the interface's internal rom.

With a disc system you must specifically request the RS232 driver to load. With Dos 3.0 this means your boot disc must contain an *Autoboot.SYS* file, as provided on your master disc. Other versions of Dos — such as Dos06L and SportsDos — provide external commands to boot the driver — which may be used as Autoboot files themselves.

The driver loads itself as the current L0MM point and adjusts all memory pointers, accordingly taking us an extra 1,633 bytes of ram over and above your particular Dos's requirements. It is nice to note that an old 855 bug — which could easily crash the computer if the Reset key was pressed — has been rectified.

A Dos 3.0 double-sided disc is

supplied with the package and contains not only the Autoboot support files, but also three public domain communications packages — AModem version 1.0, RModem and RS2 Express — all of which seem to perform admirably.

The RS232 driver can be controlled from Basic via XIO commands, and you may select various baud rates, stop bits, parity, translation and all the other settings which seem to go hand-in-hand with RS232. But it's probably much easier to use the comma software provided.

Unfortunately, there is no facility for adjusting the bit-wise word length or for using split baud rates such as 1200/75. However, initializing and control of CBR, CTR, CRX, CTR and RTS is available in case full hand-shaking is required.

IOO has made sure that the IOO calls are identical to those used on the 850, so block output and compressed input/output modes are available via the standard IOO calls.

Thankfully, the designers have

even taken care of those few programs which use non-documented calls to the 850 system. All you need to do is load a binary file called *PRG.SYS* from the master disc before working with such software, and the P.R. Connection should completely emulate the 850.

This is a very useful device for anyone wishing to use modems or other RS232 devices, and certainly a bargain compared to the old Atari 850 interface. But do bear in mind the lack of a 1200/75 mode if you want to access a system that still insists on this speed.

Also, if all you want to do is plug in a Centronics-type printer you would probably be far better off getting a Centronics interface board for around half the price.

**Product:** C.S.'s P.R. Connection  
**Price:** £59.95 (incl. disc)  
**Distributor:** Frontier Software, PO Box 113, Harrogate, North Yorkshire HG2 0AR  
**Tel:** 0432 67740

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Army Dilemma	7.95	11.95	Blackboard II	2.95
Beethoven	7.95	11.95	Bridge	2.95
Blackboard II	7.95	11.95	Calculator	2.95
Bridge	7.95	11.95	Can You	2.95
Calculator	7.95	11.95	Chess	2.95
Can You	7.95	11.95	Chess II	2.95
Chess	7.95	11.95	Chess III	2.95
Chess II	7.95	11.95	Chess IV	2.95
Chess III	7.95	11.95	Chess V	2.95
Chess IV	7.95	11.95	Chess VI	2.95
Chess V	7.95	11.95	Chess VII	2.95
Chess VI	7.95	11.95	Chess VIII	2.95
Chess VII	7.95	11.95	Chess IX	2.95
Chess VIII	7.95	11.95	Chess X	2.95
Chess IX	7.95	11.95	Chess XI	2.95
Chess X	7.95	11.95	Chess XII	2.95
Chess XI	7.95	11.95	Chess XIII	2.95
Chess XII	7.95	11.95	Chess XIV	2.95
Chess XIII	7.95	11.95	Chess XV	2.95
Chess XIV	7.95	11.95	Chess XVI	2.95
Chess XV	7.95	11.95	Chess XVII	2.95
Chess XVI	7.95	11.95	Chess XVIII	2.95
Chess XVII	7.95	11.95	Chess XIX	2.95
Chess XVIII	7.95	11.95	Chess XX	2.95
Chess XIX	7.95	11.95	Chess XXI	2.95
Chess XX	7.95	11.95	Chess XXII	2.95
Chess XXI	7.95	11.95	Chess XXIII	2.95
Chess XXII	7.95	11.95	Chess XXIV	2.95
Chess XXIII	7.95	11.95	Chess XXV	2.95
Chess XXIV	7.95	11.95	Chess XXVI	2.95
Chess XXV	7.95	11.95	Chess XXVII	2.95
Chess XXVI	7.95	11.95	Chess XXVIII	2.95
Chess XXVII	7.95	11.95	Chess XXIX	2.95
Chess XXVIII	7.95	11.95	Chess XXX	2.95
Chess XXIX	7.95	11.95	Chess XXXI	2.95
Chess XXX	7.95	11.95	Chess XXXII	2.95
Chess XXXI	7.95	11.95	Chess XXXIII	2.95
Chess XXXII	7.95	11.95	Chess XXXIV	2.95
Chess XXXIII	7.95	11.95	Chess XXXV	2.95
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Chess XXXVII	7.95	11.95	Chess XXXIX	2.95
Chess XXXVIII	7.95	11.95	Chess XL	2.95
Chess XXXIX	7.95	11.95	Chess XLI	2.95
Chess XL	7.95	11.95	Chess XLII	2.95
Chess XLI	7.95	11.95	Chess XLIII	2.95
Chess XLII	7.95	11.95	Chess XLIV	2.95
Chess XLIII	7.95	11.95	Chess XLV	2.95
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Chess XLVI	7.95	11.95	Chess XLVIII	2.95
Chess XLVII	7.95	11.95	Chess XLIX	2.95
Chess XLVIII	7.95	11.95	Chess L	2.95
Chess XLIX	7.95	11.95	Chess LI	2.95
Chess L	7.95	11.95	Chess LII	2.95
Chess LI	7.95	11.95	Chess LIII	2.95
Chess LII	7.95	11.95	Chess LIV	2.95
Chess LIII	7.95	11.95	Chess LV	2.95
Chess LIV	7.95	11.95	Chess LVI	2.95
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Chess LVI	7.95	11.95	Chess LVIII	2.95
Chess LVII	7.95	11.95	Chess LVIX	2.95
Chess LVIII	7.95	11.95	Chess LX	2.95
Chess LVIX	7.95	11.95	Chess LXI	2.95
Chess LX	7.95	11.95	Chess LXII	2.95
Chess LXI	7.95	11.95	Chess LXIII	2.95
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Chess LXXXXXXXIX	7.95	11.95	Chess LXXXXXXXII	2.95
Chess LXXXXXXXI	7.95	11.95	Chess LXXXXXXXIII	2.95

# SOFTWARE *Solutions*

## Your programming problems solved by ANDRÉ WILLEY

As you would expect, I get quite a number of letters every month from Atari enthusiasts asking all manner of technical questions. But this month I received a most unusual letter from an Acorn computer user who is having trouble getting to grips with our somewhat non-standard serial I/O system. Bernard Beaton from Enfield in Middlesex writes:

*I have an Alphacom 484 printer which is fitted with an Atari interface and I want to adapt it to work with my Acorn computer. Studying the printer I noted that it has a serial interface, but looking inside I find a cable which - unlike most - does not have a clock line in the interface, and I presume at least one of the extra lines carries a clock signal from the host computer - but apart from the obvious ground line I have no idea what any of the others do.*

*Could you help me with details of the signals this printer expects from an Atari computer, including the baud rate of the data and the frequency of a clock signal if such is required. Other details such as seven or eight bit data, and any parity bits and start and stop control protocol would also be helpful. In short - the details I will need to design and make an interface from my own computer's RS423 and/or its Centronics output to allow me to use this printer.*

*In case there is any misinterpretation, dig, the layout and numbering of the Atari printer plug would be helpful.*

Well there's an interesting question! I'm glad you feel that we might be able to help other computer users. In fact, the information will also be of interest to any Atari owners who also want to

experiment with the I/O. The interface standard is quite complex compared to normal RS232, but there is no reason why you couldn't write a software emulator for it.

The Atari serial line may be connected to any number of peripherals, so the system includes the ability to send device specific commands. Let's first take a look at the various pins on the 13-way serial I/O connector as shown below.



### Serial I/O jack

1. Clock input
2. Clock output
3. Data input
4. Ground
5. Data output
6. Ground
7. Command
8. Motor control
9. Proceed
10. +5 volts ready
11. Audio input
12. +12 volts
13. Interrupt

The 13-pin serial I/O connector. Viewed looking at the cable from the outside

Pin 2 is driven by the host computer and supplies a 19,200 baud clock signal used to synchronise all data communication between the micro and its peripherals. A data bit from the

computer commences when the clock becomes high - +5 volts. The clock will then return to zero half way through that data bit.

Any data sent from the peripheral back to the host computer is 180° out of phase and thus should commence when the clock line goes low - 0 volts.

Pin 3 is the host computer's data-in line - which could also be regarded as the peripheral's data-out since there is no pin reassignment within the I/O cable.

Pin 4 is the data ground line.

Pin 5 is the computer's data-out line - or equally the peripheral's data-in. A byte of information is always sent as eight data bits preceded by a logic zero start bit and followed by a logic one stop bit.

Pin 6 is a second data ground line - you may use this on pin 4.

Pin 7 is the line used to signify a command frame - more about this later.

Pin 10 might also be of use to you as it is held at +5 volts by an Atari computer - so dropping it low for a short time and then taking it high again should reset the printer if you get in a mess.

Now for the data packet format. There are two types of output - command frames and data frames. A command frame always comes first and indicates which peripheral the following data frame is destined for.

This command frame is signified by the lowering of the command line at pin 7 approximately 1,800 microseconds before the frame is sent. This will return high about 800 microseconds after the command frame is completed.

If the command frame has been received and is acceptable the peripheral







QMI criticism commonly leveled at home computers is that they are antisocial: Certainly it's hard to imagine the whole family gathering around the latest mega-blaster from Bantam Software, or eagerly sitting out together on a Quest for the Bejeweled Bandicut.

To redress this imbalance, here's an extremely simple gadget that will let your computer take a leading role in family entertainment.

Basically, it's a device to help you play quiz and panel games, and we've given you a couple to get you started.

Although such games are extremely popular, they can easily lead to arguments about who answered first, and

whether they took too long. The Quizbox enlists your computer's help to provide an accurate time limit, and to detect which of up to five contestants was the first to press his or her answer button.

It eliminates disputes, and introduces a level of fairness which no human quizmaster could match.

You can if you wish, wire the five buttons into a single keypad which will respond only to the first key pressed — ideal as an answering system for multiple-choice questions.

You could also use it in alarm networks, sports timing systems or any

similar applications where you need to know which of several events happened first. It's one of the simplest gadgets ever published. There's no printed circuit board, no need for any knowledge of electronics, and you can even get by without any soldering.

The hardware is little more than a set of five push-button switches, each of which is connected to an input line at the joystick port. All the scanning, latching and priority lockout functions are performed by a machine code routine which can easily be incorporated into your own Basic programs.

Operating the Quizbox is easy. The quizmaster first resets the system by pressing any key on the computer keyboard, then reads out the question.

The machine code routine scans the five switches and, if one is pressed during the time allowed, it locks out the other four and returns to Basic with the winning number held in address 1291.

If no contestant responds within the time limit, it puts 0 into that address and locks out all switches until the quizmaster resets everything.

Since the system responds in less than one-tenth of a millisecond, the chances of two players pressing at exactly the same moment are too small to bother about. However, if this unlikely event should occur, the machine code routine will give priority to players in the order 5,1,3,2,4.

The time limit is preset by a parameter in the 1291 cell which sets the machine code running — see line 30 of Program 1. It can be any whole number from 0 to 65535, each unit corresponding to one-fiftieth of a second — 58 sets the time limit at one second, 508 makes it ten seconds and so on.

Timing starts as soon as the quizmaster presses a key, so allowances need to be made for the number of seconds required to read out the question.

Now let's look at how to construct the device. A terminal block — see Figure 1 — is used to connect the various wires, though you could use a tagboard and solder them if you prefer.

The first job is to cut the joystick extension lead about 20cm from the end which plugs into the port, and strip back about 10cm of the outer black sheath.

This reveals nine coloured wires, and the next job is to sort out which wire goes to which pin inside the moulded plug. Unfortunately the colour codes differ from one lead to another, even in batches bought from the same supplier, so you'll need some kind of continuity tester to identify the connections. A multimeter

# Fingers on the button

LEN GOLDING enters the realms of family entertainment with his latest D-I-Y gadget, Quiz box

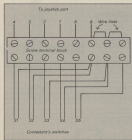


Figure 1  
Connection of  
switches to  
joystick port









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# SAVED FOR POSTERITY

## £10 LETTER

I TYPED in the excellent 3D Drawing routine from the March 1988 issue of Atari User and made some quite spectacular drawings with it. Unfortunately, they were never saved to return when the computer was switched off.

Because of this I started to look for a way of keeping the magnificent drawings I had made. Looking through some back issues of Atari User I came across the Graphics II screen dump routine for the 1020 printer in the September 1985 issue.

After editing it — and a couple of extra lines — to the original program, I had the perfect way of making hard copies on my trusty 1020.

The extra lines that you will need to add are:

```

GOSUB 10000 IF NOT PRINT%
GOTO 10000 GOTO 10110 END
10100 GOTO 410000 PUA,0,0
10110 PUA,0,0 AND THEN GOTO 10000
10120 GOTO 10000
10130 GOTO 10000

```

— Philip Thorpe-Millatt, Redcar, Cleveland.

## Helpful Zybex review

I WOULD like to thank you for the article in the March 1988 issue of Atari User about Zepplin Games. I was very interested to read about its new super game for the Atari — Zybex. The article praised it rather a lot so I decided to buy it.

After playing it withly for a while I came to the conclusion that the article was

perfectly correct in its appraisal. It is absolutely wonderful and really addictive in its game play with the sound and graphics being outstandingly good.

I have bought Zepplin's other game, Speed Ace and it's also a pleasure to play. Thanks for the article that introduced me to the game.

— Mark Gilmesh, Wars, Herts.

## Point well taken

In your March 1988 issue there was an excellent 3D drawing program by Kevin Edwards. However, there

are a couple of little discrepancies in the listing. The first modification that the program needs a fix to stop it plotting an overwound point on screen.

Just add:

```
PI OF OVERWOUND THEN IT
```

The program also produces an error message if you plot a point off the screen. This can be avoided by adding two new lines:

```

END TEMP ITS
XS TEMP XS

```

Once these are added the program will run and function perfectly. — Thomas M. Hill, Aston, Oxford.

## Fooled by Buster

AFTER reading the April 1988 issue of Atari User I came across the Checksum Buster program.

What a wonderful and revolutionary idea for

entering programs — just type in the checksums and enter the routine goes, re-creating the listing for you. So I typed it in, checked it with Get It Right! and followed the instructions perfectly.

And what did I find? What a crafty devil Andre Milley is and what an April fool I am. — Stephen Mitchell, London.

## America calling

I AM writing to tell you of an experience I had when phoning around to find out about a small problem I had with Alternate Reality: The Dungeon. The bug I encountered involved making a back-up of my character file. It always ended up with a bad sector, which meant I couldn't re-access the file, thus losing my characters.

I phoned my retailer who told me he'd also had a lot of problems, but only with that store. He advised me to contact USI Ltd. I did this and spoke to Paul Sutton, but he hadn't heard of this problem, so he told me to give Detectek a ring.

I phoned the company

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and spoke to Mrs Carol Dixon who told me that she would try and find out what the problem was. The very next day I received a phone call from America.

It was from Karl Tremblay of Intel! Creations Inc. of California — the person who wrote the Dungeon Guide. She explained that

Turn to Page 50

## CHECK THAT PLUG

HERE is a warning for readers who like me, enjoy building Lee Gillingham's gadgets. Having decided to build the Rascal Interface — featured in the April 1987 issue of Atari User — I bought two Javatich extension leads from the local Tandy store.

While connecting them to the circuit board I checked them with a meter. To my horror I found that even though they had the same coloured wires as the leads I had bought for the last gadget they terminated at different pins in the plug.

So if you are attempting

to build this gadget and have bought a Tandy joystick lead, the circuit will not work and could even damage the board. The wire connections are as follows:

Connector	Cable colour
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Grey
8	White
9	Black

I hope that this will be of some use to other readers. — T. Gigg, Kingswood, Bristol.

#### 4 From Page 48

you have to re-format your backup disc to clear all the sessions before copying to it — now that is what I call customer service.

Other readers may also be interested to know that three versions of the game are available and all have bugs. Version 1.5 is no good at all, 2.0 has bugs on disc two and won't let you cross the river Slung and 2.1 has bugs on disc three.

A new version 2.2 is supposed to be coming out shortly that has no bugs in it. — David Parrish, New Milton, Hampshire

years as a primary school teacher I often found myself in the situation of writing educational programs for the children and I must admit I was getting a little stale on the BBC Micro.

But now my Atari has given me a whole new context to programming. Text modes one and two offer large sized multi-colored text and the 6700 graphics modes are wonderful for drawing rainbows and other colourful displays.

Thanks to your excellent programming series, I have quickly grasped how to produce simple animation. I am now working on a

simple game for the children in my class to play.

So once again, many thanks for a superb magazine, and keep up the good work. — Bettie Gooding, Reddish, Stockport

■ Why not send your programs to us for possible publication in Atari User?

## Gauntlet II?

PLEASE could you tell me if US Gold are planning to release Gauntlet II for the 8 bit Atari? I enjoyed playing the Deeper Dungeons and would like to see Part II

released. — S. Tugby, Market Rasen, Lincolnshire

■ At present US Gold has no plans to release the game

## American scene

JUST before Christmas my parents took me on holiday to America. We were there for nearly a month and I wanted out to be an ideal opportunity for me to take a look at the 8 bit Atari scene over there.

I was very impressed by the support the Atari gets.

## A stitch in time ...

I HOPE you can help me to solve a tricky problem. My wife has inherited one of our computer programs and is available to help machine letters create patterns using various types of yarn and stitches.

I thought about writing such a program myself but after reading through the knitting machine manual I gave up the idea. So please advise my wife and tell me if there are any programs available that will work on my 10500. — S. Kierstead, Gurbutee

■ Unfortunately, to our knowledge there are no programs written specifically for the Atari to create knitting machine patterns. Do any of our readers know of such a program? If so, please write in and tell us.

## Better class of programs

I'M a new reader to Atari User and I would like to congratulate you on producing a superb magazine.

I have recently swapped my old BBC Micro for an Atari 10500 and 1050 disc drive and I am over the moon with it. After many

# GOING ROUND IN CIRCLES AND GETTING SOMEWHERE

BASIC very new to computing I am having problems with certain fundamental elements of Atari Basic. I was trying to write a simple program to draw circles, but I couldn't seem to get it right. Also, can you explain to me what an array is? — Michelle Simpson, Slough, London

■ Sometimes drawing circles in Basic can involve more work than it's worth. Here is a simple program to draw one in Graphics 8:

```
10 DIM C1(100)
20 FOR I=0 TO 100
30   C1(I)=0
40 NEXT I
50 FOR I=0 TO 100
60   C1(I)=100-I
70 NEXT I
80 FOR I=0 TO 100
90   GOTO 100
100 GOTO 100
```

An array can be thought of as a pile of boxes stacked on top of each other in which you can store numbers.

In Atari Basic these boxes are numeric variables to which you can assign various values and then do mathematical calculations with them. Each area must

have a name — it can be the same as you would give an ordinary variable, but following this there must be one or more numbers inside brackets. These indicate which boxes — or elements — in the pile are being referred to.

Before you attempt to use an array you must Dimension it. But there is a difference between Dimensioning an array and a string variable.

When you Dimension an array you are telling the micro how many boxes or elements you require, and the name you are assigning to them as a group. But when you Dimension a string you are telling it the maximum number of characters it can contain.

Arrays can be very useful when you want to assign values to variables very quickly. For example, imagine attempting to write lines like this in your program all the way up to 100:

```
10 XXXX1=1
20 XXXX2=2
30 XXXX3=3
```

Instead, you can use an

array to assign these values for you with the following routine:

```
10 DIM XXXX(100)
20 FOR I=1 TO 100
30   LET XXXX(I)=I
40 NEXT I
```

If you run this program and then tell the computer to print ARRAY(50) it will print 50 and this value will remain the same unless you change it or switch the micro off.

If you type PRINT ARRAY(125)+ARRAY(50) you will get 75 because the computer has remembered what numbers were assigned to the array. This technique is very useful and can speed up program execution.

If you define an array at the beginning of a program and then plot your points relative to the results, instead of waiting for the micro to calculate them each time it needs the information, it will save lots of time.

Arrays, and their counterparts matrices, will be covered in detail in our programming tutorial series in the near future.



Most of the computer shops I visited stocked all of the Atari hardware and shelf after shelf of software greeted me greedily even - it's a shame that companies over here don't follow their policy.

There appears to be lots of companies over there still writing new games and business software all the time. It just goes to show how popular the Atari 8 bit still is in America. I also bought some of the magazines written specifically for the Atari range, but I must say that Atari User is better than all of them.

They all seem to be moving more and more towards the ST, leaving around 20 pages for the XL/XE series - whereas you have 62 pages devoted to the Atari 8 bit in the maggie. - Robert Midgley, Wandsworth, Kent.

## LET SOFTWARE HOUSES KNOW HOW YOU FEEL. . .

I HAVE been reading Atari User for over two years now and it is a brilliant magazine. I always read the mailbag section as I find it very interesting, especially in the February issue.

In it there was a letter from Martin Osborne of Wimbledon complaining about the lack of software for the 8 bit Atari. In the April issue I read some letters from people who were in total agreement with him.

Why is it that software houses like USI Gold, Ocean, Imaging, Grendon Graphics,

Hewson, Jiles, Activision, Dornak and many more always claim that they are releasing a game across all formats when they don't?

They always ignore the Atari, a machine that can match and surpass in terms of quality any other 8 bit machine on the market. It can also do some tasks that certain 16 bit systems can't.

Why is it that some companies produce games for the Atari and only ever release them on the Commodore? The time has come for the thousands of Atari

owners in this country to let the software houses know how we all feel.

We must all write to them and let them know there is still a market for this superb machine. If we don't we may never see another game produced again. - Stephen Butler, Norwichey, Middlesex.

• The ball is in your court, software houses. We would like to hear your reactions to this and many other letters on the same subject which are sitting in our in-tray.

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