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# PAGE 6

**ATARI USERS MAGAZINE**

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July/August 1987

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# PAGE 6

Issue 28

July/August 1987

## ATARI USERS MAGAZINE

"The Magazine for the Dedicated Atari User"

### LISTINGS

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by Nigel Lindley

#### MUNCHY SCREEN GENERATOR

As many screens as you want!

by Paul Lay

#### 130XE RAMDISK MOVER

Autoload your files

by Rob Anthony

#### MOST HEART MATHS

Teach your children

by Peter Obbeeger

#### SWORD

by Jim Pender

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How well can you fly on your Atari?

by John S Davison

#### THE PAWN/ZORK HINTS

by John Stacey

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**MDDBASE** - an incredible database for your 5 bit

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Will Gerry Francis be back? Be seeing you.

Cover date is 12nd July. Publication date is 1st September

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PAGE 6 is a user magazine which refers entirely to readers' systems in submitting articles and programs. The aim is to explain AT 500 computing through the exchange of information and know-how. We will print for articles and programs which are original and we hope that readers will soon receive their work published. In case we hope that other readers will learn from the articles and programs reproduced and increase their enjoyment of Atari computing.

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## THE MAJOR EVENT!

So what is the "major event" that I left you pondering last issue? Well, from the next issue, we hit the big time with full newsstand distribution throughout the UK and, eventually overseas. The summer will be spent frantically preparing for this launch and praying that it all works out! We have signed an agreement with the largest independent newsstand distributor and now all we need to do is make everyone, public and newsagents alike, aware that we exist. One of the problems is that PAGE 6 does not mean anything to those who don't know (there are going to be some surely disappointed first-time buyers who expect two sets of heads!) so we have extra work in educating Atari owners who have not come across us before. If we were called Atari World, or something similar, it would be easier but we are not and, nearly five years on, we are not changing names now! If you fancy helping out, there is something you can do... Just get all your non-subscribing friends to walk into their local W.H. Smith and ask them if they are going to be stocking PAGE 6 from September. Tell them it is distributed by Seymour and maybe we will sell more than a few of our first "newsstand" issues.

If you are worried that PAGE 6 might deteriorate into another run of the mill magazine full of "read it on the train and throw it away" articles, don't. We will introduce a few more "casual" features but intend to continue with the long reviews, long listings, utilities and more serious articles which we believe dedicated Atari users want. If we fail to attract the casual user, so be it. At least they, and you, will continue to have the choice. One thing we must do is plan ahead more, hence the "Wanted" ads elsewhere. Hopefully we will hear from you if you have anything to contribute. Don't be shy!

Finally, don't run away with the idea that big time distributions means that we will be sitting back in luxury for the rest of our lives! It doesn't quite work like that, believe me! In fact, if we don't get it right, the reverse is more likely to happen, and if we can't get the shops aware of the magazine, within a limited promotional budget, you might well be the lucky owners of the last few PAGE 6's! So, stroll into your newsagent and do your bit and PAGE 6 will be around as long as Atari!

### A DEAL WITH ANTIC

We have recently reached an agreement with the American magazine ANTIC whereby we can re-print programs and articles from their previous issues and likewise they can re-print from PAGE 6. This, I believe, will be of benefit in many ways. Firstly, it will enable you to see some of the best programs and articles from the United States which you might otherwise never see and, secondly, it will give PAGE 6 greater exposure and credibility in the world at large. Additionally it will enable contributors to gain the pleasure of seeing their work published in one of the most respected Atari magazines in the world. What an ego trip!

Readers who already get ANTIC might not be so thrilled



with this news, but let me assure you that PAGE 6 will not become a "reprint service" for ANTIC. No, I am sure, will ANTIC copy PAGE 6 wholesale. We each will retain our individual style and PAGE 6 will be only reprint items which we feel will be of wide interest to our readers. The fact is that the majority of our readers do not read ANTIC and therefore will now have access to even more Atari material. The aim of PAGE 6 has always been to "explore" ATARI computing through the exchange of information and knowledge" and now readers will have access to a little more.

### COMPUTER SUPPORT OR COMPUTER COWBOYS?

Several Readers seem to have lost money in recent months with Computer Support. So have we. The last time I spoke to John Lawson of Computer Support he spun me a yarn about not being able to keep up with orders, moving to new and better premises and getting the bank to help with expansion. Load of bull, it seems, as he happily carried on cashing people's cheques and not sending the goods. What's more he didn't pay for the ads in PAGE 6 with which he got that money. So what can you do, if you send Computer Support money and did not get anything in return? Very little, it seems. The classic remedy is to take action through the Small Claims Court, but if you do not succeed you merely lose a little more. Rather than sell readers to take this action without knowing whether it would be successful, we have tried ourselves. We failed. We have tried to trace Mr. Lawson at three different addresses without success. We have even had someone go down to the latest address in Grosvenor only to find empty offices and be told by the people downstairs that they had never heard of Computer Support. Unfortunately, if you can't trace the company, there is no point in taking action in the Small Claims Court, the fee is non-recoverable.

What you could do if you have lost money through Computer Support is write to me with full details. I can't promise that anything can be done but it may prove useful to know the full extent of readers' losses in case we can take any further action. In the meantime, if Mr Lawson is reading this, he might like to do the decent thing and refund people's money!

Someone else to watch out for is N.J. Gregory who advertised The Slave some issues ago. We did not lose out but have had several letters from readers who sent money off and have received nothing in return.

Why do these people have to let everybody down?

# SOFTWARE EXPRESS



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## THAT'S WHAT IT SAYS!

How can you tell that there are a lot of ex-Commodore people working for Atari? Easy, you just look at the new promotional literature for the 130XE. Commodore have been saying that about Atari for years. Makes you feel kind of weird doesn't it, holding in your hand a magazine that was entirely lepp'd in on a games machine? Maybe one day we'll have our own photo-scan but we'll have to wait until Atari buys our Linotron or Monotype. After all, what's the point in paying £20,000 for a machine that can't play Pacman?



### ATARI 130XE GAMES COMPUTER

Perfect for the starting Computer owner is the Atari 130XE computer line. Providing a huge software library, many compatible add-on and proven performance.



## AN ORIGIN-AL VENTURE

One of the few companies still doing the PR bit in grand style is Microprose who sent us a cracking press release folder to announce their joint venture in the UK with Origin Systems Inc. The press pack is full of vapoury posters, flyers, manuals, company info etc. all done in grand style to ensure that they get a good write up! I wish you could see it all!

Regular readers of PAGE 6 will know all about the quality of Origin products from the recent release of Ultima IV and this is one of several packages to be launched in the UK from July onwards. Others include AutoDuel, a fantastic car combat adventure based on the award winning Car Wars board game, and Ogre set on the battlegrounds of the 21st century with armoured foot-soldiers fighting it out with tactical nuclear weapons! Not an arcade game this, but a one or two player game of strategy, again based on a successful board game. Another title planned by Origin for the Atari is Mobsius, an original fantasy role playing game with martial arts, sword fighting and magic set in a fantasy island kingdom.

Origin products will be released on disk only at £19.95 for the 8 bit Atari and £24.95 for the ST. Most of the titles previously available for the Atari 8 bit will be made available on the ST.

## MIRROSOFT CONVERT TO 8 BIT

Microsoft's recent deal with American company Mindscape (see ST News) is not limited just to the ST. 8 bit versions of Mindscape titles, where available, will now be distributed by Mirrosoft and they are to undertake a certain amount of conversion work themselves to bring other titles to the 8 bit market.

## WELCOME TO THE LOST CONTINENT



It's pleasing to see another company supporting the Atari 8 bit market especially when they say "there has been a great demand from retailers for ATARI software!"

ATLANTIS software recently released two budget titles for the Atari, each at £2.99. PANIK is 'an arcade classic' first released on the Commodore and DEATH RACE features day and night driving, speeds of up to 300 mph and "great graphics"! ATLANTIS are entering a difficult market where criticism is often levelled at conversions from other machines, so they are anxious to support Atari with original titles. The wider the base of software producers for the Atari in the UK, the better so if you have any original games to offer, why not give Carole Jones of ATLANTIS a ring? You can get her on 01 771 8642.

## AT LAST THE AFFORDABLE PRINTER BUFFER



Pioneer Software of Harrogate who distribute the Super Hard Disk Drives in the UK have also made available, perhaps the first really affordable printer buffer that will work with any computer already attached to a Centronics printer.

The MicroStuffer printer buffer retails at just £49.95 and has a full 64k of RAM to buffer any data sent to your printer thus freeing the computer for other work. Included is a self test and a rather unique 'Repeat' feature that allows the contents of the buffer to be reprinted as many times as required. Ideal for producing several copies of a document when you want to use the computer for something else.

The MicroStuffer will work on all Atari models and is available from your local dealer or direct from Pioneer Software, P.O. Box 111, Harrogate, North Yorkshire, HG2 0BE.

## SOFTWARE SHORTS

Recently released by Firebird on their Silver (£1.99 range) is Chimera, widely respected on most other micros, a sort of arcade space adventure in which you need to destroy the space ship Chimera before it destroys the Earth. Also at £1.99 is MicroHyphen, a digitised drum kit which bears remarkable similarities to DigDrum from 2 Bit Systems which is not surprising since it says on the label copyright 1987 2 Bit Systems!

Priam Leisure Corporation have acquired Addictive Games from Kevin Toms and their Football Manager is now available on the Atari for just £2.99. An ST version is promised later with enhanced graphics and gameplay for £14.95.

Announced by US Gold from 50¢ are the strategy games Colonial Campaign at £24.99 and Wargame Construction Set at £19.99. Both are on disk only. The former is a game of world domination for up to 6 players each controlling one of 6 countries whilst the Wargame Construction Set is just that, make up your own games and show how it should be done!

Also from US Gold are Brotherhood's 'Electronic Novels' Minotaur, Flores and Brimstone. Each title comes with its own hard bound novel which is essential reading to be able to complete the game. Minotaur allows you to time travel into the minds of four deceased geniuses in a quest to retrieve the wheel of wisdom, while Flores takes place aboard the colonial warship Flores and is an adventure of intergalactic search and rescue in a bid to save the Universe. Brimstone is more fantasy where you relive the ancient adventures of the Arabian Manuscripts in the underworld realm of Utes. All on disk at £24.99 each.

Billed as the first Atari 8-bit chess game, Colossus 4 Chess was recently released by CIPS Software and includes back-trick facilities, a problem solving mode and handicapping amongst other features. Colossus 4 is a powerful program that, only in its career, beat 24 other programs in a series of 10 game matches. Can it beat you? £9.99 for a cassette version or £14.99 for disk will let you find out.

## MISSING GAMES

Dear Page 6,

As a reply to recent letters that enquire why there are no Atari versions of certain games, I have some information that many Atari owners might like to know. Last year, your I was asked by English Software to do a title page for COMMANDO (Elite Systems gave English Software the job of writing it). I completed the work and got paid for it, but since I have heard nothing...

I have an idea what might have happened. Either of the companies pulled out of the contract and then sold the game to Mastertronic who released it under the name of Gun Law, with new artwork and game play but keeping to the basic idea.

Maybe this happens to other games?

D. Clapton, Bournemouth

## SOME SUGGESTIONS

Dear Page 6,

I would like to congratulate you on the quality of your magazine. The 50th section is particularly good but I have one criticism. Some adventures reviewed by Gary Francis do not have any real distribution in this country and, as a result, will be played only by a small handful of readers. This seems a waste of Gary's talents. I appreciate that Gary has to get many of his adventures from the US but nevertheless feel that he should pay attention to what is available over here.

The ST section is also good, although it seems to rely heavily on reviews. The ownership of the ST seems to be split between 'users' (the majority) and programmers. I am about to buy an ST and will join the latter category. Programmers seem to get short shrift from the

## BUSINESS GRAPHICS

Dear Page 6,

I have a suggestion for you for an article/program in Page 6. How about someone doing a business graphics program with options to display statistics as horizontal/vertical bar charts, line graphs and pie charts? It should have an ability to add text to the screen and, of course, be compatible with the 1024 printer! There may be a use for some statistical analysis too!

J.D. Collins, London

*That should be reasonably easy to write. If he is going to write it then!*



magazines. If the magazine included more material type articles of an advanced nature (not just copied from reference books) then the balance would be restored.

I hope your bear these comments in mind when preparing future issues.

Malcolm Brown, Dagenham

*Thanks for the input. Constructive criticism is always welcomed. I feel that one of the strengths of Gary Francis's columns is the fact that he does cover some of the more obscure adventures, adventures which readers here might otherwise never know about. NO other U.K. magazine has covered the harder to find adventures and few, if any, offer any advances in such depth. In many cases Gary gives you details of a supplier in the U.S.A. and there is no reason why you cannot order from*

## A TALE OF WOE

Dear Len,

Having owned an 8 bit system for over 5 years, I decided to stay with Atari and buy an ST. I went along to the recent Atari Show armed with my Access card and after checking the prices on offer I bought a 1040ST and Philips 8031 monitor from a company called Galtronics.

My delight lasted less than 24 hours at which point the monitor decided to call it a day so I phoned the company and was told that I could have a replacement as long as I paid the carriage to return 1 lb of monitor to them by counter! This I refused and after nearly a week it was agreed that a replacement would be sent. More phone calls and no...

monitor. I finally gave up and contacted Access who will make Galtronics collect the goods at their expense, which they had previously refused to do. I also contacted Atari who said that Galtronics, who seem to be at every Atari show, were not an Atari dealer so there was nothing they could do.

By the time you read this I hope to have a working system and hope that the company I purchase it from have a slightly better customer relations attitude. I would recommend that other readers use a credit card when purchasing goods so, at least, you get some backup if not satisfied.

N.J. Leonard, Bournemouth

*Would you like me to come to Galtronics' defence? If you were discussing so heavily that you made only a few pounds profit on each item, you couldn't afford to provide a good after sales service either. The fact is that you get what you pay for and by shopping for the cheapest price you also risk. I am sure that the established Atari retailers into cheap recommended prices and provide full after sales service will have little sympathy. Many struggle to stay in business because of sales lost to the discount merchants and often end up helping out more with problems on equipment bought elsewhere. There are one or two good mail order Atari dealers and many good Atari retailers. Support them. You may pay a little more but you can then expect, and will probably pay, the after sales service that should be provided.*

**Got anything interesting to talk about? Or some questions to ask? Or some tips to pass on? Write to Readers Write, PAGE 6, P.O. Box 54, Stafford ST16 1DR.**



## DATA STORAGE ON CASSETTE

Dear Page 6,

I have recently bought an Atari 800XL home computer. I am totally in the dark about computers, programming etc. I enjoy playing games but my friend says you can store information on cassettes from history notes to even my favourite football team did on Saturday. Is this possible? If so, how can I do it?

Trevor Gordon, Dublin

You can certainly use cassettes to store any kind of data, the only restriction is that you cannot access the data randomly as you can from disk. Unfortunately there are not many commercial programs around that support cassette storage for data and few 'user' programs. You will almost certainly need to learn a little programming and write a simple routine yourself. The

book *Your Atari Computer* is one of the few with a whole chapter devoted to the program recorder and this gives full details on how to use the cassette for data storage and gives a sample mailing list program. An expensive book that, and I will keep saying it, one that every owner should have! In. Perhaps we could do a small tutorial on First Steps or elsewhere on using the cassette. Any interest?

## DELIVERING THE GOODS?

Dear Les,

Well, it is the day after the pilgrimage to the Atari Show and I must say it was the best one yet.

I was very impressed with Atari's presence and with 'delivering the goods' with the Mega ST's and laser printer and the two PC models. I enjoyed the Atari promo videos and as the American poster enthused

about the reborn company I felt a strong sense of pride in being an Atari owner and part of something that is gaining strength and momentum around the world. I feel that the next few years will be as exciting and innovative as the late 70's and early 80's if you upgraded to 1M+ you were probably doubling your RAM as well as your overhead! Atari are now proving that leading edge technology does not cost a fortune and 'power without the price' is a reality and not a promise.

Paul Hanson, Brighton

Ah, how did you actually see that laser working? I remember the PCW Show last year when the 286ST and 486ST were shown as well as the filter and an 80 column card for the 8 bit machines. Some means, some get left behind. Never did we see that CD-ROM. Yes it will be exciting and innovative. Let's hope it will also be profitable!

## NO COMPETITIONS?

Dear Page 6,

I am disappointed with PAGE 6's lack of competitors. It seems the only competition I have ever seen was the G100 programming competition and the Masters Plus. Could you not possibly consider printing a few competitions each month, e.g. Graphics Contest, Programming Contest, DLI Programming etc.?

Graham Sorensen, Dublin

P.S. If you do not print this letter I will definitely withdraw from buying PAGE 6.

I am disappointed in the lack of response when we do have a competition. Six entries for the programming contest you mentioned? It seems that there is no real interest in competitions that require some effort. And where was your entry, anyway?

## COME ON ATARI

Dear Page 6,

At the recent Atari Show I picked up a leaflet on the Atari stand promoting what Atari describe as the 100% GAMES Computer.

Come on Atari, what are you up to?

Don't get me wrong, I don't think playing games on a computer is any less of a valid use than any other. I enjoy playing games, as I am sure most users do, it is however certainly not the only way to use them. Some computers have the image of being educational tools, witness the BBC (with BASIC, shame about the machine), microprint and underpowered, but it would be wrong people could find themselves that it would help their children's education.

I am sure that most of us users of the Atari 8 bit machines have had to endure

comments along the lines of, "Atari? They are only for games aren't they? I have a Commodore - Spectrum - Amstrad etc.". We could disagree but somehow the myth endured. At least we could be brag in the knowledge that we have that we had the best machine available, a fact that even Atari didn't seem to realise. Over the last few years, a great deal of first class 'serious' software has become available and I had begun to think that the Atari 8 bit line was being taken seriously at last.

Now along comes Atari promoting a GAMES computer. I don't think it will help them sell machines to describe them in this way. And they downgrading the 8 bit line in favour of the ST range? If they are, I think they are wrong. The ST is a superb

machine, but it is nowhere near as easy for the beginner to learn how to program as the 8 bit range is and, more importantly, not everybody can afford an ST. A around a hundred pounds, the 100% has to be the best value home computer today, so, come on Atari, advertise the fact and tell people EVERYTHING it can do and about the enormous range of ALL types of software available. Maybe then you will sell as many machines as deserve to be sold.

Alan Knapp, Colchester

Quite right! With the myth of the 'games machine' Atari managed to get the smallest share of the UK market of any of the major manufacturers. There is one legion of customers waiting into various stores and

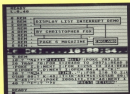
saying 'I want something for education word processing business, what is the Atari like?' It looks good when only to be sold by the salesman 'That's just a games machine, why take a look at this Commodore (BBC) Amstrad etc.'. Is that what Atari want? I can't believe it. Mind you, maybe it is so important now that Atari themselves believe Atari means 'games'. A recent price release advertising that the ST was to be sold in British stores, and I quote, 'The high performance 100% offers unique games machine sells for £199!!! Meanwhile, demonstrate at the Atari Show, an American TV commercial is running showing a JENSEL with products like English, a character and the like? What can you do? There's up your Atari in dispute, and carry on doing Atari's PR for them I suppose.

# PASSING TIME

by Chris Fox

If you enjoyed Chris Fox's TimeScreen from Issue 24, here's another one to try, this time with a more dynamic display. This one is ideal to use at club meetings or anywhere that you might like to leave a message for others to read. You can also type in programs with the demo running if you wish.

The program is similar to TimeScreen and requires you to input the time in 12 hour digital format when the program is first run. From there on just sit back and enjoy time passing! Quite literally!



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26 26 000 0          00000 00000 00000 00000 00000 00000
27 27 000 0          00000 00000 00000 00000 00000 00000
28 28 000 0          00000 00000 00000 00000 00000 00000
29 29 000 0          00000 00000 00000 00000 00000 00000
30 30 000 0          00000 00000 00000 00000 00000 00000
31 31 000 0          00000 00000 00000 00000 00000 00000
32 32 000 0          00000 00000 00000 00000 00000 00000
33 33 000 0          00000 00000 00000 00000 00000 00000
34 34 000 0          00000 00000 00000 00000 00000 00000
35 35 000 0          00000 00000 00000 00000 00000 00000
36 36 000 0          00000 00000 00000 00000 00000 00000
37 37 000 0          00000 00000 00000 00000 00000 00000
38 38 000 0          00000 00000 00000 00000 00000 00000
39 39 000 0          00000 00000 00000 00000 00000 00000
40 40 000 0          00000 00000 00000 00000 00000 00000
41 41 000 0          00000 00000 00000 00000 00000 00000
42 42 000 0          00000 00000 00000 00000 00000 00000
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50 50 000 0          00000 00000 00000 00000 00000 00000
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52 52 000 0          00000 00000 00000 00000 00000 00000
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82 82 000 0          00000 00000 00000 00000 00000 00000
83 83 000 0          00000 00000 00000 00000 00000 00000
84 84 000 0          00000 00000 00000 00000 00000 00000
85 85 000 0          00000 00000 00000 00000 00000 00000
86 86 000 0          00000 00000 00000 00000 00000 00000
87 87 000 0          00000 00000 00000 00000 00000 00000
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92 92 000 0          00000 00000 00000 00000 00000 00000
93 93 000 0          00000 00000 00000 00000 00000 00000
94 94 000 0          00000 00000 00000 00000 00000 00000
95 95 000 0          00000 00000 00000 00000 00000 00000
96 96 000 0          00000 00000 00000 00000 00000 00000
97 97 000 0          00000 00000 00000 00000 00000 00000
98 98 000 0          00000 00000 00000 00000 00000 00000
99 99 000 0          00000 00000 00000 00000 00000 00000
100 100 000 0          00000 00000 00000 00000 00000 00000

```



# Greedy Caterpillars

Greedy Caterpillars is a two player game in which you must race your opponent to eat as many apples in the maze as you can. By getting to the part of the maze where there are more apples before your opponent you can get a winning score. The player with the highest score after the chosen number of rounds is the winner.

## TYPING IT IN

**DISK USERS** should type in Listings 1 and 2 separately, check them with TTYO 3, and then SAVE them to disk. You can use any filename for the first listing but listing 2 must be saved as **D-CATERPILLAR**. Running the first listing will then automatically run listing 2. There is no need for you to type in listing 3.

**CASSETTE USERS** should type in Listing 3 FIRST and, after checking it with TTYO 3, save it to tape using SAVE 'C'. Leave the tape in position so the listings 1 & 2 can be saved immediately following listing 1. Listing 1 should then be typed in and **CRAYED** to tape immediately following listing 3. Leave the tape in position and type in listing 2 then **SAVE** it immediately after listing 1. Rewind the tape and type **KLIN 'C'** and the program will load and run automatically.

## PLAYING THE GAME

You must firstly plug two joystick in ports 1 and two of your computer and then run your version of the program as usual. After the first program has loaded you will be presented with a title screen as the second part of the program is loaded. When Billy and Benny, the two caterpillars, appear you may select the number of screens to play by using the **OPTION** key. Pressing **START** will begin play.

The object is to race your caterpillar round the maze to eat your opponent to the apples. Fifty apples will fall randomly into the maze and you will score points for each apple eaten. The points will increase on each screen. Once you have completed the selected number of screens the player with the highest score will be declared the winner.

That's all there is to it, but it is fun!

```

01 3 END *****
02 3 END ** GREEDY CATERPILLARS **
03 3 END ** BY **
04 3 END ** NIGEL LLEWELYN **
05 3 END ** ***** **
06 3 END ** ----- **
07 3 END ** PEEK 3, PEEK100 - 1000000 **
08 3 END *****
09 3 END *****
10 3 END *****
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91 3 END *****
92 3 END *****
93 3 END *****
94 3 END *****
95 3 END *****
96 3 END *****
97 3 END *****
98 3 END *****
99 3 END *****
100 3 END *****

```



A two player game

by Nigel Llewelyn





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# SCREEN DESIGNER

**Exit** - can be set anywhere on the screen (except over a heart or border) by positioning the cursor and pressing the trigger. The default exit position is 2,2.

**Colours** - may be altered to whatever you wish. After selecting a colour register (0-5) the characters used in the screens will be displayed and the colour can be altered by moving the joystick up or down to alter the hue or left and right to alter luminance. Press the trigger when finished.

**Time** - allows you to set the time in which a particular screen must be completed. This, coupled with the amount of detail on screens will determine the difficulty level of your screens. The default time is 100 but any time between 00 and 999 may be chosen.

**Number** - is the number of hearts needed to complete the screen. You must have the same number, or more, hearts otherwise you cannot complete the screens. For an easier screen ensure that you have more hearts on screen than the number used here.

## SCREEN MENU

This is where all your hard work can be saved or loaded or where you can scrap it all and start again!

**Clear** - resets the current screen. To be safe you will be prompted to confirm your decision. Move the joystick in any direction to alter the response and press the trigger when ready.

**Load** - will allow you to load a previously saved screen to continue working on it. Simply enter the correct filename when prompted. If you wish to abort, press RETURN without typing a filename.

**Save** - allows the current screen to be saved to disk. If there are any errors in the design of the screen they will be reported and the save aborted. When prompted to enter a filename, you may return to the main menu by pressing RETURN without typing a filename.

## MAKING A NEW PROGRAM

Once your new screens have been designed and saved to disk, it is time to combine them with your original Manchy Madness object code program. Note that it is the program created by running the Manchy Madness listing from line 27

```
00 10 000 *****
01 20 000 0
02 30 000 0 PAGE 0 MANCHY MADNESS
03 40 000 0
04 50 000 0
05 60 000 0
06 70 000 0
07 80 000 0
08 90 000 0
09 00 000 *****
10 1000 NEW *****
11 2000 NEW *****
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```



that you want to use and not the BASIC listing itself. The Manchy Madness Joiner program does it all for you, quickly and simply.

## THE JOINER PROGRAM

Once you have typed, checked and saved listing 1, and designed and saved your screens, just follow the steps shown. You don't have to use a new disk but it is probably easier until you get used to the procedure.

1. Copy your original Manchy Madness object code program to a new disk (NOT the original BASIC listing).
2. Copy the new screens, or screens you have designed to the same disk. You may have between one and four screens.
3. Load the JOINER program and change the DATA statement in line 23 to that of your OLD Manchy Madness program.
4. Change the DATA statement in line 12 to the NEW filename you wish to use (Don't use the same name as the old program).
5. For each screen used change the DATA in lines 32, 62, 92 and 82 to the filenames you have used for each of your screens. If you have only one screen delete lines 45, 92 and 62. With two screens, delete lines 92 and 62 and if you have only three screens delete line 62.
6. Leave your new disk in drive 1 and RUN the joiner program. A new Manchy Madness program will be created on your disk with the filename entered in line 12.

That's it! You can now run the new Man







# WANTED

## ARTICLES

More, well written, in depth, articles on all aspects of Atari programming are required especially longer articles that may be published in two or more issues. Almost anything considered unless it has been covered recently, check with us first.

## PROGRAMS

Believe it or not we are wanting very short of good games programs! There must be many more out there, send them in! All other types of programs also needed from utilities to home business to programming techniques.

## REVIEWERS

A few regular reviewers are needed generally and especially specialist reviewers for the ST. If you feel you can review specialist programs like music or business programs let us know, if you can review particular types of games for the 8 bit in depth let us know. We want to set up a small panel of reviewers to be able to cover all the different types of software we receive for review.

We will pay for all contributions published at the rates current at the time of publication. That may help you enjoy your hobby even more!

## EDITORIAL ASSISTANT

We will shortly require an Editorial Assistant to help with all aspects of producing PAGE 6 including evaluating readers contributions, writing reviews, researching articles, putting disk collections together etc. This will be a full time position suitable for a young Atari enthusiast.

You must - be totally enthusiastic about, and committed to, Atari 8-bit computers; be excited by, and willing to learn about, the ST; be able to use a word processor effectively; have a good command of English and grammer; know Atari Basic inside out; be willing to work late when necessary; be quick to learn; be meticulous in your work - and more!

Experience in producing a newsletter might help but enthusiasm and ability combined is the key.

If you are interested please write with full details of yourself (age, qualifications, experience, interests etc.) and enclose a sample of your writing skill such as a review or short article. We can then discuss the matter further.

Please write to me personally (Les Higninton) at P.O. BOX 14, STAFFORD, ST16 1DR

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## TITLE SCREEN CONTEST WINNERS

From the amazingly small number of entries I thought Atari owners were proud of writing progressively the following winners were selected:

**FIRST PRIZE** of £75 and a Disk Subscription went to D. Stuart of Mablethorpe whose program is on this month's disk.  
**SECOND PRIZE** of £25 and a Disk Subscription went to Richard Gibbons for a super spinning disk which you will see on an issue disk later.

**THIRD PRIZE** of £15 and a Disk Subscription went to Stephen Hocking for a program that would have been ideal but need no more than POINT PLAYER which is, unfortunately, copyrighted elsewhere.

Finally, an honorable mention must be given to Steve Packer who may have been among the prizewinners for a beautifully reproduced copy of our logo. Unfortunately the files we changed the logo from the last issue!

Thanks also to J.P. Howland, Mike Palmer and Alan Packer who submitted the only other entries!

# TUTORIAL SUBROUTINES

## 1. WHOLE DISK CONTENTS

There are many programs around which will list the contents of your disk to the screen or to a printer, but all of them have a common disadvantage - if you have a very large number of files per disk you have to scan several pages of disk contents and watch the list scroll away or print it out as hard copy. This situation can easily arise if you write many short letters using a word processor making it difficult to keep track of all your correspondents. I find *AcasWriter* very frustrating in this respect as the list of files scrolls rapidly and the "Control I" interrupt does not freeze it. Printing out the contents results in a long narrow list of the filenames which is not ideal for retaining with the disk.

Here then is a short program which will list file names to a single screen - that is as many as are possible under DOS 2 although some other forms of DOS can accommodate more. The program is intended to provide a tutorial and to provide a useful subroutine at the same time. It can be readily modified for other purposes and will give a next pointer if you change all the I commands to LF.

### PROGRAM BREAKDOWN

Here then is a full breakdown of the program which I hope will help you understand and use the techniques in your own programs.

**Line 10000** - This *REM* statement is merely an identifier. I find such reminders most important when keeping small bits of program or subroutines for later use, otherwise things get lost. By putting it on line 10000 I can delete it, or save memory if required, when incorporating it into a larger program and still *INCLUDE* it as a round line number.

**Line 10001** - Dimensions the string *TT1&*. For use in subroutines it is as well to avoid the more common names for strings or variables as they can clash with the main program. The disk directory files we are going to recover are of the form "*FILENAMEEXT KKK*" - 17 characters each. The "*\**" shows locked or undeleted, then there is a space followed by the filename and extension (without a gap between them as several space and then the number of sectors the file occupies).

Next we open *DISK #1* to the disk directory (as signified by the *D* in the open command). Using the two "*\**" wild cards in the "*D\* \**" name will access all the filenames on the disk. This can be changed to suit your needs, for instance if you only wish to list picture files from a disk you could use "*D\* PIC*" and any file without the *FILE* extension will be ignored (such as *DOS SYS* for example).

The first print statement clears the screen and puts a heading in the top line. The technique is not difficult to use and is very much the same as cursor movements around the screen except that to stop them taking effect immediately each

Start of a new series in which Ian Finlayson presents short subroutines which are highly documented to allow you to understand exactly what is going on.

```
01 INPUT REM **      PAGE 1      **
    ** SUBROUTINE PROGRAM **
    ** DISK DIRECTORY **
02 DIMO STR "*****"
03 GOTO FOR EACH TO ELEMENT OF TT1:IF
    TRAIL,LEN="FREE" THEN LINE
04 GOTO POSITION TRAIL,TRAIL,LEN
    IF "*****"=ELEMENT THEN*****
    END
05 DIM I "*****"
06 GOTO MOVE DIR,D,*,*GET DIR,TR
07 GOTO MOVE DIR,D,*,*GET DIR,TR
```

Control key sequence is prefixed by Escape. In this instance the first three characters in the quotation marks are obtained as follows:

Esc-Ctrl-Clear (Clear screen)  
Esc-Ctrl-Tab (Tab right)  
Esc-Ctrl-Right arrow (Cursor right one space)

Next we initialise the variable *TT1* to 1 - This is the line we wish to print directory information on. (The title is on line 10001. It would be nice to have a blank line between the title and the listing but with a possible 64 files to list and only enough width for 3 on a line we could need 21 lines, so there are none to spare in a 24 line Graphics 0 screen.

Last a non-zero point to *TT1* turns the cursor off.

**Line 10010** - *TT1* is the column in which the file name will go (0 to 21). *INPUT* gets a string from the open *DISK#1*. Next we check to see if we have reached the end of the disk contents. The last string accessed from the directory is of the form "*KKK FREE SECTORS*", and we look for a match with "*FREE*".

**Line 10020** - Positions the (invisible) cursor. Each column is 15 characters wide (including a trailing space in the item "*FILENAMEEXT \**". I have split the *FILENAMEEXT* with a period for clarity. Once the filename is displayed we go back to the next of the 3 columns and when all three are done move down a row before printing the next 3 file names.

**Line 10030** - This is the bottom line of the display, printed after finding the free sector count in line 10010. This, as the end of the print statement is important as it stops the cursor from moving to the next line which would cause the screen to scroll up if you have a full set files present.

Next we set up to receive an input from the keyboard. The *GET* waits for a keypress, the variable is a channel for which I have reserved *TT1* for economy as we don't need it any more.

**Line 10040** - After the keypress close the *DISK*, turn the cursor back on and clear the screen, this is good housekeeping. When this is used as a subroutine the Return Statement goes back also.



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## MINI OFFICE II Database Publications

48k disk  
£19.95

Reviewed by Allan J. Palmer

For the last year or so I have had the use of an ICE, 'One For Two' (OF2) desktop microcomputer at work. The OF2 is supplied with it, on ROM, a package of software called 'XChange' by Prime. 'XChange' consists of four integrated utilities (Shell) (word processor), *Alphas* (spreadsheet), *Archive* (database) and *Baseit* (graphics). It is a very useful tool. Now, believe it or not, users of 48k 8-bit Amris with a disk drive can have the equivalent. Database Publications have (at last) produced an Atari 8-bit version of their successful MINI OFFICE II, already available on Amstrad, BBC and Commodore.

If you have been trying to decide whether to spend another between thirty and fifty pounds on either a word processor, spreadsheet or database, you can now obtain all three plus more for under twenty pounds!

### THE PACKAGE

MINI OFFICE II is supplied on a double-sided disk in a ready box with a detailed 80-page, spiral-bound manual and consists of six modules: Word Processor, Spreadsheet, Database, Graphics, Label Printer and Communications.

These are displayed as a menu when the disk is first booted, and selecting one of the options takes you down to an individual menu for the chosen module. The use of sub-menus within each module is maintained to provide ease of use and maintenance. The text appears in a Roman style font in white on a black background.

### WORD PROCESSOR

MINI OFFICE II includes a full-featured word processor which provides just about all the facilities that most users could want. In Edit mode, the screen header displays the elapsed time since you started entering text, the number of words entered, the amount of free memory and whether you are in Insert or Overwrite mode. There are comprehensive commands to move through your text document, to delete characters, words or lines, and to manipulate blocks of text (deleting, copying, moving, reordering the words in the block, wholly changing the block to either upper or lower case). In addition, there are facilities to automatically number each page, display the typing speed in words per minute on the screen header, use 'hard' spaces, and more.

There is a preview mode using a software generated 80-column mode which produces multi-coloured characters that are just about readable. The scrolling speed of the preview can be adjusted. Page formatting commands are available in the Print mode (in addition to being available as embedded commands within the text) including single-sheet printing, justification, setting up of print control characters, page length, margins, and the positioning of headers and



footers. Individual text files may be chained to create a larger document. This word processor can be used with the ATARI 1620 printer (in this a limit) and ligon compatible.

A very flexible Mail Merge facility is also included and this integrates with the Database module of the package. Documents may be saved to and loaded from disk. The word processor and all modules support more than one drive, and on the 1650K, this includes the RAMdisk. My main criticism is that it does not appear to have the facility to use a pre-defined driver file for printers such as underline, italic, condensed print, etc. In order to accomplish these functions, you have to use the 'Set Print Code Strings' option of the Print Tree menu to set the control codes +variable to your printer and assign them to Control+user + combinations. These codes would have to be input at each session with the word processor, something which obviously needs remembering each time you use the package. Perhaps I am a little after using PaperClip, but I feel that I would not use the Mini Office II word processor for extensive document writing.

### SPREADSHEET

Like the word processor, this module is also very comprehensive. The default spreadsheet set up is 15 columns by 20 rows, but use of the Insert command when in Edit mode allows for additional columns and rows to be added to your spreadsheet up to the limits of available memory. Unfortunately, however, the manual does not give an indication of these limits or clearly explain the method of editing in additional rows and columns. Text and numerics are easily reversible, together with complex formulas into each cell of the spreadsheet array. The formulae may include such arithmetic functions as COS(x), LOG(x) and SQRT(x). Facilities are provided to modify individual cells and to make global changes to the entire spreadsheet - changing column widths, number of decimal places, justification and more. If you have used a simple spreadsheet, such as 'SmartSheet' from PAGE 8 issue 22, you will be impressed as what can be done here in MINI OFFICE II. Options are provided to control the printing of the whole or part of the spreadsheet, with provision for the inclusion of printer control codes. Manually, cell saving and loading are covered for. Spreadsheet data may also be saved in a form compatible with the Graphics

modules in order that the data may be displayed as a graph. Having used a number of spreadsheets, I felt the MINI OFFICE II version was very adequate with the only missing facility being the ability to do block moves/duplication of cells, in addition to the supplied single cell duplication.

## DATABASE

The Database module allows you to create and maintain files of information which you may then manipulate in whatever manner you desire. I found the documentation for this version very clear, taking you step by step through the definition of a database file structure and the creation of the database to entering and editing of data, followed by descriptions of the other functions including disk utilities, printing, searching, and sorting. A database record may be defined with up to 20 fields and each field may be either Alpha (i.e. text), Decimal, Integer, Date (in DD MM YY format), or Formula. This last option gives the powerful facility of calculating one record field from the contents of others. Editing records is very straightforward, and there is the facility to mark individual records which then allows you to create a sub-database for separate manipulation. While in the edit mode, individual records can be printed directly.

The utilities function includes 4 important features: a copy option to create a back-up of your database files, a copy of marked records to create sub-files, a facility to extend the size of the database from the initial maximum set of file creation up to the limit of available space on disk, and a program to merge databases.

The Print menu is very comprehensive, allowing for the printing of all or marked records, selecting particular fields or parts of fields to be printed, printing the selected fields from each record in either horizontal or vertical format, with or without field titles. Provision is also allowed for printer control in terms of page length and printer codes.

The Search option is equally impressive allowing for matching all or only marked records, with the search operators including all combinations of =, < and > and provision for the use of wild cards. One other menu option to be noted is the ability to total a given field in all or selected records, or to alter the values in a field throughout the (marked) records. To give wider variety to the type of report produced, the Mail Merge facility of the word processor may be used to read Database files and generate comprehensive record listings, opening up the possibility of invoices, receipts, etc. Similarly, the Label Printer module can use Database files to generate labels. One of the obvious applications here for users will undoubtedly be a custom designed disk cataloging system. No complaints on this module.

## GRAPHICS

I feel the name Graphics is a slight misnomer for this module of the Mini Office II package. More strictly, this is a graphing module. Essentially, you have the option of producing vertical bar graphs, line graphs, or pie charts from data that you either enter directly or load in from files produced by the Spreadsheet module. I found this module to be very impressive, and whilst not incorporating some of the more exotic statistical functions of R-Graph, it certainly would satisfy the needs of the majority of users.

The pie chart offers the ability to explode one or more

segments of the pie for greater effect. The bar graph can be drawn either flat or in 3D. Having produced the desired graph, text can be placed where desired on the screen. Graph screens can be saved to disk for subsequent use in this module, or for use within other programs. The module also supports Aztec EPS and Epson printer dumps, and allows for graphs to be saved on disk in a format suitable for loading into the word processor files giving the ability to generate documents containing graph data. A very neat and comprehensive module.

## LABEL PRINTER

This module is capable of accepting data from the keyboard or from Database files and allows you to design the format of label desired. Editing options provide for the specification of number of labels across the page and label depth. Using database files, specific fields or parts of fields can be printed in the desired positions on a label template. As in other modules, printer codes can be incorporated to utilize facilities such as bold-faced text, italics, etc. A nice compact and usable feature of the package.

## COMMUNICATIONS

The Communications module provides an answer for those who found ViewTerm from Miracle Technology somewhat lacking. I am only a novice in the communications field, but I am soon able to get to grips with this module. Using the menu/sub-menu style of the other modules you are able to define your communications protocol.

(Miracle Link/Telocoin Gold 300 and 1200 baud protocols are built in and a customised system is available). One important feature I found was the easy to change Filter mode, enabling you to switch between ASCII and ATASCII mode with a simple key-stroke combination. If you have ever used the CHARS builtin board, for example, you'll find the benefits in the use of ATASCII. There is a Auto-Print mode enabling all text received to be sent directly to your printer and this, again, is a feature which can be simply toggled on or off.

The module is designed to operate with a serial modem connected to port one of an 850 interface or with Miracle Technology's DataTee cable. Macro keys can also be set up for use when in Communications mode, and uploading and downloading are catered for. To this newcomer to communications, the package does not appear to include Knowless facilities, but I could be wrong.

## SUMMARY

This review of MINI OFFICE II, of necessity, only scratches the surface in some areas. The program is, after all, six individual pieces of software, but inevitably well integrated. Yes, there are some shortcomings. I will, personally, still continue to use PaperClip for word processing, but the built-in word processor does give additional options for the formatting of requests from the database. In my opinion, twenty pounds (plus five pence) is a reasonable price for any one of the six modules (well, maybe not the label printer) and anyone who wants to use their ATARI for purposes other than games should not go wrong in purchasing MINI OFFICE II. This is a product that Database Publications must be proud of.

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## Hollywood Hijinx

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So starts the description on the back of yet another Infocom text adventure, or Interactive Fiction as they like to call them. You turn the excellent (as always) package over to check the box for Infocom's standard representation of difficulty level and genre and find... nothing!

Although, from the description, one can deduce that it fits into the Mystery genre, how is one to ascertain how difficult it is? Is it like *Moonmist*, aimed at 9 year olds and up? Or is it like *Spellbreaker* - to read and buy the latest package one? It doesn't say Introductory, Standard, Advanced or Expert in Infocom's usual manner. Have they decided that they are leaving their potential audience too much by specifying the difficulty level? Or is this just an exception? If you check out the advertising photos of the game in the brochure that comes with it (using a magnifying glass) you can just make out that the box in the picture says "Mystery, Standard Level". In this all part of a plot to confuse us all? Will all be made clear when Infocom's next offering reaches us - "Bureaucracy" by Douglas Adams (of Hitchhikers) Guide to the Galaxy fame?) No, leaving Douglas Adams' genius mind, I suspect we will all be even more confused! Does anyone care? Or should I just get on with the review?

### LOADED WITH PRACTICAL JOKES

Well, it does indeed appear to be what Infocom used to be classed as Standard Level. And a very enjoyable game too.

The story is set in your late uncle's Malibu mansion. According to the rather strange terms of his will you have one night to discover ten 'treasures' hidden in or around the mansion, which is loaded with practical jokes and booby traps. The 'treasures' are in fact props and memorabilia associated with your uncle's 'B' movies, including the only copy of his last, never released film 'A Corpse Line'. Buddy died of a massive heart attack while watching it. If you find it and decide to watch it in the private screening room, he sure and SAVE your game first!

The game is up to Infocom's usual high standard in nearly every respect: excellent prose, excellent vocabulary, excellent puzzles, excellent descriptions full of humour and innuendo, etc., etc. The only possible complaint is that it seems to have been finished off slightly hurriedly. They haven't implemented the abbreviation X for examine which they introduced in *Moonmist*, a great shame, and they haven't checked as carefully as usual for responses to some quite reasonable inputs, e.g. when you examine the statue in the drive where the game starts you observe that it has a bob and a mailing (among other things), but although the game



## John Sweeney looks for Uncle Buddy's treasure in a wacky movie adventure

understands both 'bob' and 'mailing' it claims neither is present when you try to examine them - such items do, in fact, appear much later in the game (the bob is actually a conveyor belt) but to find a film so early in the game is a trifle disconcerting. Infocom don't usually mix things like that.

One of the best aspects of many Infocom games is the logical problems with which one is faced on attempting to progress through the story. *Hollywood Hijinx* is no exception to this. I especially enjoyed the problems of getting light into the Bomb Shelter and reaching the Atomic. Because they are so logical and so well presented, you can actually solve them while not playing the game. One of these I solved while driving to Birmingham, the other while cleaning my teeth! It is also fascinating how different people approach problems in completely different ways. For instance, I was stuck on the problem of getting light into the Bomb Shelter for well over two hours! I tried all sorts of weird and wonderful things before I finally cracked it. But when I posed the problem to Philip Robinson (you may have seen his article and program on 3-D Graphics a couple of issues back), throwing in as many clues and hints and as much extraneous information as possible, I hadn't even finished stating the situation when he said, "Well, if I was doing it, I would..." and proceeded to outline the exact answer immediately!

Like all good adventures it has a maze. And, like all good Infocom adventures, the maze is different. This one is a hedge maze with about 180 locations! As you walk around it you get descriptions like "You walk 20' east. You are at a junction. You can go east or south." Great fun. If you do decide that you want to map it then I suggest you cut graph paper, and I

really think that it should have told you (since you can walk around the outside of it) that it is about 200 feet across and about 100 feet wide. I had to start three times walking to smaller and smaller scales as I kept running off the edge of the paper!

## A COMPLAINT?

Coming back a minute to complaints, one other complaint I have seen levelled at the game, and at Infocom in general, is that they haven't IMPROVED their standards. Other adventure producers are now producing games with high quality graphics, key-boards or mouse machines, RAM SAVE facilities, 'better parsers', and so on. Personally, I am quite happy for Infocom to refrain from using graphics. I have rarely found that adding a few pictures to a game, no matter how pretty they are, does anything to improve it, unless, of course, you are going to go all the way and have the pictures contain clues and the player interact with the graphics. Games such as Black Cauldron and King's Quest III are very enjoyable - but they are a rather different kind of bird.

The question of a 'better parser' is also pretty doubtful. All the attempts at that which I have seen so far have gone too far towards trying to impress you with clever imitations of artificial intelligence but always at the expense of the game play and the clarity of the game. As far as I am concerned they ARE games. And anything which detracts from my ability to enjoy the game is NOT good. Infocom's approach of defining the limitations of their system very precisely, and of programming the game to tell the player exactly which word or grammatical construction is not understood, is in my opinion the correct approach. This allows the player to enjoy the game without worrying whether it is the game or the parser that is at fault when he or she gets stuck.

As for the other areas, RAM SAVE, key-boards, etc., yes, it is about time Infocom decided to move with the times a little. But I can live with it as long as the games remain so enjoyable.

What do YOU think? Have Infocom been overrated by Level IV's latest offerings (maybe we need to wait and see what Knight On a Stick or Maggoty Nettle's Illustrated Interactive Fiction or Broderbund's Electronic Novels or Sierra's 4-D Adventure Adventure Games or Telltale's Interactive Adventures? What do YOU think is important in an adventure? Why not write and let us know?

Anyway, to simulate Hollywood Hits, once you have found the ten treasures you head to the Living Room to meet the lawyer, then you notice that your score is only 120 out of 150! Sure enough, there is a ring in the tail end, assuming you work out what to do next, you will find yourself practically inside an old 'B' movie yourself as you battle to the death against your evil Cousin Herman as a beautiful lady looks towards a whirling saw blade and a gory ending!

What a finale.

Could be a little bit cheaper, but still thoroughly recommended and well worth buying.

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# READERS AWARDS 1986

A surprise awaited both Mark Hutchinson and Paul Lay at the recent Award Show in London where we presented the trophies for the Readers Awards for 1986. Jim Sherr, unfortunately, couldn't make it from the far North (Honey Scotland) so his award was sent through the post (I wonder if it has arrived yet). Nobody knew who had won so issue 17 had not been published at the time so a couple of very surprised visitors to the Show were persuaded to step on the PAUL's stand for some photos.



Mark Hutchinson accepts his award from Nicola (Mark's the one on the left)

**STOP PRESS!**

Paul's got his last year's nomination as the winner of "Outstanding Achievement" category. Congratulations Paul. Aren't you lucky.



Paul Lay accepting his award and he would have shared it he had known!

And as to the acceptance speeches. The following letter came from Paul Lay and the sentiments are, I am sure, echoed by our other two winners who also asked for their thanks to be passed on to the readers.

*"My deepest thanks to all those readers who voted for Mandy Madness in the Readers Poll. I hope that everyone had as much fun playing the game as I had writing it! It really was great to receive the award and know that people do appreciate all the work that goes into a program like Mandy Madness. The awards are an excellent idea, and being lucky enough to receive one makes all the hard work seem so worthwhile."*

Who will be the winners next year? Will it be YOU? Only if you send in that program or article you have thought about writing. Share it!



# STAGE

The PAGE 6 ST section



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**Precision Software** recently branched what they claim is 'a revolutionary database' for the ST. **Superbase Personal** is a fully relational database that places no limits on the number of fields or size of records. All the expected facilities of a relational database are included but what makes the package

'revolutionary' is the simplicity of its visual interface which uses 'controls' similar to a video or cassette recorder with which everyone is familiar. Another unique facility is the ability to catalogue pictures or documents produced on the ST and to call up the actual picture alongside the record! Price is £99.95 inclusive.

**ReMark** have an impressive range of products recently released or on their way including software, hardware and accessories. Much of the software is on their new **Diamond Games** label at budget prices. You can pick up **ST POOL SHUFFLEBOARD**, a two game compilation for £19.95, **GOLD DIGGER**, which is similar to Boulderdash, for £19.95, a four game compilation called **RAMBLER** at £19.95, a memo-colour chess program, **CHECCMATE**, at just £14.95 and, finally on the software side, a **SLAMMERS COMPENDIUM** with 10 board/snake games at just £14.95! Hardware wise there is the **EMULATOR INTERFACE** allowing direct reading of Macintosh disks, an **MS DOSE HARDWARE EMULATOR** giving 4 times the speed of the PC/85%\*, compatible\* and, on its way, a **SCANNER VIDEO DIGITIZER**. Accessories include a **MOUSE PAD** at £7.95, a **CARTRIDGE EXPANDER** with 3 slots and, something everybody must have been waiting for, the **MAGIC MONITOR INTERFACE** allowing you to connect both mono and colour monitors without re-booting.

Two new titles from **Pagooda** look to be very impressive from pre-release graphics and come with the usual Roger Dean designed accompaniments. **Barbarian** is an animated fantasy graphic adventure in which the player becomes a 'dragon-slaying, monster-mangling barbarian'. They say you need humour, adventure and dexterity to achieve your goal. The other one is **Terraviva**, a strategy arcade game in which you must defeat invading Triped forces. A 'three dimensional playing field with perspective scrolling' sounds to be quite impressive. Both are £14.95 and that includes all these superb Roger Dean designs.

**Infogrames** are a French based company with U.K. offices that have just started producing titles for the ST including **Prohibition** which may well turn into one of those classic - simple in concept but so addictive! The company has been producing titles for other machines - notably Amstrad - for 4 years and its first ST releases are mainly Amstrad conversions, however UK spokesman David Crosswell told us that they will now be concentrating on programs written specifically for the ST to use its full power. Between 12 and 15 titles are to be released in the coming year mainly on the games side.

**Miramax** have signed a new distribution agreement with the American company **Mindscape** who have achieved a top reputation for their **Cinemaware** range on the Amiga. Titles in the **Cinemaware** range to be available for the ST include **DEFENDER OF THE CROWN**, **KING OF CHICAGO** and **MINIALL**. Already available is **SOB**. There is also a **Driv** 5 version which will include the titles **DIJIA YU**, **SHADYWATE** and **UNINVITED**. Further details and release schedules will be reported as soon as known.

**Koma's** latest is **K-BUGGET**, a GEM based thesaurus based on the internationally acclaimed Longman Pocket Roges Thesaurus with over 150,000 words and phrases. **Poems** is in June at a price of £29.95.

**Microware** has now released version 3.04 of the famous **Lanite C compiler** which they say is 'a superlative C compiler of which we are rightly proud'. The revision includes faster math routines and a new link loader called **Debug** - which is claimed to produce programs 'blazingly fast'. A **Resource Construction Editor** which allows easy construction of icons, menus, dialog boxes and the like. There is lots more (a three page press release!) included for just £99.95.

**Software Express** have recently signed a distribution agreement with American based company **Vagler Software** who produce some top quality business and professional programs for the ST. Top of the range is **Markant**, a modular expandable business program for stock control, invoicing and basic accounting. The program features a huge variety of functions including the unique ability to leave the program to run a second processor like 1st Word and then return to where you left off! Other products include **JackSpell**, a background spelling checker that looks like giving 'Thunder a run for its money'. Features include 64,000 root words and up to 32 endings for every word giving a staggering 2 million word capacity! **ShoreCalc** is a simple but useful program to allow you to define your own keyboard 'macros' for use in other programs. **JackEdit** is a text editor for systems files and VDI installable fonts which can be used with **EasyDraw**, **DEGAS** Elite and other similar programs. Most of the software has been under development in Austria since the ST was first released and promises to be of high quality. Prices and release schedules should now be available from Software Express.

Towards the end of May **Software Express** will release **The Election Program** in time for the General Election on June 11th but it is a program that can still be used to do 'what if' exercises and the future by-elections. Basically a huge database of Election results, the program can predict the result of swings for future elections, analyse by-election results, show the details of any constituency in the UK and much, much more. Most of the information is represented using maps of the various regions of the UK and you can watch the results coming in depending on the selections chosen. A full update of the 1987 General Election will be available shortly or there is a facility to add results yourself. A setup program, whether you are interested in politics or not. Perhaps the most original program yet for the ST. Price is £29.95.

Can anyone keep up with **Microware**? New licensing products from the U.K. as well as the States, latest releases include **ST REPLAY**, a sound digitiser which has had some high recommendations from those who have used it. This comes as a cartridge and software for £99.95. Also licensed from 2 bit Systems is **ST DIGITDRUM** which has many sampled sounds to enable you to set up your own drum machine for £24.95. Also available, at £34.95, is **DIGITDRUM SAMPLE DISK 1** with 41 samples that can be loaded into the original program. If you are into MIDI then **SUPER CONDUCTOR** might be the sequencing package you are looking for at a reasonable price. Lots of features for mixing, transposing, editing and more in sixteen tracks. For £49.95 that might be just what owners of a Casio or similar are looking for.

# TIME WARP

## GOLDRUNNER

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*Reviewed by John Davison  
jr*

### An Arcade Machine Inside Your ST

The Plot: The Earth is dying (yet again), but luckily in this future scenario, new worlds have been discovered and the only thing which stands between the poor innocent people of Earth and these new planets are the 'Ringworlds of Time'. To pass through these Ringworlds, the awesome spaceship onboard must be destroyed, and that's where you come in! Guess what, guys? You've got to get into your own man fighter and blast the badies! (James I heard this somewhere before!)

The Game: Yes, it's vertical scrolling shoot 'em up time again, but this time with real class. You control a fairly large golden spaceship known as the Goldrunner, which can fly about all over the screen. The main aim is to eliminate ground installations in order to weaken the power of the particular Ringworld which you are on. When you have done this you may leave the level via a portal, go on to a bonus screen, and then on to the next Ringworld. Sounds straightforward but it is not that easy!

There are plenty of aliens to zap, which wrap around your ship (dropping 'disruptor bombs'). These are like homing missiles which zero in on your ship, and you'll need a lot of skill to know how to dodge them without getting hit. You can withstand about seven or eight hits before being destroyed but before that you'll lose your booster in sort of mega turbocharger that zaps you out of danger and your wing lasers (extra firepower). To add to the danger from the sky, you can also be killed instantly if you fly into a tall ground installation.

Star Raiders to Goldrunner  
six years apart but still close?  
(There are some serious ones here too!)



want to good effect, although it is a bit scratchy. As a fan of programming I cannot criticize it - Steve Bak (author of Kameo Kid II) has produced a real winner, and Pete Lyon (who did graphics for KK2) has done some really eye catching graphics. But how does it play?

Well, to start with you'll find it infuriatingly difficult, it is a VERY hard game. When you have finished level one though, you will feel a great sense of achievement, however you will still find it difficult trying to get past level one again on another go. The next two levels are fairly easy, but level five is a real nasty. I have been playing the game now for about a month, and I still cannot do it.

The game can be played using a variety of control methods, either a joystick, which is most people's natural choice, the keyboard, which I found extremely hard, or the mouse which was weird. You can swap between these controllers at any time during the game, so the ST is monitoring all three at the same time.

Conclusion: Well, what can I say? It truly is one the best blast 'em games ever written. But that's it, nothing else, just pure mindless blasting. Many people will find the game far too hard and therefore boring, but those of you who are good at this sort of game will love it. The game is pleasing to the eye (those graphics are really stunning), the scrolling is some of the smoothest and fastest I have ever seen, and the music is truly superb. One note about the sound... if you turn off Mr. Hubbard's excellent tone then don't expect any mind blowing sound effects! The basic sounds in the game are pretty lousy, so if you don't like the tone, you'd be better off turning the sound on your monitor down!

Steve Bak and Pete Lyon seem to have the knack of creating classics. Kameo Kid II was their first, and this will undoubtedly be their second. It's like having an arcade machine in your own home, sitting inside your ST. ■

## 'just about flawless'

It takes good strategy and a keen eye, if you're to avoid being mangled up against the nearest wall!

The game design is just about flawless. The scrolling is ultra smooth and mind bogglingly fast, the backgrounds are beautifully detailed and the animation of your ship is excellent. The aliens are colourful and the music is some of the best, non-digitalised, yet heard on the ST. It's by the musical maestro Rob Hubbard, and I guarantee that after you've played the game you'll find yourself humming the tune! The digitised speech during the game is

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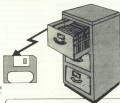
Choose which fields from a record to print.  
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## TRIVIA CHALLENGE 1 Microdeal £19.95

Reviewed by *Les  
Ellingham*

With the success of Trivial Pursuit and all its clones it is no surprise that trivia programs should appear on computers. What is perhaps surprising is that so few of them should have appeared! This one, written by Steve Nak, is graphically quite simple but quite challenging and keeps you coming back for "just one more try" as all good computer games should do. It has the added bonus of allowing you or a friend, to add almost unlimited questions of your own.

Trivia Challenge is, essentially, a one player game being based on the trivia gambling machines found in pubs and taverns. You start with £10 and can invest either 20 cents for one go or \$1 which gives you five credits. Once the coins are 'inserted' you click on the word play and your first question appears. After a short delay to enable you to digest the question, three alternative answers appear and you click on the one you feel is correct. You have a limited time in which to answer and the faster you answer, the more points you score. Actually winning something is quite difficult as you are



allowed only two incorrect answers in a run and need to score at least 1000 points to win \$1! The maximum points per question seems to be around 110, but if you need time to think it will be much lower. I consider myself to be pretty good on Pop music, but even so have had a hard struggle scoring even \$0.50 in this category!

The disk comes with the categories Sport, Art, Pop, Science and General Knowledge which is a mix of all the others. Each category has a minimum of 900 questions and General Knowledge has nearly 2,000. Questions do tend to repeat when you play the game after switching off, but the answers do not always appear in the same order. The questions are well thought out, interesting and particularly 'English' despite the 8 soundings and the frequent spelling mistakes! Mind you if you start to be pedantic I suppose you could always load up the questions with your word processor, spell check them and save them back! Full instructions are given

graphics have been enhanced considerably but what it has gained in beauty it has lost in speed. This game is so S-L-O-W it is virtually unplayable unless you have the slowest reaction time in the universe! There is not much that you can really say about a game of this type, other than that you have to shoot just about everything that moves, no matter how slowly!

The scrolling isn't bad, and the backgrounds are fairly good, but I have seen better. The spaces are well defined but not very well animated, the movement being a little painful on the eyeballs after a while. The sound effects aren't very good and there's no music at all. All this leads to a fairly mediocre game of not very good quality. The only redeeming feature is that it cheaper than almost any other game on the ST. ■

to create your own question sets with any ASCII word processor.

All in all, Trivia Challenge is great fun and highly recommended for any trivia buff, especially those who cannot find any friends to play with. Finally, for even more fun, how about using the 'do it yourself' option to load in all of the official questions from Trivial Pursuit, practice like mad and then break the life out of everybody at the next party! ■

## STARGLIDER Rainbird £14.95

Colour or monochrome,  
TOS or ROM required.

Reviewed by *Steve Pedler*

Ever since the ST came into being, it must have been inevitable that a game would appear which is not only better than almost anything available for the 8-bit machines but is better than anything which can be written for such machines. Starglider is that game. Put crudely, this is a shoot-'em-up, but one of such quality that even those who don't like such games will be impressed. It describes itself as 'an air to air and air to ground combat simulation' and I would say that is exactly right.

The plot of Starglider is simple. The peace-loving inhabitants of the planet Novemia are invaded by the inhuman Empire led by their despicable commander Hermann Kraut who rapidly conquers the entire planet. Having long since discarded their armed forces, the only means of striking back left to the Novemians is an old Air to Ground Attack Vehicle (AGAV). Mankind piece (literally) it may be, but it is better than anything the Empire has, their strength lying in numbers. It is hardly necessary to point out that you are the pilot of the AGAV.

On loading the game (supplied on an acetate disk) you are presented with an excellent title screen and the best computer-generated music (including vocals) I have ever heard. Pressing any key launches you onto the planet's surface to be confronted with a bewildering variety of enemy craft. What are all these vessels, and what are they do? All becomes clear as you play

## TIMEBLAST Microvalue/Tynesoft £9.95

Reviewed by *John Davidson  
Jnr*

Tynesoft are not noted for titles of superb quality, so I was a bit dubious about reviewing one of their best ST games - TIMEBLAST. Upon loading the game I thought that maybe, just maybe, they might be better on the western bit than on the 8 bit machines. After a while, however, I concluded that this is a pretty boring game.

It is, basically, just a rewrite of the ancient classic 'Assault' but without the bombs. The closest game to it I can think of is 'Fall of Beta Lyrae'. The

the game, but to give you some idea the Ergon levels range from tanks to flame fighters (manoeuvrable but slow), proximity mines to the near-invaluable walkers, and ground laser beams to Starfighter One (Commander Krydel's ship).

Your AGAV is armed with the usual lasers and, at the start, one guided missile. The lasers are conventional enough, but the missiles are quite extraordinary. On pressing 'L' on the keyboard a clear female voice says 'missile launched' and a new screen appears which instead of showing you the view from the cockpit of the AGAV shows instead the view from the nose cone of the missile. You guide the missile simply by steering it to the target using the mouse. I say 'simply' but it takes quite a lot of practice to hit the target consistently, and even then the missile can be destroyed in mid-flight by enemy fire. You also have shields, which are depleted alarmingly quickly by enemy missiles, and an energy supply which is also gradually used up during flight. Fortunately, several Newtonian bases surround the Ergon onslaught, and it is possible (again with a considerable amount of practice) to duck with these aids and replenish missiles, lasers and shields. Refueling cannot be done here though - to do this involves a tricky and dangerous piece of flying, very low between the energy towers present on the planet's surface. The AGAV is destroyed if you run out of energy or if your shields are exhausted.

The ultimate aim of Starfighter from the enclosed manual appears to be to destroy all the Ergon vessels finishing with the command ship Starfighter One - so easy said! The game has several levels of difficulty, exactly how many I'm not sure although I have seen the figure of 50 plus mentioned elsewhere! You proceed from one to the other automatically as your score increases. However, I don't know of anybody who has got anywhere near the finish - perhaps only the programmer really knows how it ends.

The graphics of this game are excellent; there is a 3-D view out of the AGAV cockpit (or missile) with everything in perspective and with very smooth scrolling. Illusory ships, buildings, missiles etc. are drawn in wireframe graphics with full hidden line removal. The interior of the AGAV cockpit is very detailed with plenty of instruments and gauges.

Control of the vehicle is virtually entirely by the mouse, with occasional keystrokes needed for some actions.

The packaging and documentation are quite superb. As well as the game disk, you get a 64 page glossy printed novel (essential reading to get the most out of the game), a flight manual for the AGAV, a quick reference card and a full colour poster of the vessel. Information about the various enemy craft is not included in the documentation - you only get this after clicking with a title and interrogating its computer, a nice touch I think. The documentation is of such quality that other companies publishing software at identical prices should take note.

Overall, this game really has to be seen to be believed. If you don't own a copy, go on and buy it now. If you don't have an ST, Starfighter might well convince you that you should have one.

## MI-PRINT Microdeal £19.95

Reviewed by Alan  
Goldsbury

The presentation of documents, whether a short letter or a full length dissertation is vastly improved by good layout. If there are times when your word processor cannot produce the style you desire maybe Mi-Print could assist you. Mi-Print is a program which prints any text file the way you want it, giving you control over paper size, all four margins, leaders, page numbers, pins and line spacing. Style preferences and printer definitions can be saved onto set up. The program is quite small but it has a wide range of attributes and, coupled with logical design, will make your printer sing with every line it prints!

The first great point is that Mi-Print is not just for Epson and compatibles but can be defined for a huge range of printers. The default setting is for a Panasonic 1082 but my Epson LX80 had no bother in printing using the default set up. If you need to define your own printer drivers, however, control codes can be entered into a dialog box in either ASCII, Decidex, Hex or control character format.

To ensure maximum visual

impact, the layout style of any document is important and Mi-Print will allow you to format your documents by making best use of margins, leaders, line spacing and pins. From all these 'Read Me' files can be formatted to your own individual style and printed out either page by page or automatically on continuous stationary.

If you are printing from a disk file, leaders can be full path and file name, and the current system date and time can be printed alongside together with the page number. Margins, left, right, top and bottom are easily adjustable and there are four pre-set line spacings of 1, 1.5, 2 and 3 lines between each page of the print head. Pitch is in three pre-set styles, pica, elite, and compressed, with a user defined optional format. Finally within the style menu there are commands for print range (lines 1 to 9999 pages), page widths and heights. Printer and style menus can be saved to disk and both reside inside the PRINT HELP file which is loaded automatically every time the program is loaded.

Mi-Print doesn't just dump to a printer, it can also send the information to screen for pre-viewing or reading or to disk for printing out later or to include in a separate document. A 'directory' menu is included and this can display any drive showing pathnames, folders, and full directory listing. Just as with printing a document, the full pathnames, page number, date and time are listed. Mi-Print will also simulate a typewriter. You can type continuously and print letters at the end of the text to send the information to the printer or alternately send the one line by line. This is the only mode in which you cannot send text to the screen. Text can be sent to the printer unformatted for use in address labels and the like.

On-line help files are contained in the PRINT HELP. These files are sixteen lines deep each and contain basic information about each of the six menus. All of these files can be edited, saved and re-loaded at boot up.

Mi-Print is one of those nice little utilities that the majority of printer owners will find useful. The package has a 12 page manual and comes in Microdeal's usual sturdy ring binder. What's well written and effective in it's performance, the price of £19.95 may seem high for some owners. I liked it, however, and what's more I'll use it! ■

## SUPER HUEY Cosmi US Gold £19.95

Reviewed by Steve Poitler

Super Huey, a helicopter flight simulator, initially appeared for the Commodore 64, several months before it was available for an Atari, and I had been looking out for it for some time when it simultaneously appeared for both the 8-bit and 16-bit machines. This review is of the ST version.

There is a very nice title sequence to begin with and then you find yourself in the cockpit of the machine - a Bell Helicopter UH-130A. The cockpit interior is extremely detailed, with an impressive variety of gauges and digital readouts. The graphics of the ST seem to lead themselves to producing high-tech displays like this, as can be seen in other games such as Starfighter and Deep Space. The lower part of the console contains various engine and in-flight displays, while overhead there are navigational and weapons status instrumentation.

The first thing you have to do is power up the onboard computer, and having done this you may select one of the four available missions. These are Flying School, Explosive, Rescue, and Combat. I normally choose Combat first, and was quickly blown out of the sky. Back to flying school.

Flying school is exactly what the name implies. The mission takes you through take-off, flight and landing with commands displayed on the screen of the onboard computer situated in the middle of the lower console. This is a nice gentle introduction to the complexities of helicopter flight, and the manual also contains some quite detailed notes on the theory of rotary winged flight so that you can understand what you are doing when you fly the aircraft. Control of the helicopter in flight is entirely by means of the mouse, with the keyboard used for actions such as selecting the mission and loading/firing the weapons. The use of the mouse is generally quite satisfactory, but I found it very tricky to turn the helicopter and couldn't help thinking that this might have been better done with a joystick. One other point is that while the cockpit is very detailed the view out of the window is a real let-down, with very little to actually look at. This is just as well

initially, as you have to concentrate hard on flying the thing rather than looking out of the window, but it does not do justice to the ST's graphics.

Having had enough of flying school, I went back into Combat. Here you take on an (unnamed) enemy desert aircraft complex with hostile and very numerous helicopter forces. You don't have to do anything to find these choppers, they'll find you, and when they do the aim is quite simple - knock them all down before they do the same to you! When you are shot down it is made apparent by a line of very realistic bullet holes in the cockpit window which can give you quite a shock the first time it happens. Fortunately, unlike the real thing, you can have another go. The weapons available to you include 20 rockets and a machine gun with 1,000 rounds. Since there are 32 enemy helicopters, you can't afford to waste any ammunition.

If you get tired of being continuously shot down, you can try one of the other missions. Both of these are basically navigational exercises. In Rescue, you are given the task of

rescuing stranded personnel, but you are only given a general position for the party. This means that you will have to fly to the general area and search it until you detect the transmission from their rescue homing device. Once this is picked up, you follow the appropriate heading until you spot the flares sent up by the party, then land, collect them and return to base.

Finally, Explosive requires you to map the terrain around your base. When the map is complete, the instructions invite you to send it to Cosmi and they will send you the correct map to return.

I think anyone who likes flight simulators would quite enjoy Super Huey. Being a helicopter simulator, it is a little different from other such programs and it does have that extra spice of getting shot at. I can't help, however, having slight reservations, particularly with regard to the sparsity of graphic detail outside the cockpit. It occurred to me that this would be an excellent game on an 8-bit Atari, but just isn't quite of the standard we are coming to expect on the ST. ■

## EASY-CALC Robtek £49.95

A re-review by Alan Goldsboro

In the last issue I reviewed E2Calc the spreadsheet package from Royal Software. Now Robtek have acquired the distribution rights for Europe and renamed it EASY-CALC. To their credit they have also reduced the price to £49.95 and have included a graph program as part of the package.

The program was run without its faults and this was consequently referred to in my review. My main concern was that the program didn't really match up to its name, and it still felt that this is partly true. The other area I highlighted was the inability to "convert" VFP Lotus 1-2-3 files into E2Calc format correctly. This seems to have been rectified but still it could not convert templates 100% correctly. I had to make some small adjustments to the conversion but this is probably a small price to pay for what is generally a good facility.

With the graph program, Robtek

have done themselves proud. E2Graph sits in memory as an accessory and can be pulled down at any time to take up half of the screen as a default, but, like any other window, it can be sized to suit your own requirements. Bar and Line graphs, each with four variations, single, stacked, overlay and compare coupled with a Pie chart make up this impressive accessory. Labels can be dragged from the spreadsheet to the graph to make up your titles. Cells can either be dragged individually or whole ranges pointed at one go. Up to four full sets of data can be displayed on the graph resulting in a highly visual and pleasing display.

Graphs can be saved to disk and the retrieval time for "saved" graphs was almost instant. Printing the graphs does not provide any problems providing you have an Eights compatible printer. Quality dumps without any significant distortions were produced in under two minutes.

Everything taken into account, the graphing program from E2Calc really is worthy of the title card, although most of my earlier comments regarding the spreadsheet still apply. On reflection, what was a program destined to collect dust on many shelves should, could now be a good buy. ■



## MIGHTY MAIL. Microdeal £29.95

Reviewed by Mark  
Hutchinson

Helping to run a vast group magazine meant keeping records of subscribers' names and addresses, any information they tend to give about their system and, always, the onerous task of making labels for the envelopes. I have been using a Basic program to write the labels, but not a keep database. I have never had the time to set control codes for the printer so that the label spacing is right. This meant writing a few labels, reentering the text and printing a few more. You can imagine my joy when the postman delivered my copy of MIGHTY MAIL.

The disk contains both an American and U.K. version of the program, along with several example files. The instruction comes in a 40 page booklet. The program is GEM based and extremely easy to use, but it is slow

in its down, set up your own labels, and experiment with the various options. This is far easier and quicker than reading the instructions (who does that anyway?).

I set up a small batch of records and tried out a sample print. The result was quick and clean, but was far larger than the standard 1.5" labels. Silly me, the ST sends out a low feed and I forgot to reset the DIP switch (set for the 9-bit). Problem solved.

The next problem came shortly after that. MIGHTY MAIL will print an error message to the screen when it is in trouble. This one told me it had a truncated record and the program code where it occurred. I set up a new file, only to find that the program could not access the drive. I used a new disk and all went well. Then I remembered that Microdeal use a bulk copying program that only writes the tracks it finds. Another problem solved. Time for a break and a good read of the instructions.

Back to the keyboard and more experiments. The file I had set up contained 10 fields in what is termed a mask, enough for most programs but limited for my own personal records

(the amount of hardware I possess). I set the fields for several records and found an option to delete duplicates, of which I had a five by now. Once the file was set up I had the option to Search Mask, Search Name, Get Previous, Get Next, Delete, Show By and Exit. Show By will sort records by Company Name, First Name or Postcode. Setting the fields is done with the mask options. This will set a high and low marker so that if you enter 'Mask', for instance, you can print any record alphabetically before or after 'Mark'. The average mask is very handy if most of your records have a similarity. It will hold the constant data, spending up-carries.

There is a layout option whereby you can change the default layout of both labels and reports. This is adequate, but I believe that, if the program is used for different types of record, a bit more flexibility would be required by the user.

Like everything else, the more it is used the easier it becomes. I found it a bit awkward at first until I set up my own records and fiddled about. A nice little program, worth considering if you need a mailing list.

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## STAR RAIDERS

Atari Corp.

£14.95

Colour monitor required

Reviewed by Steve Padler

Shortly after the release of the first 1-bit Atari, Atari themselves published a piece of software that was revolutionary for the computer game. This was Star Raiders - since much interest in other machines with varying lack of success - a game which has been consistently voted one of the best ever written. Even today, many Atari owners would include it in a personal top three 'best games'.

I mention this ancient history to try and impress upon those readers new to the Atari community the special place Star Raiders has for us. At last, after a long wait, the ST version of this classic has appeared. How does it compare with the marvellous original?

When I first loaded up the game, I did so with a certain amount of apprehension. Would this be a much-enhanced version of the original taking into account the best features of the ST, or merely a completely different game relying on a famous name to sell? Fear not, this version is almost entirely faithful to the 8-bit original, with one or two minor changes that in general enhance the game play.

One very pleasant surprise came on reading the manual. The first instruction given is to make a backup copy of the master disk, and use the copy routinely. That's right, Atari have not copy-protected the disk in any way. For this I applauded them for, although it has never happened to me, there can surely be nothing more than buying an expensive piece of software and then losing it through some disaster which is no fault of your own. If we want more software publishers to follow this line, however, I must beg and entreat ST owners neither to give away or sell pirated (i.e. stolen) copies of the game nor scrape such a copy if it is offered to you. This has caused too much damage to Atari owners in the past for anyone to want to see it repeated on the ST.

Anyway, onto the game itself. The plot of Star Raiders is simple. You are one of the elite 'Star Raider' pilots of the Aurian federation, which is under attack from the Zyrroids (also referred to as the Zylons of the original) a race of

mutated robot creatures bent on destroying humanity. The aim is straightforward - knock out all the Zyrroid ships in your quadrant before they get you!

On loading the game (from the GEM disk) you select the difficulty level using the mouse and then start the game. This is the only time the mouse is used, game control being entirely by joystick and keyboard, as in the original. Four levels of difficulty are available to you. As in the 8-bit version these are classed Novice, Pilot, Warrior and Commander. When the game commences the upper half of the screen shows a scrolling 3-D view out of the window of your starbases, with the lower half containing the control panel. This includes status lights for shields and weapons, a tally of the enemy destroyed and an external systems indicator showing you the current

### 'an all-time classic'

enemy vessel being tracked by your ship's computer. In the centre of the control panel there is the tactical display, which can operate in three modes - galactic map, long range scanner and all views. These modes who have played the 8-bit version will recognise the similarity here, but one useful feature is that the use of a tactical display like this means that you can have both forward and all views available simultaneously. The control panel is graphically very well done, as it is in many such games written for the ST.

Before you commence battle, it is advisable to turn on the onboard computer, which among other things displays the game's title and provides a head-up display of information about distance and bearing to the enemy ships. You should also turn on the shields, without which the ship will be blown to atoms within seconds of finding the Zyrroids. This brings me to one point that is a little different to the original - you don't actually have to go and look for the enemy, they come and find you! There are seven types of Zyrroid craft, each with its own particular attack pattern. You don't see them all in the easier levels, but are only faced with the less dangerous ones. Graphically, the Zyrroids are superb, all you would expect to see on the ST. In fact this is true of all the game

objects from the meteor to the stunning rotating starbases to the victory flyby accorded to you if you destroy all the Zyrroids. Did I forget to mention the starbases? Because your fuel is limited, and because you may sustain damage to vital systems in combat there are a number of starbases at which you can refuel and be repaired. The Zyrroids will attempt to destroy the bases, but this should be prevented at all costs. There was a possible complaint about the 8-bit version that docking with the starbases was extremely tricky, but this is thankfully not the case here. The game sound effects are simple but adequate, and are spectacularly loud - the room will reverberate if you turn the sound right up.

The quadrant of space you are in is divided into sectors, and you must use your hyperspace system to move between them. The hyperspace graphics are very realistic - rather similar to that which you see in the 'Star Trek' movies. Unfortunately one feature of hyperspace has been discarded in this version - the need to enter through hyperspace in the higher levels. I don't know why this isn't there, it always added an extra dimension to the gameplay for the more skilled player. However an added feature with no counterpart in the original is something called the 'Emergency Atomic Unit'. Using this, which you can only do once between visits to a starbase, will destroy all the remaining Zyrroids in the sector and snap you out of trouble fast. Again I'm not sure why this is present - in truth I wouldn't have thought the game difficult enough to warrant this feature. That brings me onto my final point, concerning the overall difficulty of the game. On the 8-bit version I find Novice level to be easy, Pilot to be hard, and I can only survive for a minute or two at the hardest level. I am not a particularly daffodil player of this type of game, but on this version I can survive easily at Warrior level and even the hardest level of all isn't that troublesome. I just wonder if experienced game players might find this just a little bit too easy.

So there it is, the ST version of an all-time classic from Atari. If you know and love the original, you'll like this one too. If you own an ST but have never played Star Raiders this is your chance to find out why it has such a great reputation. Definitely one to add to your collection.

I've long thought Sublogic's Flight Simulator program to be supreme in the simulation world, and was delighted with the version released on the 8-bit Atari (see issue 21 for a detailed review). The advent of the ST has opened up a whole new world of possibilities, and Sublogic have responded with a magnificent new version of Flight Simulator II, utilising virtually all of the ST's new features. There's only one word for the resulting package - stunning! And it's self-evidently different from the 8-bit version in fully justify this 'to-review'.

I won't go into details of the basic program, as in concept it's identical to the 8-bit version. Instead, I'll describe just the differences and enhancements. There are lots of these, and most of them will blow your socks off!

The package is similar to the 8-bit version, but the program and scenery data is now on one single-sided 3 1/2" disk.

# FLIGHT

Instructions are contained in one 132 page, fully indexed, spiral bound manual of very high quality. Sublogic have dropped the second manual as supplied with the 8-bit version, so you don't get to learn about the theory of flight, nor do you get the right flying lessons. However, the ST manual does contain everything you need, including many useful diagrams.

## MORE OF CALIFORNIA

In addition to the 8-bit's maps of Los Angeles, Chicago, Seattle and New York areas, this version also includes San Francisco. The area covered adds 41 new airfields (several equipped with Instrument Landing Systems) to the 81 in the 8-bit version. You also get many new radio navigation beacons to help you find your way around. The new area is extensive, measuring about 250 miles north to south by about 200 miles east to west - enough to keep you busy exploring for a long time!

On boot-up, you find yourself in a Cessna 182 lined up to take off from runway 27R of Oakland International airport on San Francisco Bay. Yes, it's a different aircraft from the 8-bit version, and yes, the boot-up defaults is into the new map area. The instrument panel looks definitely familiar, but on closer inspection there are minor differences, such as reversible undercarriage controls, different flap settings, autopilot, and different radio and engine instrument layout.

The essential program controls are available either through the keyboard, or via mouse activated pull-down menus. They're all summarised on a reference card thoughtfully included in the package by Sublogic. Additionally, the mouse can be used in place of keyboard for primary flight controls, but I found this rather clumsy and preferred using the keyboard.

## SUPERIOR GRAPHICS

Looking through the windscreen you can immediately see a difference from the 8-bit version. The scenery graphics in the San Francisco area are far more sophisticated than those in the 8-bit version. For instance, items such as runway markings

are colour filled shapes, not single lines or 'wire frames', and there are many buildings to be seen. This only applies in the new area, though, the others seem to have been transferred from the 8-bit with very little change.

As soon as you enter the take-off run, the ST's mouse power immediately makes itself felt. The screen refresh rate is very much higher than before, making the view through the windscreen look more like a film than computer generated graphics. The runway markings glide smoothly past as you gather speed and lift the Cessna into the air. Almost immediately, the tower of the Bay crosses into view, and soon after that the massive 4 mile long Bay Bridge between San Francisco and Oakland. Flying straight on you quickly pick up the skyscrapers of downtown San Francisco. As you get closer you see they're colour filled 3D graphics (with hidden lines and surfaces removed). That famous San Francisco landmark, the Transamerica Pyramid is there - a huge, 853 feet high, pyramid shaped office block. You bank the Cessna and switch to a view from the side window, really getting the feeling you're flying round a solid building. All along the windscreen you see the piers and moorings of the gate area, with the Prefecture's 'Wharf' tower just at the far end.

Continuing your original flight path you see in front of you the most famous San Francisco landmark of all, the Golden Gate Bridge. In portrayal here is excellent - I flew the Cessna round and round it, inspecting it from all angles, and marveling at the skill of the Sublogic programmers.

Flying back to Oakland you pass over the island of Alcatraz and notice that the prison building is there - Sublogic have thought of everything. The graphics on approach and landing at Oakland are as impressive as the take-off. And on touchdown, the tyres really screech as they hit the runway - it's worth doing a lowly landing just to hear that noise several times over!

The improved graphics are easier to look at in this version of the simulator, as it allows you to freely adjust the direction of view you get from the aircraft cabin. You are not limited to the 8 fixed directions, as before. Further, you can adjust the



by John S. D.

## ator II on the ST



in S Davison

angle of view up or down - very useful when in a steep climb or descent. There's also a new zoom control to enable you to get a closer look at the central part of the screen (up to 511 times magnification). If you want a wider view you can do this too, with a magnification down to 0.25 OK, so we're getting away from realism here, but it's a useful feature, especially when used with the other new viewing facilities I'm about to describe.

### SEE YOURSELF AS OTHERS SEE YOU

A major addition to the ST version is the ability to view your aircraft FROM THE OUTSIDE. That's right, you can now see how your aircraft looks as you fly it. Microprose's *Jet Flight* has been doing it for years, you say? Not like this, it hasn't! You have the choice of two different vantage points, either from a spoiler plane flying near you, or from a control tower on the ground.

You can set the position of the spoiler plane relative to yourself, on either wingtip, in front looking back at you, behind you looking forward, or looking straight down from above. Also, you can set the distance between you and the spoiler and the height above or below you that it flies. After selecting the viewpoint, you see the view on the screen gradually change as the spoiler plane flies to its new position. Now, as you manoeuvre your aircraft, you see it move about relative to the spoiler's viewpoint, but the spoiler always eventually gets back into its required position. The view you get during aerobatics is truly thrilling, as the spoiler tries to keep steady as you convert around the sky.

The control tower option is just as spectacular, but in a different way. This time, you get the view of your aircraft from the ground. For best effect, you have to make use of the new controls mentioned earlier. As you fly away from the airport, the program automatically pans the viewpoint to follow you. Eventually, you get so far away that you can't be seen even on full zoom. So - here comes the amazing feature - you select the Track function. The view you get now is as if

the control tower has taken wing and is streaking after you at very low altitude and at tremendous speed! You rush THROUGH the landscape, whizzing past buildings, over water, under bridges, whatever... until it's repositioned at the distance away from your aircraft originally requested. The effect is startling, incredible, fantastic, exciting... I'm running out of suitable adjectives! All the time, your aircraft position is kept in view on the screen, marked with a small dot. The dot slowly grows in size until it becomes the familiar shape of your aircraft once again. The effect can really be quite breathtaking.

You can switch between views from inside the aircraft, to spoiler plane, to control tower, to tracking view anytime, at the press of a key or mouse button. Even more astounding, you can set up multiple windows, each with a different viewpoint and you can add a radar/trap window too, if you

# FANTASTIC

need it. Windows can be positioned and sized to suit your needs. For the ultimate in views you can slide the instrument panel down giving a full screen display for any view. This is really spectacular when landing (if you're skillful enough to manage without instruments!).

### FLY WITH A FRIEND

As if all this weren't enough, there's yet another brilliant new feature. It's possible to link two ST's together (each running the program) via the RS-232 ports and run in 'multi-player' mode. This means you and a friend can each fly an aircraft, and each can see the other on his own screen. The ST's continuously exchange data via the RS-232 link on position, height, etc. You need a null modem cable to connect the machines, or alternatively you can use modems and conduct a two player game via the phone. Communications facilities are built right into the program! You can send and receive radio messages to/from the other player too (via the keyboard).

### JOIN THE JET SET

If flying the Cosmos becomes too easy, try selecting the Learjet option. This is a completely different haulage, as a Learjet is a twin engine executive jet aircraft, capable of flying at 400 knots at altitudes up to 50,000 feet. My only grumble about this is that the instrument panel remains broadly similar to the Cosmos, so the simulation is somewhat lacking in visual authenticity. It's great fun, though.

There's a lot more detail I haven't covered, like the World War I Ace game, screen replay, multiple options, manual for saving/loading scenarios, additional weather features (like ground fog and turbulence). I could go on writing about this forever. By now you must have gathered that it's a program not to be missed by any ST owner. If you have an ST you MUST, repeat MUST, add this program to your software collection. It's the finest piece of simulation/educational/entertainment software I've ever seen on a home computer and worth every penny of the £39 asking price. ■

## Using GEM from the C language

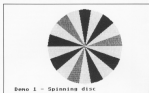


Figure 1 - Spinning disc

### A tutorial series by Steve Pedler

Having acquired an Atari ST, I went through the phases I imagine many new owners experience - starting off by finding out how to get the computer powered up, playing a few commercial games and trying some public domain software and finally, when the introductory euphoria wears off, actually attempting to program the machine yourself. It is at this point that you discover that ST BASIC is not exactly the world's ideal programming environment - not that it isn't a powerful interpretation of the language, but more that the screen editor provided must be one of the slowest and most unfriendly ever written, and that you are denied simple access to one of the features for which the ST is best known - the GEM interface. At that point I decided that I needed a more powerful language than ST BASIC, and with a certain amount of expedition opted for the one that many others seemed to be using, particularly in the USA, the C programming language. I haven't regretted my choice for one moment. Using C to program the ST and make full use of GEM is so easy and produces such fast programs that I never want to return to ST BASIC again.

It occurred to me that Page 4 readers who either own a C compiler and have not yet started to use GEM, or those of you thinking about buying a compiler might be interested to see how it's done and so hopefully avoid some of the traps I fell into and so this first article came into being. I hope that you will learn with me as we examine the ways in which C can be used to program the graphics of the ST. I haven't said that I am very much a novice in both C and GEM, and I hope more experienced programmers will forgive the need to state facts and principles which to them must seem obvious. Many ST owners, however, are still at the novice stage as regards C programming and it is for them, primarily, that this series is written.

#### THE DEMO PROGRAM

I have always felt that articles of this nature are likely to prove more interesting if a useful program is the eventual result. The aim of what I hope will be a series of articles is to

produce a comprehensive demonstration of the graphics capabilities of the ST which you can use for your own pleasure or to show your family, colleagues and friends. To this end, I would welcome suggestions from readers concerning aspects you would like to see covered in these articles, or suggestions for graphic demonstrations. Often the hardest part is not the actual coding but thinking of something which will adequately demonstrate a particular point.

I should point out that this is intended to be a demonstration of GEM rather than how to program in C and some rudimentary knowledge of C will be helpful, however even those who do not know the language should find the discussion of the various GEM functions useful, as the principle of using them from ST BASIC is similar.

The demonstrations will take the form of a single program which creates out a series of demos in turn. This will save you having to type in the necessary initialization code each time. In this first instalment we will set up the system for the demos and include a simple demonstration of animation using colour rotation. This powerful technique is used in numerous graphic demos and once mastered will allow you to write spectacular demos of your own.

#### TYPING IN AND RUNNING THE DEMO

This first part of the program does not use any of the more advanced features of C such as floating point numbers, structures or unions, so it should be compatible with all the currently available C compilers. One point to note is the `#define` in the first few lines which defines "WORD" as a short integer variable. This is necessary because GEM functions expect to be passed 16-bit integers and the compiler used to write this program, Microsoft's Lattice C, uses a 32-bit integer as standard. In Lattice, a short is 16 bits long as it almost certainly will be in any other compiler, regardless of the integer size. However, thank your compiler, if a short is not 16 bits long you only have to change the `#define`, not every occurrence of the short keyword in the program. To run the completed program, double click on its icon and click on the





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button of the alert box when it appears. You must be in low resolution for this program, if you are not, the program will tell you so. You can increase and decrease the rate of spin of the disk by holding down the left mouse button; holding down the right button will rotate the disks, while holding both buttons will return you to the desktop.

## PROGRAM INITIALISATION.

The listing starts with a couple of #include files, and two #defines, one of which defines SOLID as the number one. This is a constant used in selecting an interior fill pattern, and it is included simply because SOLID means a lot more to a person reading the listing than trying to figure out what significance a 1 might have when passed to a function. This is followed by a series of declarations; more particularly, the function demo() , our first demonstration, is declared as returning a short variable, rather than the default int. The reason for this will become apparent.

The main() function comes next, and the first thing this does is call the init\_gems() function. This carries the necessary initialisation code both for GEM and our demonstration. It starts by calling three GEM functions. The first, appl\_init(), initialises GEM for a new application. The second, graf\_handle(), returns a very important variable, the name or device handle of the current workstation. It also returns four other items of information about the workstation, but we don't need these so we can just use a dummy variable to pass them in. Before we can open a new workstation to draw in, we have to be able to pass certain parameters to GEM. These are passed in init[] , and information received from GEM about the new workstation will be found in inew[]. As you can see, elements 1 - 9 of inew[] all contain the value 1. Table 1 gives the meaning of these values for GEM. The function v\_openwin() will open our new workstation. It must be given the address of work\_handle so it can be modified for the new workstation.

Table 1. Values passed to GEM in v\_openwin().

init element	value affected	attribute	result
1	1	polyline type	solid line
2	1	polyline colour	black
3	1	polymarker type	dot
4	1	polymarker colour	black
5	1	text font	system font
6	1	text colour	black
7	1	fill style	solid
8	1	fill style index	no effect as solid
9	1	fill colour	fill chosen above
9	1	fill colour	black

Element 10 of inew[] is set to 2. This is an instruction to GEM to use screen coordinates, i.e. conventional computer graphic coordinates with point 0, 0 in the top left corner and a resolution of whatever the computer concerned can offer. The alternative is Normalized Device Coordinates (NDC), which is based on a standardised screen of 32767 pixels vertically and horizontally. This offers the possibility of writing graphic applications which are independent of a particular computer's hardware.

Much of the information returned in inew[] will not be

of interest to us if we are writing programs specifically for the ST. However, instead of elements 0 and 1 will return the maximum horizontal and vertical resolution respectively, useful if you are writing software that will run in more than one resolution.

The rest of init\_gems() contains code specific for our application. The demonstration will use colour resolution so the first thing we do is to move the colour palette into an area of memory where we can manipulate it. The Setcolor() function is not a GEM function but a call to the ST's operating system (it is an XROM call). The general format of Setcolor() is as follows:

Setcolor(colour number, colour value)

where colour number ranges from 0 to 15 and colour value is a 16 bit number representing the RGB value of the colour. But Setcolor() does more than this. It also renames the old colour value in the array, and if the colour value supplied to it is negative, it is ignored. In other words, Setcolor() as used here has the effect of changing some of the colours but copies the present 16-colour palette into the array old\_palette(). This array will be used to reset the palette to its original value on leaving the program. The next two lines simply copy old\_palette() into new\_palette() which will be used for the actual colour rotation.

The next statement is also an XROM call. Getres() does what its name implies - it returns the current screen resolution. This is important to us, since this program will only work in low resolution. The values returned are as follows:

0 low resolution  
1 medium resolution  
2 high resolution

Having determined the resolution, the program checks to see if the user is in fact in the required resolution. If not, an alert box is put on the screen to inform the user and the variable 'finished' is set to 0. Alert boxes are printed using the GEM function draw\_alert, and are simplicity itself to use. The general format is as follows:

button = draw\_alert(default button, alert string)

where button is the number of the button the user clicked on and which can range from 1 to 5. The default button is the button which is selected by pressing the Return key as well as clicking with the mouse; it too can range from 1 to 5, or be zero in which case there is no default. Examples of the alert string can be seen as res\_alert and beta\_low. The general format is:

{icon} text with lines separated by the \n character} button 1 ; button 2 ; button 3

where icon is the icon displayed on the left side of the box. Possible values for this are:

1 exclamation mark  
2 question mark  
3 stop sign

You can have a minimum of one and a maximum of three

buttons. Since we only have one button in each of these boxes we don't need to know which one was clicked on. If the screen resolution is anything other than low, the string `res_alarm` appears in the box; otherwise `hello_low` is used. On return from `init_gems()`, `main()` checks the value of the variable `finished`. If this is anything other than zero, the statements in the while loop are executed; if it is zero, these statements are not executed and the function `finish_gems()` is called. Assuming the loop is executed, the demo is called as `demo 1()`, which will return a short in the variable `'c'`. If `c` is returned as greater than 2 the program will break out of the loop, set `finish` to zero so that the loop is not executed again, and call `finish_gems()` to exit the application.

## LET'S START THE DEMO!

Now for the demo itself. The first thing to do is reset the colour palette so that we can manipulate it. This is done with another `SETRGB` call, `Setpalette()`, which is provided with the address of the new palette as its argument. We then hide the mouse cursor since we don't want it on the screen, with the GEM function `vs_hide_c()`. Function `vs_draw()` then clears the screen using the current background colour (always found in colour 0 of the palette). To be absolutely sure, although we have already done it during the open workstation routine, the interior fill style is set to solid colour with the call to `vs_interior()`. The format of this call is as follows:

```
vs_interior(device handle, style)
```

where `style` can have one of the following values:

style	result
0	hollow - i.e. outline only, no fill
1	solid colour
2	pattern
3	hatch
4	user defined pattern

If patterns or hatch styles are chosen you can choose from a variety of preset patterns using another function, `vs_style()`. We will look in more detail at this at another time. You can even define your own fill pattern using function `vs_define()`.

The aim of the demo is to draw a disk composed of segments of different colours so that, by rotating the colour palette we give the illusion of a spinning disk. The functions which draw the circle segments is `vs_piech()`, which uses the following format:

```
vs_piech(device handle, circle centre x-coordinate, circle centre y-coordinate, circle radius, start angle, stop angle)
```

Most of this is self-explanatory, except perhaps for the question of start and stop angles, which determine the position of the segments in relation to the centre of the circle. These are expressed in terms of degrees, and can therefore range from 0 to 360. An angle of 0 is due east, while 90 will be due north. By incrementing these variables by a set amount each pass through the loop, we draw a filled circle composed of a number of segments. Before we can do this however, we have to set the colour to fill the segment with, and here we can into a slight problem. The 16 colours used in the low resolution colour palette are numbered 0 to 15, with colour 0 being the

background colour. Unfortunately, the GEM functions use colour indices, also numbered 0 to 15, but which do not correspond with their counterparts in the palette. In other words (for example) colour index 1 does not use colour 1 in the palette, but colour 15. If we draw with colour indices 1 to 6 therefore, but rotate colours 1 to 6 in the palette, we shall not be rotating the correct colours. To avoid this, the array `col_index[]` was set up which contains the colour indices in the order of the colours they correspond to in the palette.

Having drawn the disk, the next task is to print the title of the demo using the function `vs_print()`. I don't want to say anything more about this at this time, except that the height of the text (in pixels) is selected by using the `vs_height` call. Move about this next time. Finally the colours are rotated by rotating the contents of `new_palette[]` and calling `Setpalette()` each time the array is changed (changing the array without calling `Setpalette()` will have no effect).

The program incorporates a delay loop to slow things down to a reasonable level. In order that you can see the effect of altering the delay, the mouse buttons are checked using `graf_mouse()`, which returns the current mouse attributes. This has the following format:

```
graf_mouse(mouse x-coordinate, mouse y-coordinate, mouse button, shift/control/alternate key state)
```

We are only interested in the mouse buttons here so the other values go into our dummy variables. The mouse button returns a 1 for the left button, a 2 for the right button and a 3 for both buttons at once. If the left button is pressed and held down, the delay is increased by the value in `step` until a limit is reached when it starts to decrease again. Holding down the right button or both buttons at once will exit from the demo loop and return the button value to `main()`. If this is 2 (right button only) the demo is reset, if 3 (both buttons together) the program will return to the desktop, terminating by calling `finish_gems()`.

The `finish_gems` function is very straightforward. We first bring back the cursor using `vs_show_c()` which has this format:

```
vs_show_c(device handle, reset flag)
```

where the reset flag is either zero or non-zero. If zero, the cursor is redisplayed regardless of how many `vs_hide_c()` calls were made; if non-zero, the number of `vs_show_c()` calls must match that of the number of `vs_hide_c()` calls for the cursor to be redisplayed. The old colour palette is restored with `Setpalette()`, and the workstation closed with `vs_close()`. The application is terminated with a call to `app_exit()`, and the whole program returned to the desktop by coming to the end of the `main()` function.

## ALL FINISHED!

And that is it! You might say that it is a lot of effort for a very simple demonstration and I would agree, but don't forget that GEM gives an enormous graphics power that is generally very easy to use. Regrettably the price we pay is an increase in the amount of code needed to do things up. Although I have deliberately used C to demonstrate some simple GEM functions in this article, all these functions are also available to BASIC programmers, who might like to try implementing the demo in BASIC. Next time we will look at some more GEM functions and add another demo or two to the program. ■



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# K-GRAPH 2

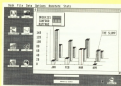
Kuma  
£49.95

Reviewed by John S Davison

Here's another of the K Series of application packages from Kuma, this one providing your ST with comprehensive business graphics and statistical analysis capability. Now in its 16-bit version, it offers graphs and charts in suit more ways. It is GEM based and easy to use, so at least you have a simple way to turn all that boring numeric data into something a little more digestible.

Like other members of the K Series, K-GRAPH comes in the obligatory three packaging, containing a single sided disk and slim, tutorial style instruction booklet. I found the booklet to be one of Kuma's better efforts, but for the price it could (should?) be a bit better.

K-GRAPH uses the standard Kuma installation procedure to produce a working copy from the supplied master disk. On a single drive system this requires about 30 disk swaps to complete - not as ridiculous as some of Kuma's other offerings, but a little inconvenient.



## MASSIVE CAPACITY

The program produces graphs and charts from data provided either by existing data files from programs such as K-SPREAD or by typing it in through K-GRAPH's data editor. The usual data editing facilities are provided, so you can easily add, delete and change sets of data to be charted. Up to 20 data sets can be displayed on any one chart, and up to 80 across all chart types at any one time. A maximum of around 3000 data points can be held in memory on a 102K machine - so this is no toy program! In practice, though, charts get very messy with more than about six data sets displayed, so you'd probably never push the program to its theoretical capacity.

Data points can also be generated from a formula supplied by you, and K-GRAPH has a set of 18 built-in arithmetic and trigonometric functions for this purpose, together with conditional processing facilities. You just define the formula, provide the range and increment for X values, and K-GRAPH

does the rest, at least, that's the theory - I had a lot of trouble getting it to work. I found the program's error messages helpful, and the instruction booklet inscrutable in this area. Kuma should have included a better explanation of the syntactical rules and provided examples to make this feature more easily usable.

A wide range of chart types can be produced from your data, such as line and scatter graphs, area charts, vertical and horizontal plain bar charts, stacked, overlaid, or three-dimensional bar charts, and pie charts. You can flip at will between different chart types for a given set of data, this being as simple as clicking on the appropriate icon. Consider the order.

## CHART CUSTOMISATION

Up to four windows can be open at any time, each displaying a different chart. Size and position of a chart within its window is easily changed under mouse control, and you can design your own graph line styles and fill patterns in terms of pixel layout and colour. Point markers may also be used on line graphs, there being a selection of shapes available for this purpose. They can be used without the connecting graph line, and in fact this is how you produce a scatter graph - it's really a line graph without the lines!

Scale points on the X-axis may be individually labelled, permitting the use of non-numeric items such as dates, month names and the like and there is also a general annotation feature which lets you place text anywhere on the graph in a variety of line styles and sizes. You can draw an arrowed line connecting the text with any part of the chart to highlight something of special interest. The text block can be moved at any time, too, and if it has an arrow attached, the line 'snaps-back' so the head of the arrow remains pointing where it should as you reposition the text. Very neat.

A legend box showing which line or fill pattern represents which data is automatically generated for you. This is based on the names you give to the sets of data, and the line-fill patterns you defined for use in plotting them. Again, this can be placed anywhere on the chart and can be repositioned at any time without damaging the underlying graphics. By clicking on one of the legends, you are cleverly taken straight into edit mode for the data it represents.

Further options allow you to overlay a grid on the two dimensional charts, to change X and Y scales for certain types of chart, and to choose whether pie charts display percentages or absolute data values against each slice. You can also choose to slide out one slice to highlight it, although a bug in the review copy made this feature unusable.

If all this isn't enough, you can even save a K-GRAPH chart in DIBGAOS format and use that package to convert it to even more. The possibilities seem endless!

## HARD COPY FACILITY

When you've got the chart looking exactly as you want it, you can print it out upright or sideways, and enlarged or contracted in the X, Y or both directions. K-graph displays a representation of the printed page, with a shaded area showing



# COMPUTE! DO IT AGAIN!

It has to be said that the majority of the ST books to have been published to date, with only one or two notable exceptions, have been re-writes of the manual with, maybe a few new ideas thrown in here and there. Compute!, who have a fine reputation for quality books, have themselves been guilty of this, but now comes the publication of a new series, and a new format which they call the COMPUTE! Library Selection, that looks like being the start of some excellent reading for the ST.

One of the things missing so far for the ST is a collection of type-in listings that helps new users get started with learning just what their new machine can do and the first of the new Compute! books is just that. ST APPLICATIONS is a collection of mostly practical applications that any owner can type in with ST BASIC. The programs range from games of skill to 'household helpers' and on to business, finance and science. All will run on a 128K or 184KST in either mono or colour. There are no arcade style games here, most of the games require thought and skill and include such favourites as Knight's Move, Mosaic Puzzles and Checkers. More useful programs are those for calculating bank payments and there is even a spreadsheet! Other, less usual, applications include Chemistry Basics, a Simultaneous Equation Solver and Least-Squares Fitting and there is even a program for Weather Forecasting! All in all, an unusual collection with some very useful programs that will not only teach you about using your ST but will also provide you with some useful programs.

Another applications guide is the first in a series entitled ST APPLICATIONS GUIDE and this one is subtitled PROGRAMMING IN C. Here you have a guide which shows the elementary C programmer how to use C for many specific ST applications. Chapters include Creating The GEM Environment, Creating Menus, Dialog Boxes and Graphics, Programming the Sound Chip and others on graphics. The book is full of programming examples illustrating all the aspects of GEM using actual programs such as a fiscal program and a program for drawing world maps as examples. All the co-ordinates for the latter are provided in an extensive



Appendix! There really is so much in this book that it is hard to know what to mention. There are over 300 pages chockablock full of examples and explanations and anyone who works all the way through will have a very good understanding of GEM and programming the ST in general. It does not teach C as much but looks to be the best book so far to explain how to use C to get the best from the ST.

The final one in this trilogy of new books will appeal to artists and doodlers alike, indeed anyone who has a copy of the Neochrome Sampler (c. £5) or Degas. The title is COMPUTE! ST ARTIST and the book has 265 pages packed with information about Neochrome and Degas, including much that you might never discover yourself! Most users will be able to work out how to use the various functions of the programs but there are many small features that are not documented, particularly with Neochrome, and the authors introduce several tips and tricks to enable you to extend the basic facilities. There is much included on using perspective and shadow effects and defining your own text and pattern fills and several, not to obvious, applications including flow layouts, graphs and charts, even letterheads and business cards! Some very clever effects include using two screens to produce an A4 image and cutting designs from background patterns. Advanced techniques concentrate mainly on achieving animation through colour cycling and include some very impressive effects. Several appendices include a conversion program for Degas/Neo, a glossary and a round up of all the art programs available if you need to explore further. All in all a cracking collection of ideas and tips that will enhance your purchase of Degas or turn a 'free' copy of Neochrome into one of the most interesting programs in your collection. If you want to pay a bit more you can also get the book with an accompanying disk which not only includes all of the drawings, programs and routines from the book but also has six extra Degas fonts and four fill patterns plus three screens of Neochrome 'shapers' that can be cut and incorporated into your own drawings. This is one of the few times where the disk actually provides more than it is in the book.

All the books are in a new large format of 9" by 7 1/2" in conventional paperback style. These are expensive, as are all books nowadays, but at least they look the part and all three are packed with information to provide value for the money.

**COMPUTE! ST APPLICATIONS** by Brian Flynn and John J. Flynn. ISBN 0-87185-887-X. £15.95  
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# Donald Duck's Playground

Sierra  
£24.95



'An action-packed game about change-making for ages 7 to 11'. I hate Donald Duck's Playground! Not that the program is bad, it's just that I am not sure I like the thought of 7 to 11 year olds being smarter than me! Seriously though, in a time when everybody seems to complain about the lack of good educational software, this one is a real cracker (or quacker? Grouse!).

The game is designed to teach children the concepts of logical thinking, shape, colour and letter recognition and the use of money in a society that requires you to understand that nothing is for nothing and that hard work brings its rewards. It succeeds admirably in its aims and is packed with a number of well thought out scenarios that must make some impression on any child who plays. As with *Winnie The Pooh* (reviewed in an earlier issue) the hand of Walt Disney is evident in the understanding of children.

Starting from the beginning, you have the choice of three levels, beginner, intermediate or advanced, but be warned, even the beginner level is not too easy (play it while the children are not looking!). Donald passes through the appropriate gates and emerges in the high street where there are four workplaces in which to earn some money. These are McDuck Airlines, The Produce Market, The Toy Store and Aesop's Railroad. Each has a choice of working a shift from 2 minutes upwards but they all feature different skills and will take time to master. At the airport you are a baggage handler and must sort baggage from a conveyor into the appropriate truck for its destination. This involves checking a three letter code on each passing package and recognising the corresponding truck. With the conveyor continually moving it is quite hard! In the Toy Store you must put toys on the shelves by recognising similar toys and placing a ladder so that you can climb up and put the toy in the right place. An additional problem is the train passing by from time to time which, if you are not careful, will dislodge the toys you have put up and so reduce your earnings. The Produce Market has more of an arcade element requiring you to catch produce thrown off the back of a truck and find the right box to put it in. Finally, on the Railroad, you must pick up packages from certain stations and deliver them to others by changing a series of points. A real challenge to logical thinking, this one!

Whichever job you choose, at the end of your shift you go to the Payroll office to pick up what you have earned. The money is counted out in appropriate coins and your total earnings increased. You may now go back and work some more or find somewhere to spend some of those mugs!

On the other side of the street are three shops where you have a choice of items to buy. Each item has a stated price and a description which needs to be read carefully because some items are much more useful than others, especially if you want to have the most fun in the park! After choosing the item you want you must pay the shopkeeper, you are not allowed to leave or buy more without settling your debts. Paying involves

## Too clever for Les Ellingham!

going up to the till and counting out either the right amount or tending a higher amount and working out how to get the correct change. A nice lesson in paying for what you want and understanding how to count up the right amount or check that you have the right change. Once you have got it right your purchases are automatically delivered to the park. Guess where we are going now!

After all that work, it's about time we had some play, so off to the park. This is the Playground of the title and to get the most fun you will need to have worked hard and bought some of the right things. There are many tantalisingly interesting things in the park but you may not be able to use them without the right accessories. The park lies across a railroad and, all credit to Donald, he stops and looks both ways before crossing but it might have been wiser to have some gates or a railroad rather than encourage children to cross railway lines, however much they stop and look. Anyway there are lots of things to do in the park and many more challenges. You will have to work out how to use most things and will certainly need to go back to the shops to buy more equipment. In all probability you will have spent all of your money and will have to go back to work again. Another lesson, this time in economics, perhaps it is better to keep something back in case you need it!

Donald Duck's Playground will last for a long, long time and with parental guidance cannot fail to have some beneficial influence on a young child. Almost all of the concept and design is excellent but there are one or two criticisms. Certainly I felt that the control of the character is unnecessarily difficult, especially with a mouse, and might well deter a child that is good at thinking but not necessarily the dexterous. A great pity because the aim of the program is to encourage positive thinking and not to produce another 'wreck junkie'. The other point is that better use could have been made of the graphic power of the ST. Each scene is loaded in from disk, as with other Sierra adventures, and this makes the action extremely slow, especially when you finally get on the rocket slide and have to stop halfway down for the bottom half to load! Donald Duck's Playground is not a huge area and most of it could be loaded in and scrolled.

Criticism aside, this is probably one of the few, and one of the best, educational programs filling the gap that seems to exist for the over five's. If you have children, you really should consider buying this. It is fun, educational and may just help your children understand all the complexities of their life a little better.

Donald Duck's Playground will run in Colour or Mono and uses joystick, keyboard or mouse. Many thanks to Software Express in Birmingham for supplying the review copy.



## 130XE

## RAMDISK

## LOADER

The problem with many ramdisk file transfer programs is that they are in machine code which makes them very inflexible and difficult to modify, especially if you haven't got a clue about machine code programming. The accompanying program is written for the most part in Basic and will move selected files and programs to ramdisk at power-up. Being written in Basic means you will be able to alter it to suit your own needs.

The program should be of use to everyone with a 130XE and if you own an 800, the program will still work, but you will have to fit extra memory to hold the files. If you own an 800XL, I strongly recommend you read the October 1986 edition of *COMPUTE!* magazine, which shows you how to create a small ramdisk in the hidden memory.

To use this program, all you need to do is type it in and save it to disk. If you wish you can run it automatically by using DOS 2.0's SETUP.COM file, to create an AUTOEXEC.SYS file. My advice is to call this program RAMDISK.COM, but you can call it what you wish, and so long as you use the same name in your AUTOEXEC.SYS file.

Here's a breakdown of the program, with a few ideas on how you can modify it for your own use.

1000 - This line sets up the strings we are going to use for the machine code, and various other bits and pieces required. You can change FILE1 if you wish here to a smaller number if you want to move files of specific size. Set your maximum file size as 48 (you could increase it accordingly). If you want to move lots of files you can increase the number in NAME1. Simply multiply the number of files you want to move by 4. Remember, it is the length of a filename less the number. FILE2 will be reduced in size automatically, so remember the more files you want to move the smaller they will have to be. As it stands FILE1 will move files up to 200 sectors long, which is the largest I have. Also remember the RAMDISK is only so big, so make sure you don't try to move too many files, as the program will stop with an error.

1020 - 1040 - These three lines copy the small machine code program into COM, which is the most important part of this program. I got this routine from *COMPUTE!* many years ago, but I'm afraid I can't remember who is responsible for it - probably Bill Wilkinson.

1020 + 1030 - To move these files, we must know which ones they are, so using DIR we take this information directly from the directory. If DIR returns "FREE" we know we have read all the filenames, so we can go on and load any files we have identified.

1040 - Here we check that the filename we have taken from the directory is in fact a file to be moved.

1050 - 1060 If the test is positive we trim the edges and

2070 - store the result in NAME1.



by Rob Anthony

1060 - Here we make sure that we are not going to try and push in too many files. If you want to increase the number of files you are going to load, remember to increase the value of X accordingly. If we have all the filenames we can fit, the program will continue further.

1080 - Here we clear the directory and make sure we have got some files to move.

1080 - 1090 - This is where we decide how many times we have to perform the load/save routines. X is going to be equal to the number of files in NAME1. After performing the first load/save we increase FOR by eight, which indicates the position in NAME1 of the next filename.

1090 - When all the files have been saved the program has completed its job. Here I load a menu program, but you can just run the program if you wish, or else add some other functions. Remember if you increase the size of the programs, you are going to interfere with the size of files you can move, running a menu program keeps your Atari smart. If you are going to develop some kind of data processing program, then MENU could easily refer to the menu control program, with all its sub programs and/or data on Ramdisk.

4020 - 4040 - Having finished with DIR earlier, we can now use it to represent the filename of the programs we want to load in to FILE1. These two lines simply take the filename from NAME1, and trim it to a suitable filename. We must now empty FILE1 if we have used it before, otherwise we could end up with one mass of files of all the other files we are moving. Having done all that, we move all the machine code whether we are going to perform a read or a write operation.

4050 - Now we can open the disk file for reading, and show what we are moving.



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400 - Because we are going to use a buffer to store parts of the file, we must fill it up with inverse commas. We can then call up the machine code and load in the first part of the file. The figure 1 in the arguments refers to the amount we are using, so if you want to use the maximum size for some other program - say loading and writing data from a database - remember to set this argument accordingly.

405 - Now we must find out how much data we have read, and this information is stored in locations 00 and 01. Having done this we can use the length of the buffer accordingly and tag it on to the end of the file.

406 - 408 - If M25 equals 1 then we have read all the files, so we can go off and store it on the ramdisk. If it remains 0 then we will have some of the files to pull off the disk, so we go back to line 400 and get a new store.

409 - If there are any problems, then M25 will reset an error number - so we can POKE that into the error number location, 100, and trap to the error routine.

40C - 40D - Here we have the error trap routine, which is fairly self explanatory.

40E - Before saving the file to ramdisk we must inform the machine code we are going to perform a write operation. Then we change D08 from drive 1 to drive 5. If you have changed the ramdisk drive number by altering your DOS, remember to change this number accordingly.

40F - Now open the ramdisk file for a write operation.

410 - Using the machine code we now write the file to Ramdisk.

411 - Now we can close the file, and go and look for some more.

412 - (Pause)

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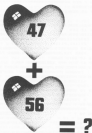
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Independent User Group



# MOST HEART MATHS

by Peter Ohlmeyer



Teach your children or accept a challenge with this multi-level maths program

Since I have never been too impressed with the few mathematical games for children that I had seen for the Atari I had been planning such a game for some time but it was not until the recent birthday of the eight year old daughter of one of my friends that I made up my mind how to develop what I felt to be the right combination of teaching mathematics and having a little gaming fun. MOST-HEART MATHEMATICS is the result of my efforts. I cannot judge myself whether I have programmed something that meets the demand expressed above, however, the children that have played it so far were quite pleased with it and were on playing it again and again.

You might be intrigued by the title of the program and I don't blame you! This is because the title and all the prompts of the game were originally written in German and nothing else came to my mind as an English version of the title than 'Most-Heart mathematics', because I wanted to save time and the title had to fit into the space provided for the German version. I don't even know whether the title is English or whether it is nonsense!

Anyway, type it in and play it and you will find out that it has quite a lot to do with mathematics and even more to do with hearts which, because it is written for children, play a very important role.

## WHAT DOES THE PROGRAM DO?

Firstly, you have the choice between addition, subtraction, multiplication, and division. Secondly, you are asked to decide on which level - ranging from easy to extra in three variations - that you would like in your children's arithmetic skills to be improved.

According to your choices you are presented with three sets of six arithmetical problems. The answers are typed in on

the keyboard but will not appear on screen until RETURN is pressed. It is important here to watch the keyboard carefully to make sure you have typed the answer you intended. When all six answers have been entered they are checked and wrong or right answers are marked accordingly. For every right answer, the ATARI displays - what else? - a nice heart. Wrong answers are indicated differently. If there are any incorrect results you are asked whether you would like to see the correct answers before proceeding.

Over all rightness problems have been solved your total score is displayed. If you have reached a certain percentage of the total score possible, you have the choice between either going back to the next set of arithmetical problems or playing a little reward game instead.

That's all there is to it. The program was originally written without the time having an influence upon the scoring but I found that this feature makes the program interesting even for adults who usually over-estimate their arithmetical skills. Every body is so used to using their 'Texas-Instruments' when calculating  $4 \times 10$  and assumes that the answer really is 36.99999!

Try Most Heart Mathematics yourself and play some rounds against an adult or even against your children and very soon you will be under time pressure and will make mistakes typing in the results that will reduce your scores considerably. The best choice for adults to start with is DIVISION as level 3. EXTRA. Have fun!

In conclusion I should point out that as the program was written for children there are many sounds in it that may not attract adults. I am sure that you will surely find out which (GAYLE)'s you have to curb in order not to be disturbed by foolish sounds when solving some of the easy or the 'bunny' arithmetical problems.

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# Contact

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**HELPS** Can you convert the Colbung system on PAGE 4's Mandrake? Set disk ROM to version on my 1020? Please! Thanks and a token offered. J.D. Collins, RL Drive Hill, London, SE8 2AC. Tel. 01 940 3277

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# FLY!

**Acc Atari pilot John S Davison, AFC, KB, JSO\* takes to the air in a variety of aircraft. Are you good enough to fly with the best?**

\* Squadron Flight Commander, Royal Air Force, 1950-1955

A Spitfire simulator ought to be an inevitable program for the flight simulation fan. Add a good game element, and the package should be a sure-fire winner with everyone. With *Spitfire 48* Microsoft started out with this successful formula well over a year ago, and the program was very popular on other home micros. At last, they've released an 8-bit Atari version, so with great expectation, I prepared to become one of "The Few".

The game scenario has you as a newly trained pilot in your first Spitfire squadron. You must first learn to handle a Spitfire, and then go on to combat duty. Once into real combat, your experience and success in shooting down enemy aircraft and returning safely to your home base wins you medals and promotions. Who knows — you could have what it takes to become a Group Captain with DSO, DFC and VC to your name! Your progress is recorded in a log book which can be saved to disk or cassette, so you can continue your career next time you play.

All controls may be operated from the keyboard, with the option of using a joystick for alternative and alternate control. Everything is adequately explained in the 24 page instruction booklet, and summarized on a separate quick-reference sheet.

## SIMULATION OR GAME?

On the one hand, a single sound channel plays what could have been a stirring march with better treatment, presumably betraying the program's Special ancestry. Didn't the programmers know the Atari has FOUR sound channels!

Choice of "simulator" or "game" option at this point lets you either fly a complete aerial, or pinches you straight into the dogfight stage, saving you the trouble of the scramble and search for the enemy. News, you load in the pilot's log, showing name, rank achieved, medals won, hours experience, victories scored, and other details. Following this, you choose either practice or combat mode which, predictably, lets you learn how to handle the Spitfire without worrying about the enemy or puts you in combat status awaiting action. A combat score starts with the order to "scramble", giving height, bearing, distance and number of enemy aircraft. It's up to you

to find them and use them off.

The next screen shows the runway through the framework of the cockpit canopy. The runway graphics are somewhat rudimentary, just a few straight lines against a grey background. Inside the canopy, a rear-view mirror enables you to see when enemy aircraft get on your tail. The other prominent feature is the reflexive gunsight, the granddaddy of the sophisticated "head-up" displays found in modern combat aircraft.

Surprisingly, there's no instrument panel displayed at this point. To see it involves switching to a different screen, then losing your view through the canopy. The panel graphics are probably the best feature of the program, showing the basic instruments you'd find in a real Spitfire. The instructions say you should be able to see the Spitfire's control column, which exists in an operator's cockpit, but there's no sign of it on the Atari version.

## INTO ACTION

Scramble!! Quick, start the engine! This produces a noise very much like my next door neighbour's ancient motor mower instead of the unforgettable sound of the mighty Rolls Royce Merlin engine. OK, OK, I know it can't be reproduced exactly, but surely a competent programmer can do better than this!

Right, release the brakes and accelerate as full throttle down the runway. At 40 knots, switching to runway view provides another disappointment. The crude runway outline is continually redrawn on the screen in an attempt to create the illusion of movement. The result is a jerky, flickering mess, quite unworthy of the Atari's capabilities.

After take-off, it's a case of climbing like crazy to intercept the enemy, using the map/radar to help you find him. Once again, the graphics are fairly minimal and clumsy, showing your position relative to the enemy bands. A map icon feature gives several levels of detail, allowing you to see your position relative to the (very sparse) geographic features of the landscape below.

Going into map mode pauses the game, so you can't see the effect of any corrective manoeuvres without switching



back to the canopy view and then back into map mode. Changing course by a specific amount involves a further switch to the instrument panel so you can use the compass. I found it necessary to continually switch from screen to screen to locate the enemy, which became very tedious after a while.

## TALLY HO!

Suddenly, an aircraft appears in your rear view mirror. Throwing the Spitfire into a screaming turn, you manage to shake him off your tail. Then he's in front of you, staring for his life, and diving about to avoid being hit. Tally Ho! Open the throttle and chase him. The motor never chugs louder and you get closer, center him in your gunsight, and fire. You see a stream of bullets converge jerkily on him. He disintegrates and disappears, to be immediately replaced on a different part of the screen by one of his mates.

The Spitfire responds well to the controls, and I was pleased to see the horizon tilt smoothly as the aircraft is banked (aside from some so-called flight simulators). As expected, the artificial horizon on the instrument panel follows rate, but very jerkily and with jolts standard blockiness. Other instruments seem to behave fairly realistically, though.

# JUST LIKE THE FALKLANDS?

**Strike Force Harrier** is another of those programs which aren't what they seem at first sight. Like many so-called flight simulators, it's more of a combat simulator than an accurate simulation of jet fighter flight. I can say this for several reasons: firstly it has a high find/shoot/bomb/avoid the enemy content, secondly the instrumentation in the aircraft is fantastic rather than realistic and, finally, the aircraft's flight behavior doesn't look or feel quite right. Apart from this, though, it's a pretty good program!

The package contains two disks, a summary sheet showing all keypresses, mouse and joystick controls plus an overview of the instruments and data displays, and a map grid showing your starting point and the position of your eventual objective. The package is completed by a small instruction booklet containing hints and tips on flying the Harrier as well as the usual program details.

## FIRST, LEARN TO FLY

After boot-up you choose the mission type from Demo, Practice, Combat, or Combat Practice, and the difficulty level from Pilot, Commander or Ace. The two higher levels introduce features such as black-out and red-out of the pilot's vision during high-G manoeuvres.

The Practice option gives you the chance to learn to fly the Harrier without getting shot at by the enemy. Helped hints on how to take off vertically, make the transition to horizontal flight, back to the hover, and finally to land vertically again are given in the instruction booklet. It's

After dispatching the last enemy plane you have to find your way home, going through the annoying business of screen switching again to locate your home airfield. I found getting back to the airfield extremely difficult, as you can't see it unless you're below 1000 feet (because of haze, the instructions say), and even then, it doesn't come into view until you're almost on top of it. In many hours of play I managed to land successfully only once. As you can't progress through the game without successful landings, the whole thing could, and did, rapidly lose its attraction.

## GOOD IDEA, POOR IMPLEMENTATION

Full marks, Microsoft, for supporting the 6-bit Atari. But please, next time, look ahead regarding your programmers' use of advantage of the Atari's sound and graphics capabilities, instead of copying features from lesser machines.

I liked the idea behind Spitfire 40, but sadly, it's a classic case of a great idea spoiled by poor implementation. With more care it could have been a great simulator instead of a mediocre game. I hope the upcoming ST version remedies this.



difficult at first, but like most things becomes easier with practice.

The screen layout is pretty standard for programs of this type, with the lower part displaying the cockpit instrumentation and the upper part showing a through the windshield view with the obligatory HUD (Head Up Display) superimposed on it. Cockpit instruments are dominated by FOFTRAC (Forward Of View Tracking Radar), AAR (Air Attack Radar), Multifunction Display (showing fuel remaining, throttle setting, and positions of flaps, undercarriage, weapon inventory, etc), plus various warning and damage status indicators. The HUD shows essential flight information such as height, airspeed, vertical speed, pitch, and direction. It also acts as a gun/missile bomb sight and special landing indicator to help you get back to base.

In fact, getting back to one of the four prepared landing sites is something you must learn fairly quickly, as you can't refuel or rearm anywhere else. Your instruments can guide you to the correct locality, but final identification has to be done visually. Landing areas are marked by flashing beacons, which can only be seen from fairly close range.

## THEN, LEARN HOW TO FIGHT

Once you've got the hang of flying the beast, the next stage is to learn how to fight with it. The Harrier's offensive armament consists of three 1000lb bombs, two Sidewinder air-to-air missiles, and 250 rounds of cannon shells.

Weapon delivery is aided by several clever electronic systems. FOFTRAC is a combined map and radar display covering an area of one rectangle on the map grid supplied in the package. Map details shown include mountains and your landing sites. It also shows enemy SAM (surface to air missile) installations, and is continuously updated to show the current positions of active enemy tank formations, aircraft and missiles, plus your own flight track.

An annoying feature of FOFTRAC is that it loses the map display detail if you fly across the boundary from one grid rectangle into another. To get it back you have to fly across the centre of the rectangle to 10000 feet, as FOFTRAC has to photograph the area before it can be displayed. This is

reasonable if you enter a rectangle for the first time, but surely not EVERY time? If you accidentally clip the edge of the rectangle, you find, on re-entering the original area a few seconds later, that the detail has been lost and FOFTRAC no longer displays the position of the tanks. It's very hard to find them without FOFTRAC, so it's back to 16000 feet over the centre of the area again to regenerate the display. As that abstract you can guarantee you'll get a severe mauling by the enemy fighters. I repeatedly found myself in just this situation, and it quickly became a major source of frustration.

The Air Attack Radar helps you pinpoint enemy aircraft and avoid his missiles. It shows aircraft and missile positions within a 7 mile radius and height band of approximately 3000 feet of your current position.

## NOW - DO IT FOR REAL!

When you think you can cope try flying a real mission. The objective is to fly to the enemy headquarters situated some 50 grid rectangles away from your initial base, and destroy it. You don't have enough fuel to get there and back, so you have to move your bases forward from their initial positions so they can support you. Unfortunately, the enemy is attacking your bases with tanks, so you have to destroy the tanks with bombs or cannon before a base can be moved. Once a base has been moved the enemy sends in a fresh tank squadron and the process begins over again.

While taking out the tanks you're likely to come under attack from small arms fire, anti-aircraft flak, and above 3000 feet, surface to air missiles. Small arms fire is generally harmless, but can damage your health, and a missile hit is usually pretty terminal! The graphic effects of this bombing

around you are really rather good. And unique too - I've not seen this effect before in aerial combat games.

To find the tanks you have to get to 16000 feet so FOFTRAC can generate its display. This is where your dogfighting abilities are tested, as you're sure to get harassed by enemy MIGs (no kidding!) in fighters. These occasionally come screaming in at you for a head-on attack and the graphics for this are superb. No crude wire frame graphics here - you get the real McCoy! The MIGs fly VERY close to you at incredible speed - you get a big, detailed view of the aircraft for a split second as it flashes by. The effect is quite startling, and guaranteed to get the adrenaline pumping.

For much of the time, though, the MIGs are behind you trying to pick you off. Your job is to defend yourself using chaff, flares, and good old dogfighting skills, then to get behind them and staff a few cannon shells or the odd missile up their rear endlers. All other views you get of the MIGs seem to be from behind, as they link around trying to choke you off.

Once FOFTRAC has done its stuff, you can leave the MIGs to play with themselves and get back down to low level tank busting again. Incidentally, you get points for chlobbering tanks, SAM sites, and MIGs, giving you an incentive to try that bit harder with each successive go, even if you don't make it to the enemy headquarters.

## CONCLUSIONS

As a flight simulator I found Strike Force Harrier disappointing, but as an air combat game it's one of the best around. Its mix of action and strategy should please the game players, while its complexity should keep the simulator nerds interested too. Some of its graphical effects are startlingly good, but in the sound department it can only be described as adequate. Overall, then, a reasonable buy, but don't expect the ultimate flight simulator.



aircraft with similar weapons to yours, plus SAMs (surface to air missiles), and is quite keen on opening your little game!

You can identify and fight off these threats by using the F17's advanced avionics and weapon systems, plus, of course, the superb performance of the aircraft. Get it wrong and you could end up with an AA-9 Aphid hovering inside you (not supposed to be, you'll end up nursing a crippled, highly unstable aircraft back to friendly territory). As a last resort you can even bail out, with a 50/50 chance of escape.

For each mission scenario the manual explains the flight plan, likely threats, and the opening situation. It also has a map of the area in which you're operating, showing positions of primary targets, enemy airfields, known SAM sites, and any friendly bases where you can get down for refuelling or repairs. These maps have also been fed into the F17's navigation computers, and are displayed during flight.

Control is via keyboard and one or two joysticks. As usual, joystick 1 handles the primary flight controls plus weapons firing, while joystick 2 can take over some of the keyboard functions. I found the roll control rather too sensitive, but otherwise everything worked OK.

## COMPETITIVE ELEMENT

On booting, you choose a skill level ranging from 'wreck', to 'ace'. Ace is really an easy introductory level, but the other three levels are full simulations of progressively greater difficulty, with more numerous and cunning enemy aircraft

# WELL HOW DO THE YANKS DO IT?

Microprose are renowned for their excellent simulation programs and F-17 Strike Eagle is well up to their usual standard. The high quality extends to the packaging and instructions too, as the program comes in an attractive box/insert pack complete with superbly presented 'Flight Operations Manual'. This not only contains operating instructions, but also a wealth of information about the F17 and air combat techniques.

The program itself really is classed as an air combat simulator rather than a flight simulator as it's essentially all about modern air warfare, using cannon and heatseeking and radar guided missiles, missile attack avoidance using electronics countermeasures, decoy flares and radar chaff and target bombing - rather than the niceties of flying an F15. For instance, you don't have to take off and land the plane, as each mission starts and ends with you in the air.

## MULTIPLE MISSIONS

Seven mission scenarios (of increasing difficulty) are provided, covering Europe, the Middle East, and South East Asia. Basically, you have to locate and bomb specified targets and return safely to base. Unfortunately, the enemy has

and 3AB6. You can have up to 4 people in your squadron, each taking a turn to fly the missions. Points are awarded for hitting primary and other optional targets, and for enemy aircraft destroyed, giving the simulation a nice-competitive element. It's also possible (and easier!) to have two-player cooperative missions, where one person acts as the pilot dealing purely with the flight problems. The other acts as the weapons officer, responsible for selecting the right weapons at the right time, which isn't as easy as it sounds.

When a mission starts you're presented with the main screen of the simulation, showing the view from the F15 pilot's seat. The top half of the screen is the view through the windscreen, with the horizon cutting across the middle. As you'd expect, the horizon rises, falls and tilts convincingly to any angle, in response to the F15's controls. The ground (and sea) is overlaid with a perspective grid pattern, which scrolls down to give the impression of movement - it's not realistic, but infinitely better than nothing at all. The only other ground features take the form of blue triangles representing primary and optional targets.

The F15 is fitted with a 'Head Up Display' (HUD), which projects important flight information such as altitude, airspeed, and navigation cues onto the windscreen. It also shows the gun, missile and bomb aiming sights, and enemy aircraft and missile tracking boxes. These boxes move across the windscreen, showing you where to look to visually locate incoming threats.

The bottom half of the screen contains several major systems. The map display shows the mission map mentioned earlier. You can set a camera at any position on this, and the F15's navigation system will project course cues onto the HUD so you can fly directly to the preplanned position.

The radar screen can be set at three ranges, and displays all targets (and missiles) in the air and on the ground. Above it, warning indicators give you early warning of incoming threats.

Finally, the weapons status display shows you at a glance

how many bombs, short and medium range missiles, and decoy flares you've got left, and status of fast drop tanks. There's a lot more on the screen too, but some of it includes 'conventional' aircraft instrumentation, which may upset some purists.

## HEAVY WORKLOAD FOR PILOT

Once a mission gets under way, you have a really heavy workload, even with all the electronic systems to help you. Your basic task sounds simple: find the target, bomb it, and get home. Unfortunately, there are so many other things requiring your attention that it's not that easy. The worst distraction comes in the form of enemy aircraft. As the higher difficulty levels they can give you a really hard time. You have to use your skill and the F15's aerobatic ability to the full to outclass them, especially if you want to ditch them the macho way using the F15's canopy! You can easily burn up the whole mission's fuel trying to out-glide one clever adversary. In fact, missions tend to have scintillating endings, as you struggle to glide your damaged aircraft back to a friendly base because you were overly optimistic about fuel usage.

The sound effects add considerably to the realism - the whine of the jet engines, the roar of the afterburners, the whosh of your missiles, the ping of the warning systems. Yes, it's all here. There's even a few bars of music thrown in at the end of a mission to release the tension.

The only real criticism I have concerns the graphics showing what's happening outside. The ground grid movement is rather jerky, and horizon movement could be smoother. Also, the enemy aircraft are very simple outlines and again move jerkily. Even so, they seem to manoeuvre realistically. When hit by your missiles or shells, the resultant explosion doesn't look very convincing either - just a few straight lines radiating from the impact point.

All this can be forgiven, though, because as a simulation the program is totally absorbing, and as a game it's got that magic quality which forces you to have "just one more go"! If you like simulations full of challenge, with large helpings of tension and excitement, F15 Strike Eagle is the program for you.



couldn't honestly tell me one as none of their stock copies worked properly. Instead, they kindly agreed to lend me one to try for myself. They were dead right - the main area on the disk (showing San Francisco dry and Golden Gate Bridge) just wouldn't load, although the rest of the area was OK.

A letter to Sublogic in the USA produced almost instant action. They phoned me at home expressing concern that there were faulty versions of the disk around, as the problem was spotted and corrected in September last year! Just a few days later I received TWO disks from them by air freight, both of which are reviewed here.

## STAR SCENERY

Let's begin with the San Francisco area. Sublogic call this a "STAR" disk, meaning it covers a relatively small area, but with a higher than usual level of detail. The package contains a single sided disk in a plastic wallet, a map showing all airfields and radio navigation aids in the area, a set of airfield plans showing airfield layout and sundry other data, and finally the operating instructions. Most of the paperwork consists of looseleaf pages and these, together with the disk wallet, are all pre-punched to fit into a smart ring binder available separately

# NOW FLY THE WORLD

At last. They're here. Sublogic's long awaited **Flight Simulator II Economy Disk** for the 8-bit machines, that is to be, 7 of a planned set of 12 covering the whole of the USA has been released, with the remainder due out later this year. There are also a few 'specials' planned. Two of these are already out, covering the San Francisco Bay area and, surprisingly, the Tokyo to Osaka area of Japan. Cost? Around £20 each in the UK. (Ouch! That's expensive!)

I'd almost given up hope of finding the disks in the UK and a call to Strategic Plus Software, of Hampton, Middlesex, established that the San Francisco disk had arrived, but then the bombshell struck! They said they

from Sublogic. Other disks in the series are similarly presented, so you can store everything neatly together.

The area covered measures about 15 miles by 50 miles, from Sausalito in the north to beyond San Jose in the south, taking in the whole of the San Francisco Bay area. Eastern limit is at Tracy, about 50 miles inland from the Californian coast. Within this area there are 16 airfields, many interesting topographical features, plus radio navigation aids to help you find your way about.

A few years ago I worked in the San Jose area for a while, so I know the area covered by this disk quite well. Many of the features I remember do actually appear here. The main attraction, of course, is San Francisco itself. I was disappointed to see so few buildings represented, but then 3D manipulation of a whole cityful of buildings would probably require the power of an IBM 390/600 mainframe! The spectacular Transamerica Pyramid is included, plus about half a dozen lesser buildings. There's no detail shown of the port area, but the island of Alcatraz is there, complete with its infamous prison building.

The use of the disk (see page introduced) is undoubtedly the Golden Gate Bridge, although I wish Sublogic could have painted it the right colour! Both this and the nearby, 8 mile long, Bay Bridge are in full 3D representation, so you can fly over, around, through, or under them if you feel so inclined. In contrast, other bridges at the southern end of the bay are little more than single lines marking the bridge position.

Going further afield, there are other 3D features waiting to be discovered - like the three giant hangars at Moffett Field, a naval air station near Palo Alto, and the control tower at Livermore airfield, the first I've seen in this simulator. Many major roads and mountains are present and can actually be identified by name if you have a proper map of the area.

During my exploration I discovered an unexpected bonus. The area actually covered is much, much bigger than Sublogic's map shows. In fact, it includes the same area as that on the newly released ST version of Flight Simulator II, covering about 150 miles north to south by 200 miles east to west. All the airfields and radio aids seem to be the same too - that's a total of 47 airfields and countless radio beacons! The instructions say the extra area is included to give a smooth transition from this STAR disk into adjacent areas on other scenery disks. Apparently, you're not actually intended to use it!

## JOURNEY THROUGH JAPAN

The Japan disk is packaged similarly to the others, but has one fascinating extra. This is a sheet of 'approach plates'

showing the standard instrument approach procedures for seven of the major airfields. For instrument flying devotees this is really something! There are, however, no instructions on how to use these complex charts, so if you don't understand them already, they're not much use.

The disk covers a large area of some 350 miles by 110 miles of the Tokyo/Nagoya/Osaka region, giving you scope for really long flights. There are only 14 airfields here, but many of them have control towers and refuelling facilities. The area's vast array of radio beacons includes many NDB's for use with your aircraft's Automatic Direction Finding equipment, plus VOR/DME facilities if you need them. Also, eight of the major airport runways are equipped with Instrument Landing Systems for poor weather landings.

The Tokyo area has several interesting features, including Tokyo Tower, the palace grounds, shrines, and the Shinkansen 'bullet train' network. As expected, significant roads, mountains, lakes and other waterways are included too, however detail at Osaka is limited to one building - the crane.

The snow-capped Mt. Fuji is easily the most impressive feature on this disk. It takes quite a while to fly to its round top, and back to Tokyo. Sublogic's simulation doesn't extend to the vicious air turbulence said to surround the mountain, so you can approach it without fear. If you like mountain flying there are plenty of others to choose from, and all in a realistic 3D representation, too.

## ARE THEY WORTH IT?

Overall, both disks give me a lot of pleasure. Personally, I prefer the San Francisco disk, as I know the area and enjoy 'revisiting' it by air. The Japan disk I like for its radio aids and detailed approach charts, which let you fly real live approach procedures. I wish Sublogic provided those with other scenery areas.

Apart from the cost, I have only two real criticisms. The first concerns the slow screen update with certain scenery, which makes control of the aircraft more difficult than usual. The other relates to a strange problem with mountains, where you can sometimes see things 'through' them. These niggles aside, I think Sublogic should be congratulated in releasing these disks. They're not cheap, but considering the extra scope and enjoyment they add to Flight Simulator II, I view them as a good buy and I look forward to getting my hands on more of the series.

Finally, special thanks to Strategic Plan and to Sublogic themselves for their help in producing this review. I get the feeling they really CARE about their customers, as well as the products they sell us. \*

## PROGRAMS REVIEWED

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# PAWNI THE

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If you have any interest at all in adventures then you will almost certainly have heard of *The Pawn* already (unless you have been stuck down a really noisy telephone for the last year). The ST version of it was released last year amidst a great flurry of advertising praising its wonderful graphics and 'revolutionary non-handling system which allows input of complicated sentences and complete interaction with characters'. It is now available for the XL/XE but the bad news is that the graphics aren't as good on the 600 XL as on the ST, and that its understanding of English isn't quite as good as they would like us to think (I read some 'complete interaction' with the Princess and it didn't understand at all, still I suppose it IS intended to be a family game!).

by John Sweeney

The inferiority of the graphics is, to be fair, the hardware's fault and in fact the graphics are very good for an 800 XL - if you stand back from the pictures they are really quite impressive. There is also an excellent facility for scrolling the pictures smoothly up the screen with the SELECT key, so that you can see as much of the screen as you want for text. And there is plenty of text.

The descriptions of locations, artifacts and people, the results of your actions, and the responses to your attempts to converse with the many inhabitants of the game, all give you plenty of interesting and often amusing text. This text within the game is further supplemented by the fifty page booklet which comes with the game and details the background to it. 'A Tale of Karamon' introduces you to many of the characters in the adventure, including the King and his daughter, Kramon the Wizard and his pet dragon, Harry (who is supposed to be afraid of people - but didn't seem so when I met him!), and Gringo Broombringer, a dwarf who hopes to overthrow the King by demonic means!

## 'The plot unfolds slowly and deviously'

You start the game on The Park. Initially you have no idea of what your objective is, but if you wander around the immediately accessible area you will soon discover plenty to do. Getting rid of the annoying Silver Wizardband which has appeared on your arm, finding a way to persuade the guards to let you into the palace, and working out how to get Hroton (John) to part with some of his goods, are just a few of the goals you will soon set for yourself. And various characters will probably have jobs for you as well, assuming you can persuade Kramon to stop flying away on his stone platform long enough to have a chat, or the Gnomes to stop laughing so that you can get a wood in edgewise!

The plot unfolds slowly and deviously. New characters appear, and you slowly find ways of reaching new and intriguing places. There are plenty of interesting problems to solve and most of them are pretty logical. The game gets especially messy when you discover that there are multiple ways of solving some

of the problems, and also multiple uses for certain single-use artifacts!

Choosing the right route to take through all this is not as all easy. You are aided here by two things. Firstly you should keep your eye on your score. It appears random as to whether it updates on the move when you deserve it or on the next move. If you think you just did something clever but got no score for it, then perform some simple command (I use L) to check the real score. Secondly you can Save and Restore quite efficiently. Note that even though the documentation states that the Save Files are not in DOS format, the disks are most have been formatted by DOS, and to enhance clarity, sorry - did I forget to mention that you must have a 1050 diskette drive to play this game?

Once I had finally sorted out all the devices and bearings and subplots, and achieved the prime objective which I had set myself, and even encountered a character who told me he was going to celebrate my finishing the game, I thought perhaps I had finished, but I had nowhere near the full score. I did a few more things I knew about which got me more points, however I was now completely stuck. I read all the cypharic hints in the back of the book, but I still couldn't get the last few points. I have since found out how to get the full score (yes - it is possible), but the game still doesn't end in any obvious way. I enjoy the feeling you get when you get the final message from a game and know that you have well and truly succeeded and definitely completed it. I still haven't found one in *The Pawn* - if YOU do please let me know!

Apart from that minor disappointment and a couple of little bugs (e.g. always GET anything before you UNTIE it or it may disappear forever), my only real criticism is that it doesn't really understand as much as one might expect from the advertising. During a conversation it will attempt to respond meaningfully to any old garbage so you can't tell whether it understands or not. It is a little incoherent in demanding additional information - e.g. if you say UNLOCK THE DOOR it asks WITH WHAT? and responds similarly for giving, buying and numerous other activities, but there are some sentences which appear quite correct and reasonable, and which are critical to finishing the game, to which it instead responds with phrases such as 'YOU CAN'T DO THAT TO THE...' or 'I DON'T FOLLOW YOU!' when it should, to be consistent and fair, respond with 'TO WHAT?' or 'WITH WHAT?' or 'ON WHAT?', or at the very least give a sensible response which might encourage you to try and experiment.

further in that direction. I occasionally found that the responses to certain requests were actually incorrect, either grammatically or just plain wrong - I think these are mainly attributable to its attempts to respond to sentences even when it doesn't really understand either all the words in the sentence or the grammatical construction you have used. It wastes full stops which you don't want (e.g. GO NORTHWEST WITH THE WHEELBARROW gets turned into two commands).

## 'The Pawn's ability to understand . . . is truly amazing'

The real result of all this is that the poor adventures can occasionally have solved a problem but not be able to get the computer to understand what he wants to do - the game degenerates into typing to guess how the computer wants the request phrased. In general, however, The Pawn's ability to understand and respond correctly to some extremely complicated sentences is truly amazing and a demonstration of the game by someone who knows its capabilities could, I am sure, be a very impressive demonstration of Artificial Intelligence. Unfortunately the qualities which enable good demonstrations are not necessarily those required for good playing! Please don't misunderstand - the game really is excellent - just be aware that if you are stuck it may be the game's fault and not yours!

Other excellent features of the game include: the ability to help yourself; the ability to recall the last command, change it or correct an error in it, and reexecute it; excellent responses for a game of this sophistication; impeccable packaging, including a twelve page booklet on how to interact with the game, easy five spacious locations and lots of fun - do examine the rats in the basement!

For a company's first release to be so good shows great potential. If Mignotic Scrolls can keep up this level of quality then we should all look forward to their next adventure - The Guild of Thieves - with great relief. I thoroughly enjoyed The Pawn, despite a few minor frustrations, and have no hesitation in recommending it as excellent value for money.

P.S. Loved the mouse!

# Zork I - magic words, alternative solutions, short cuts, and jokes

Because of its origins, ZORK seems to have evolved rather than have been designed. Some of the original problems in the mainframe version have been given different solutions on the micro, in some cases the original solution has been left in the code on the micro, in other cases it has been removed.

Where these multiple solutions occur, they usually one is a single 'magic' word which is sometimes clever and you have to be lucky to guess it, while the other is usually a longer, more complex, solution involving a number of actions of a more logical nature. The 'magic' word solutions generally appear to be older, part of the original game while the longer solutions have in some cases been added on the micro, presumably to enable a more logical solution without the programmer having to make a lucky guess.

Some of the magic words are of course lists:

**PLUGH** - In the Original Mainframe Adventure (MAY 200808), if you stand at T1 and walk, then a helpful voice becomes PLUGH - which seems not to be a magic word for transporting you back to the building. In ZORK, if you type in PLUGH then it responds "A hollow voice becomes GREETIN."

**GRANTH** - There are, I think, three grants with in ZORK. I have not found any use for them. They are very clearly marked on DINGDONG's map map of ZORK. Are they entrances to the Thief's secret passages? Does anyone know their purpose? On the mainframe if you type in GRANTH it responds "I think you are taking this thing for granted."

Don't read any further unless you have either solved ZORK I or don't intend to try!

**BOBO** - On all versions I have seen this changes the Local Keys so that you can pick up the bar. The filler solution, which does NOT work on the mainframe, is to open the door, wait for the elevator to empty, close the door, and step down and pick up the bar while the elevator is stilling - the timer in front the door going over the top of the door.

**EXAMINE** - On the mainframe you just get the Bell, Book, and Candle, go to the Basement or Hades, and type in EXAMINE. Not so easy on the micro! - EXAMINE SPIRITS responds with "You must perform the ceremony". The hint is a case where they had a simple solution on the mainframe and removed it. Also you must go through the whole sequence of BURN BELL, SET CANDLES, LIGHT MATCHES LIGHT, CANDLES WITH MATCH, READ PRAYER.

**OPENING LUTHER** - The full solution to getting past the cyclops involves feeding him hot peppers, then giving him a drugged drink of water to put him to sleep. The magic word saves him so that he smashes a vase from the Cyclops Room to the Living Room for you. This not only saves time in getting out of him, but also does away with the need for the key, the game, and the other half of the door! (Doing this also stops the thief from hearing the explosion.) On the mainframe you also get 10 points for entering the Secret Passage which the cyclops answers, presumably this is another reason for making the priest an acrobat about Luther (look at the first letter of each line of it) - so as to give you a clue as how to get those last two points!

**FRAT** - I didn't discover this until a year after I successfully completed ZORK I. It transports you and anything which you are carrying (such as the coffin, which otherwise appears impossible to remove from the Alice area) to the tower. The alternative is to pick up the coffin as early as possible in the game and drop it immediately. The thief will then take it and you can retrieve it later from his room as your liaison.

**GETTING DOWN** - On the mainframe, at the top of the falls, there is a wooden barrel. If you climb in you that the word GERONIMO echoes on the side of it. Typing GERONIMO makes the barrel, with you in it, go over the falls. No, you don't survive! It was quite fun though, when they left it out on the micro!

### Short cuts:

**BLUE MIRROR** - transport yourself from one side of the reservoir to the other. Rather than wading into getting into the boat with the supplies, then having to repair the boat with the gear, just PUT SCRIPTURE IN BOAT, then it doesn't protest it. On some betas, wade the supplies from the OTHER end of the reservoir.

Marked then going through all the rituals with the books, lowering it down the shaft with everything in it, try going into the Draining Room very early in the game - sometimes, on some versions, on some computers, it lets you walk in and out carrying it much as you like!

Do YOU know of any other short cuts or alternative solutions?

John Sweeney

# MAKING IT MOVE

Mark Hutchinson's regular column for beginners

In issue 27 I said that GRAPHICS 8 and GRAPHICS 9 were similar. Perhaps you would like some further explanation? Each mode has the same colour attributes, i.e. a border, a background and a point on the background that is the same colour as the background but which can have a different luminosity. Each can be addressed down to a single pixel though GRAPHICS 8 is addressed in a block of 8 by 8 to make up a character.

The interesting part is that, if you can address GRAPHICS 8 using a similar block, you can write to this mode as if it were GRAPHICS 8. I have included LISTING 1 as an example of how this can be done. Obviously, being in Basic, it is slower than the operating system but it can come in useful.

The screen pointer (88,89) starts at the top left hand side of the screen. If you POKE any number here it would show as a character in a text mode, or as a coloured point in graphics mode.

Location 57344 is the start of 1024 bytes that hold the character set. Each character is 8 horizontal lines of one byte each. So 1024/8 gives 128 characters. These can be toggled with the inverse key (using an OR operation) to give another 128 characters. For more information, I would recommend the purchase of a good memory map.

The basis of the example listing is to recognise the character required, look up the appropriate location, get the character data and then produce this data, one line at a time, as a block on the screen. When you RUN the program, you will see the character written quite slowly.

## GETTING A MOVE ON

This issue I would like to have a look at movement (ANIMATION to programmers). Movement, without using Player Mosaic Graphics, comes in two forms. One form, published in issue 29 by Allan Knapp and in the last FIRST STEPS column, is called page flipping. This is where you draw several pages, with slight variations in each, and flick through these very fast to simulate movement. The other method is redrawing which is what we will look at now.

Moving a figure on a screen has to be done in steps. First the figure must be drawn in one location, then drawn (perhaps slightly different) in another position. Normally this is done by drawing the figure in a certain colour on the screen, redrawing in the same position using the background colour (effectively hiding the figure), then moving to another position and redrawing using the first colour. LISTING 2 is a good example of this technique. A variation of this theme is to use the colours of the points to create movement. You may wish to review the last column for details of COLOR and SETCOLOR.

## COLOUR CYCLING

Now let's look at how LISTING 3 works. A row of characters is set up, each one using a different colour register. The colours are then shifted from one register to another in a cycle thus making the figure appear to change places. Your homework is to try this out in GRAPHICS 3, making a straight line (remember the robot eyes in Bartstar's Galactic, the car in Knight Rider).

Remember I mentioned memory locations 88 and 89 at the start of this article? One of the reasons is that you can place points directly on the screen using POKE instead of the slower PRINT or PLOT. A few years ago I was given a demonstration of this technique, a program called 'RUBIN' written (in Basic) by some other than Les Kilmington - it was FAST.

## USING PRINT

PRINT can, however, still be used to animate the screen with reasonable speed. It is, after all, a form of redrawing. It can be slow and jerky but can have uses in graphic modes. Text modes 1 and 2 use upper case characters only, but they use the same SETCOLOR statements as the four COLOR statements. So if we were to print, say, ABCDEF1234, the four registers would be used for ABCD and then repeated for EFGH. Remember last time that I said GRAPHICS 7 uses only four COLOR statements? Well we can in fact print characters to a graphics screen, only they will show as colour points only rather than letters. One of the reasons for using PRINT in a graphics mode is partly for speed. The character contains the colour register and the point does not need to be PLOT every time. Another good point is that the drawing can be stored as a string and ATARI is renowned for its speed in string handling.

LISTING 4 will demonstrate the speed of using a string instead of trying to PLOT points. I have also used the DRAWTO statement to show that drawing lines is just as fast this way as using a string but I wanted to point out the convenience of a using string - a method which I am sure many of you were not aware of.

LISTING 5 is a complex diagram stored as a string. Try this out using PLOT and DRAWTO and see if it is just as fast. Experiment with character strings and different COLOR and SETCOLOR values and you should be able to build up some good graphics of your own.

I hope that this article will stimulate you enough to try out some of your own exercises, you will only become proficient by practice!



# STEPS.... FIRST STEPS

```
VI 1 REM FIRST STEPS - PAGE 4 ISSUE 28
W1 1 REM
W2 1 REM ***** LISTING 1 *****
W3 4 REM
W4 1 REM *** Set up screen and initial
      N, Y position.
W5 10 REM TEXTING:COLOR,TYPE,COLOR LINES
      TO/TX IN GRAPHIC SCREEN GRAPHIC 0
W6 10 REM *** Set screen pointer and PEEK
      initial position.
W7 10 REM ***** SCREEN POINTERS - SCREEN POINT
      TO/TX LENGTHENED THIS END
W8 10 REM *** Change character to STANICE
      value, keep it within set.
W9 10 REM FOR PLOT TO LENGTHEN (SUBTRACTIVE
      TO/TX) IF WILEY THEN REM-LIN
W10 10 REM *** Upper case & graphics only.
W11 40 10 REM *** add size new characters 0
      0
W12 10 10 REM *** Insert new texts.
W13 10 REM TEXTING, POSITIONING POINT ON
W14 10 REM FOR FOR TO LENGTHEN (SUBTRACTIVE
      TO/TX) LENGTHENED THIS END TO Y
W15 10 REM *** PEEK is into screen memory.
W16 10 REM FOR FOR, PEEK (SCREEN POINT WITH
      INCREMENT 1)
W17 10 T "PINK BIRD"
```

Listing 1

```
VI 1 REM FIRST STEPS - PAGE 4 ISSUE 28
W1 1 REM
W2 1 REM ***** LISTING 2 *****
W3 4 REM
W4 1 REM *** Set up mode and print.
W5 10 REM GRAPHIC SCREEN PLOT, SET "*****
      BIRD BIRD 0 00 BIRD 0"IT "See lin
      00 0140"
W6 10 REM *** PLOT POINT with, use colour,
      add some sound.
W7 10 REM FOR FOR TO STICKLER LIPLOT N, LIPLOT
      WILD TO 0 STEP -1, SOUND 0, 000, 10, 0000
      0 Y
W8 10 REM *** Screen point with sound
      colour, stop sound.
W9 10 REM FOR FOR TO INCREMENT LIPLOT N, LIPLOT N
      , SOUND SOUND 0, 0, 0
W10 10 REM *** That's all.
W11 40 T "***** BIRD"
```

Listing 2

```
VI 1 REM FIRST STEPS - PAGE 4 ISSUE 28
W1 1 REM
W2 1 REM ***** LISTING 3 *****
W3 4 REM
W4 1 REM *** Set up mode & print string.
W5 10 REM GRAPHIC SCREEN FOR TO STICKER PLOT
      , SOUND PLOT FOR FOR TO 10 STEP 1000
      ITION N, 0, 0, "***** BIRD"
W6 10 REM *** Turn a register colour.
W7 10 REM FOR FOR TO LENGTHENED THIS END
W8 10 REM *** Upper register colours.
W9 10 REM FOR FOR, PEEK (SCREEN POINT WITH
      INCREMENT 1), PEEK (SCREEN POINT WITH
      INCREMENT 1) TO SOUND SOUND 0
```

Listing 3

```
VI 1 REM FIRST STEPS - PAGE 4 ISSUE 28
W1 1 REM
W2 1 REM ***** LISTING 4 *****
W3 4 REM
W4 1 REM *** Set up screen and use PLOT
      only
W5 10 REM GRAPHIC SCREEN PLOT, SOUND PLOT FOR
      , SOUND PLOT FOR FOR TO STICKLER
      LIPLOT N, Y, SOUND PLOT INCREMENT 0
W6 10 REM FOR FOR, SOUND "***** BIRD BIRD 00
      *****"
W7 10 10 REM FOR FOR, SOUND SOUND 00
W8 10 REM *** Set up screen & use PLOT
      and SOUND.
W9 10 REM GRAPHIC SCREEN PLOT, SOUND PLOT FOR
      , SOUND PLOT FOR FOR TO STICKLER
      LIPLOT N, Y, SOUND PLOT INCREMENT 0
W10 10 REM FOR FOR, SOUND "***** BIRD BIRD 00
      *****"
W11 10 10 REM FOR FOR, SOUND SOUND 00
W12 10 REM *** Set up screen & use string.
W13 10 REM GRAPHIC SCREEN PLOT, SOUND PLOT FOR
      , SOUND PLOT FOR FOR TO STICKLER
      LIPLOT N, Y, SOUND PLOT INCREMENT 0
W14 10 REM FOR FOR, SOUND "***** BIRD BIRD 00
      *****"
W15 10 10 REM FOR FOR, SOUND SOUND 00
```

Listing 4

```
VI 1 REM FIRST STEPS - PAGE 4 ISSUE 28
W1 1 REM
W2 1 REM ***** LISTING 5 *****
W3 4 REM
W4 1 REM *** Dimension string, data for
      plot half of string.
W5 10 REM FOR FOR SOUND (PLOT, SOUND "*****
      *****"
W6 10 REM *** Dimension second half of
      of string, graphics mode.
      SOUND 0, 0, 00 00
W7 10 REM FOR FOR, SOUND "***** BIRD BIRD BIRD
      *****"
W8 10 REM *** Print string as a matrix of
      10 rows 000 & sound volume
W9 10 REM FOR FOR TO INCREMENT LIPLOT N, LIPLOT N,
      SOUND 0, SOUND 0
```

Listing 5

# XWORD

by Jim Flewker

## CROSSWORD MAKER

**XWORD** is designed to print out crossword puzzles of various sizes. It will not do the thinking for you, but it will print blank grids, puzzles, solutions, and (using a separate program) clues. The program has been designed to work with Epson-compatible printers, although it should be easy to adapt it to other 80-column and 80-column printers.

**XWORD** will create a grid up to 17 spaces wide by 17 deep, square or oblong in shape. An odd number of spaces must be used. Words and black squares may then be inserted on screens, and two kinds of symmetry can be used automatically when placing black squares. The grid may be printed at any stage, as a puzzle or as the solution, with answers. The separate program **NCUES** prints clues in two columns for those not wishing to use a word processor. A joystick is required to move the cursor around in the grid.

The Clue Numbering is slightly different from normal crosswords. Instead of printing large boxes containing a number for each word, I opted for smaller boxes and a co-ordinate system - letters along the top and numbers down the side. This enables the start of any word to be located by a code such as **a1, g9**, etc.

### HOW TO USE THE PROGRAM

When run the program will ask you to decide the size and shape of your puzzle and its symmetry if any. The screen will blank briefly and the grid will appear a few seconds later. It is probably a good idea to print out the empty grid and use it to design your puzzle on paper. After that you could fill in black squares or place words in any order you wish.

The top screen line shows the main menu choices from which you choose. If you want to add either words or blacks, you will see that the option number is already printed for you - just press return. For another choice, type the number and press return.

### OPTIONS

**A44** - Select this to fill the grid and use the joystick to move the flashing cursor around the grid. It cannot go outside of it. On selecting **A44** you see various sub-options and keys displayed:

- **ESCAPE** will return you to the main menu (as will some screens).
- **OPTION** alters (or turns off) the symmetry for black squares.
- **SHIFTE** toggles direction of word placement.
- **START** allows you to enter a word, which will begin at the current cursor position. Confirm that start and direction are right by pressing **RETURN** entering anything else returns you to the menu. The program will first check that the word fits in the grid and if so, will place it for you. Note that no

### Requires Epson compatible printer

other checks are made, so you can place words across blacks and missing letters.

- **JUSTICE TRIGGER** fills a black square (or several, depending on symmetry). On screens, black spaces are shown as dots. You can't erase a dot but you CAN place a word over it.

**Symmetry** - You may prefer to do without this altogether, or you can choose between two types:-

**DIAGONAL** symmetry which creates a puzzle like those often seen in newspapers, with each corner mirroring the one diagonally opposite. You can work on the top half of the grid and your pattern will be mirrored below.

**FOUR-SQUARE** symmetry in which each quarter of the total grid mirrors the others. You need only block in the top left-hand quarter of the grid. Indeed you will find that the cursor will always return to that area when you fill blacks using this symmetry.

**Print** - You can print at any stage, with or without answers. You are then returned to the main menu.

**Clue** - Because this is a separate program, you are asked if you have finished printing your crossword (and solution) before proceeding. (No means of viewing the puzzle on disk has been provided - you could add one!)

**Restart** - Again you are asked to confirm your choice before the current creation is lost for ever.

### PROGRAM NOTES

The screen grid: in order to provide a good-sized puzzle grid on screen without scrolling, the right amount of blank horizontal lines are created by setting up a new display list in page 6. The lines are simply two blank scan lines between normal scan lines. The vertical lines are **CHAR(128)**. Storage of puzzle data (characters are merely printed on screen and, for hard copy, pushed directly from screen memory. Some conversion is needed from internal codes to ASCII and Epson equivalents before those are sent to the printer. Printer routines On previous the above data is interpreted with strings which contain the values of Epson graphics characters. These strings are built to the right size by the sub-routine in lines 100-120, from the elements given in lines 940-980. You can alter these to suit your printer. More details of printer commands are given in **EPSONS** note-book.

```

01 1 0000 *****
02 2 0000 *****
03 3 0000 *****
04 4 0000 *****
05 5 0000 *****
06 6 0000 *****
07 7 0000 *****
08 8 0000 *****
09 9 0000 *****
10 10 0000 *****
11 11 0000 *****
12 12 0000 *****
13 13 0000 *****
14 14 0000 *****
15 15 0000 *****
16 16 0000 *****
17 17 0000 *****
18 18 0000 *****
19 19 0000 *****
20 20 0000 *****
21 21 0000 *****
22 22 0000 *****
23 23 0000 *****
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25 25 0000 *****
26 26 0000 *****
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38 38 0000 *****
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90 90 0000 *****
91 91 0000 *****
92 92 0000 *****
93 93 0000 *****
94 94 0000 *****
95 95 0000 *****
96 96 0000 *****
97 97 0000 *****
98 98 0000 *****
99 99 0000 *****
100 100 0000 *****

```



# SOFTWARE REVIEWS

Jim Short and  
Paul Blazeby

## TOMAHAWK



Digital  
Integration  
XL/XE only  
64k disk  
£14.95  
64k cassette  
£9.95  
1 Player  
Joystick

New trends fade almost as fast as they are introduced, but flight simulators seem to be as popular as ever. This one from Digital Integration is, in effect, an Atari follow-up to their previous smash hit, *Fighter Pilot*. This time you'll be based around a helicopter rather than a jet fighter, the chopper in question being the U.S. Army AH-64A Apache.

**TOMAHAWK** appears to be an enhanced version of its predecessor. The graphic display is virtually identical and the screen view and accompanying instrument panel will be familiar to all *Fighter Pilot* fans. There are various improvements here and there, of course - and so mildly "Landsat" to control with either!

All the usual flight options have been retained, but **TOMAHAWK** is a much more complicated beast than its *Fighter Pilot* counterpart and more keyboard controls are required to operate it. This shouldn't cause any headaches for flight addicts though.

The in-flight graphics have been spruced up no-end and the game boasts over 700 ground features which are mainly in 3-D, and the geometrical shapes have a certain feeling of depth to them rather than the usual vague outlines often found in this type of game. D.L.'s 3-D 'real world' display includes landing pads, buildings, trees, transmission poles, mountains, enemy tanks, field guns and helicopters, so there's plenty to get excited about.

**TOMAHAWK** is a genuine luxury product with all the trimmings. If you're into flight simulators, don't miss it! ■



## PHANTOM



Tynesoft  
48k disk  
£9.95  
48k cassette  
£7.95  
1 Player  
Joystick

Tynesoft have taken a lot of trick from me for the awful Jason Willy but they've made amends with **PHANTOM**, a brilliant arcade adventure which should help restore their credibility.

The scene is set as follows: These dark ghosts have been creating havoc again. As Professor of Aero-Physics with more than a passing interest in Psychic Phenomena you are well prepared for the situation. Equipped with your experimental nuclear accelerator you must destroy all the ghosts, monsters and other evil apparitions that live in the four buildings you have been asked to visit.

Gameplay is based around a variety of maze type screens viewed from above. There are several rooms per building and progressing through the rooms is accomplished by collecting a series of keys which allow you access to subsequent rooms. Your eventual aim is

to reach the Transport Room on the bottom floor of each building. You gain bonus points for clearing a room of its gloomy inhabitants, but beware of your weapon - will drain your reactor, and hence power packs are free and for forewarned. A close encounter with an apparition will accelerate your ECG rate. If it reaches 100 BPM it's curtains for you, so a degree of caution is advisable. A superb control panel situated below the maze lets you keep track of all these important matters.

Graphics, colour and animation are beyond criticism and the background music, which changes repeatedly during gameplay, is quality stuff. Maybe **PHANTOM** isn't quite as complex as other games in this format, but it's the easier to get to grips with than most of them and should therefore have a much wider appeal. Top marks for this one Tynesoft. It's a winner all the way! ■



More →

## ASTRO-DROID



**Red Rat**  
**48k Disk**  
**£9.95**  
**48k Cassette**  
**£7.95**  
**1 Player**  
**Joystick**

This one was written by the author of Screaming Wings and it shows as ASTRO-DROID is basically a futuristic version of Paul Curran's previous effort for Red Rat. Indeed, it might well have been called SCREAMING WINGS 2000!

The game scenario speaks of Rebel Fighters and Neutron-powered Star Craft and suchlike, but you can forget the blab as this is more or less another Lividham clone. Quite obviously it's Red Rat's bid to cash in on the success of Warhawk and this should be enough to

tell you that ASTRO-DROID is a vertical scrolling space-crapper.

The flight over the Rebelian mega-craft is identical to the flight over the asteroid station in Warhawk, but the alien space-fighters are faster, closer and altogether more deadly. Diverging 'C' targets will transform your Astro-Droid into an invincible attack-ship and, believe me, this is the only way you'll negotiate your way through some of the alien swash formations. Not even Luke Skywalker could weave his way safely through that lot!

Graphically ASTRO-DROID has the edge over Warhawk, but it's main drawback (for people like me) is that it's a bit of a slogfest. The instructions mention bonus sections in deep space but I've never found the pace sufficient to motivate any. Definitely one for all those poor suffering mega-players who can't find a difficult enough Atari game to sink their teeth into.

Apart from that, it has brilliant graphics, reasonable sound effects, original music, and challenging gameplay. Red Rat have done it again. Who needs English Software anyway?!



## WHO DARES WINS II



A GUN LAW clone from Tynesoft which follows the Commando theme popularised by many recent computer games.

Armed with an automatic rifle and 12 grenades you must embark on a desperate mission to rescue prisoners held captive in enemy garrisons. Each subsequent mission becomes a survival quest as you tackle the endless hordes of defiling troops and snail snipers.

Extra points are awarded for destroying enemy trains, jeeps, buses, staff cars and tanks, with a bonus life arriving at 10,000 points. You also gain an additional 12 grenades for each approval output.

The title screen is well designed and the background music - 'The Great Escape' - quite appropriate, but the game is let down in other departments. The use of colour, for instance, is nothing short of abhorrent. What you get are green trees and then everything else in shades of yucky brown. It's like an

**Tynesoft**  
**XL/XE only**  
**Disk £9.95**  
**Cassette £7.95**  
**1 Player**  
**Joystick**

explosion in a sewage factory!

Not a bad game by any standards..... play about those colours though!

## RIVER RALLY

**Red Rat**  
**48k cassette only £1.99**  
**1/2 Players Joystick**

A budget release from Red Rat which is primarily a 2-player race game. A winding river forms the backdrop, twisting and turning in every direction, and the players must compete for random treasure which must then be safely deposited in their respective banks. Staying on course is the main problem, especially when you give the boat a touch of throttle. It's like hitting the turbo-boost on a Knight Rider 'Kia' or

## GAUIT VERS DANDY DJ

Paul Blazeby finds the



and the boat responds instantly by careering headlong out of control. Fortunately, traps can be used to negotiate the river banks. A handy item there!

Various dirty tricks can be used to hinder your opponent, such as luring them to traps to crash into or stealing their money by colliding with their boat - anything goes really.

The game features a split screen view and the graphics are reasonably well done apart from the boats themselves, which are primitive PMG's without any elaborate shape or form.

Nothing earth-shattering about this one, but it's worth it's place in the budget market.



# GAUNTLET VERSUS DUNGEONS

the original Gauntlet

Gauntlet versus Dandy Dungeons? Who, has ever heard of or seen Dandy Dungeons?

For the benefit of the uninitiated amongst you let me give you a bit of background information. As most readers probably know Gauntlet has been the smash hit of the arcade for the last year or so - the ultimate two player game! Dandy Dungeons is very similar, in fact the gameplay is almost exactly the same. HA! So it's just a rip-off of that old favourite Gauntlet, eh? Well, no. To be more precise Gauntlet is just a rip-off of that old favourite Dandy Dungeons!

Many years ago APX (Atari Program Exchange), then a division of Atari Inc., released a game by John Patrick, who also wrote Deep Blue II. This game was Dandy Dungeons. The title of the game was simply serving as long as possible, collecting, shooting, and

using various items while avoiding numerous foes. Many years later Atari Color-Op converted this almost forgotten game into the classic arcade machine Gauntlet. The rest, as they say, is history.

## GAUNTLET

Many moons ago U. S. Gold announced the 'imitation' release of the arcade classic Gauntlet on various home computers. Gauntlet fans rejoiced everywhere. In somewhat 'simulacrum style' the release of the game was delayed although a few, bug-ridden, versions did reach the shops. (U.S. Gold denied this but then withdrew the game to make some 'minor alterations'). Eventually the game was re-released and at last Gauntlet games everywhere could sample the real thing at home! I wanted no time in getting the game, this was one game where I felt money was no object!

I booted up my disk and waited, and waited, and waited! The game takes simply time to load as whenever did the protection on this really want to touch my disk drive sluggish, grinded, and grunted for what seemed an age with only a simple message on screen informing me that Gauntlet was loading. Eventually I was greeted with a good title page and some fine title music. I chose the wizard and the disk chattered once more. Finally a message appeared telling me to flip my disk. After completing this task I was finally greeted with the dungeons and my wizard. There I was! Me, the wizard, in my very own dungeons! Youself! It was wild. The wizard was indeliberately stinky and yucky whilst the dungeon was almost totally lacking in any interesting detail at all. There was nothing but the sound on the screen so, inevitably, I abandoned. Animation of the wizard was reasonably good and I decided that maybe Gauntlet wasn't as bad as my first impressions had led me to believe. Soon I met my first load of ghosts. I ran and shot at them as they lurked after me (yes, JERKED!). Regrettably the game grew worse as it went on.

You start with so much energy that you can last for so long that the game gets boring. The graphics are only average, colours are a bit off, the ghosts and other monsters jerk around the screen in 'spectrum' fashion, whilst the player begins to wonder what the point of it all is. Most importantly the gameplay is poor. The collision registers seems a bit dodgy and movement is sluggish. Even on a two player game things get no better. Sound effects are almost non-existent. At least the title music is quite good.

I am afraid in my opinion the 8-bit Atari version of Gauntlet is a non-starter. By the way, if you insert the disk on the wrong side you are greeted with a message telling you to flip the disk and press the 'START' key. This is accompanied by a spinning animated disk which is clearly the best animation in the whole game!

## DANDY DUNGEONS

So this is the game that Gauntlet was based on? When I first saw it I never gave it a fair chance. After booting up I took one look at the graphics and movement, decided that it was no good and never tried it again. Sometimes later after I had heard that it was the game that Gauntlet was based on I re-booted it with renewed vigour. This time I gave the game a fair run. The graphics are stinky but colourful. The animation is poor. The sound is almost non-existent. There are no different characters, only players 1 to 4 (yes 4) which are simply static shapes of a man with a large number (1-4) on. They look everywhere. Believe it or not I was hooked!

What sets Dandy Dungeons apart is the gameplay. It is almost identical to Gauntlet in the arduous which shows how closely Gauntlet was based on Dandy Dungeons. The game is simplicity in the extreme, and it works superbly. On the multiple player modes Dandy Dungeons is almost unbeatable and there is also a very big bonus - a dungeons editor! This means that the user can create new dungeons when he/she has completed the ones provided and they are incredibly easy to make. You can have an infinite number in one game by disk swapping (36 is the maximum on one disk).

To me, there is simply no competition between Gauntlet and Dandy Dungeons. Despite all the advances in graphics and sound and the 'technique' of modern Atari games, Dandy Dungeons is so far ahead in playability it is unbelievable. Gauntlet costs for about £8.99 on cassette and £12.99 on disk. Dandy Dungeons may be hard, writing on impossible to find but if you are lucky you may be able to get it at a bargain price. There are a few places selling APX games for as little as £1.99 each!

I know I have been hard on Gauntlet but I had expected so much after playing the arcade games that I felt so disappointed by the Atari version. The arcade Gauntlet is still the best for me, although I have great hopes for the ST version however I have a feeling that I may never have those immortal words "The Wizard is going to die!" on my computer!







## THE RESOURCE FILE

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

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

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**Members:** 50 (8-bit; hardware  
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Do you want others to know about your group? Send details in about 21 words max. on Form 601 on a plain sheet of paper headed **RESOURCE FILE - USER GROUPS**.

This is all you get! We will not publish any other details as moving times and places tend to change. Appoint someone responsible to handle any enquiries received.

## IT'S UP TO YOU!

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

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