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May 1986

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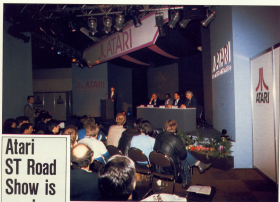
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## Atari ST Road Show is coming

There are currently more than 1,000 software developers writing programs for Atari ST machines, 400 of them US-based.

And to keep dealers up to date with this software explosion an Atari ST Road Show is touring the country during the spring.

Presentations at venues in Birmingham, Bristol, Manchester, Leeds and Edinburgh will demonstrate what the 520ST and 10MST can do for the small to medium sized business.

Leading software houses have been invited to talk about their products, from simple book-keeping programs to CAD/CAM packages, the VT100 terminal emulator and Protext software.

Dealers will hear a presentation about Atari itself, the marketplace in general, and how best to boost sales of the ST machines.

# A 15,000 CROWD BOOST FOR ATARI

THE first Atari Computer Show proved a spectacular success, attracting 15,000 more people than had been expected. In all close to 15,000 people converged on the three day event held at the Newcast, Hammersmith.

Now observers are claiming that this mass demonstration of popular support for the Atari range has effectively re-established the computer company as a market leader in the UK.

So impressed were the party of Atari VIPs who had flown over from California to attend the show that they immediately

announced their intention to hold similar events in both Germany and the United States.

This was not only the first Atari Computer Show in the UK, it was the first in the world. Atari's president Gary Traniello summed up the reaction in one word: Fantastic.

He told Atari Users: "We couldn't be more pleased. You people over here have really shown us a thing or two. The organization has been superb, the standard of exhibitors first class and as for the visitors, if those are Atari users here in the UK then we are certainly on the right track.

"I can only thank everyone on behalf of Atari. Naturally when you take over a job company as we did you are bound to be a bit concerned over what the future has in store, but after this show we realise our efforts have all been worthwhile".

The 10 exhibitors were equally enthusiastic about the success of the show. And no wonder considering that sales over the three days amounted to more than £1 million.

Standholder after standholder found themselves running short of stock by noon on the





**THE resurgence of Atari as a force in the computer industry has led to unexpected benefits for 8 bit enthusiasts.**

In a major about face the company is re-instating its approach to the 'low end' of its product line which has had to take a back seat to the ST machines since the great Atari revival began a year ago.

A new word processing package has been built around the 1300X to take on the Amstrad PCW6256 in the small business and serious hobbyist arena.

And there are plans to double the memory capacity of the sole surviving Atari 8 bit micro and launch a 128K version.

All this has come about in

## NEW BENEFITS FOR 8 BIT ENTHUSIASTS

response to demand from a section of the market that Atari bosses were convinced was declining.

The survival, and growing strength, of the 8 bit user base has surprised and delighted company executives.

They had relegated the low end micro to a secondary role in the re-evaluated marketing strategy designed around the ST generation of Atari computers.

Production of the 8008L was discontinued and remaining

stocks offloaded at bargain prices through Decca and Curry outlets over Christmas.

At the time Atari promised continued support for the 1300X as its sole ongoing machine in the 8 bit market.

Now the company has gone even further, encouraged by demand from consumers and support from third party suppliers.

The 1300X Super Word Processing Pack comprises a micro, 1080 disc drive, 1027 letter-quality printer, AsaPrinter Plus and three more pieces of software.

At £349 it undercuts the Amstrad PCW6256 by an impressive £100 and is sure to cause a stir among Alan Sugar's high fliers in Brentwood.

Atari vice-president Sig Hartmann explained the reason behind his firm's new emphasis on the 8 bit market during an interview with Atari User.

"We intend to revitalise this section of the market", he said.

"We have come to realise that there is definitely a need for machines to serve consumers at the so called low end of the market.

"I have to admit that we have been surprised by the continuing strength of the 8 bit market. It is healthier than ever, and we intend to get our share of the action.

"As well as bringing out the 1300X word processing pack we will be producing a 128K version of the XL and it should be on sale within the next few months".

## £1 million sales at Show

### From Page 7

first day despite thinking they had sufficient supplies for the full three days - 10 exhibitors actually sold out by 2pm, just four hours after the show had opened.

Typical of these was Computart whose stand was offering Atari 8 bit computers and peripherals, so you couldn't have found a happier man around than the company's managing director Steve Burke.

"It was just incredible - we ended up selling out completely

three times", he said. "The first time was half way through the first day when we had taken orders enough to last a normal week. But we still sold out and had to get more.

"By Saturday afternoon we were in the same situation again so once again we had to restock and by Sunday morning the lot had gone and we just couldn't get any more. It means tens of thousands of pounds worth of business for us.

"So we immediately restocked a stand for the next show not even knowing when it

is going to be".

The last word must go to a typical Atari user, Peter Dobson, 18, travelled down from Cardiff to attend the show.

"And that's a little bit further than West Ham", he pointed out. "But I'd have travelled from the Antarctic by dog sled to go to this show.

"It was great. Lots of new things and plenty of bargains. I got back what I'd paid out for my car fare in the savings on my first purchase alone.

"Nothing but nothing is going to keep me away from the next".

## WHAT THE EXHIBITORS SAID...

"It was a very good show. We felt the strength of it was the contacts made both in the UK and with overseas people. Our business software brought in orders and promises of more than £700,000 and most of it has already been shipped.

It was an ideal venue and business visitors told us they were impressed with the ease of travel from Heathrow to the Atari with its Underground link-up.

- **Habe Systems managing director Mike Dale**

"We really had a super three days. We launched Star Trek and sold out the games by the second day. We

just could not get enough to meet demand. It was one of the best shows we have been to and we are certainly going to the next one.

- **CGS Software sales manager Martyr Wilson**

"A super show, really like the old days. Our sales covered the cost of the stand in two days and we were pleased with the press.

- **Lamson's director Hazel Minter**

"The show was excellent. Congratulations to Clive Dea. We can't wait for them to organise another. It was

100 per cent above what we expected, the sales were just thousands of pounds when we were only expecting hundreds.

- **Software Express managing director Jerry Howells**

"We made excellent contacts with foreign and European visitors. Sales were very good. It was an impressive show, nicely put together.

- **Mirodial press officer Jeremy Page**

"I was pleased there was a spill for the games and

business visitors. This kept away the noise of the games and the general exuberance there rather than distracting the business side, which produced good sales.

- **Reaction director Vernon Houshops**

"It was above expectations. Our software games sales were excellent. We sold out certain games and had to send out for more stock. We were happy with the whole show and with the interest shown by Atari owners which has encouraged us to produce more software for them.

- **Tynesoft sales manager Trevor Scott**

## The five year pitch

JACK Tramiel has given himself and Atari five years in which to grab 20 per cent of the world's micro market — or suffer dire consequences.

The influential Atari chairman told influential US financial paper Investors Daily that sales of ST machines in North America and Europe prove his target is obtainable.

But he warned: "If you don't reach 20 per cent of this

computer market in five years you're out. You won't get the support from software houses and you won't get the right prices from your suppliers because you won't be able to buy in sufficient volume".

However Tramiel was confident the 20 per cent figure was within his reach "although I don't have the exact timing — it's all a matter of market conditions".



Billy Green

## Atari is a star's star turn

THE Atari 1040ST has proved a star attraction for short-topping Billy Green. His manager, Larry Jay, taught the computer to organise plans for a six month world tour which starts in June.

Said Laurie: "The Atari has done everything for us. It has worked out our flight arrangements, listed our hotels and all our venue details.

"But the most useful is that we have been able to draw the stage plans and print them out in colour so they can be forwarded in advance to the venues for preparation".

"It is the first time we have used this computer to arrange things and we are still learning what it can do. We are now two months ahead of schedule, and I cannot believe the amount of work it has saved us".

## Crime in the past

A CRIME adventure, out for Atari ST users, has a small-time private detective as the hunter — and the hunted.

Activision's Borrowed Time, set in the 1920s, entails tracing 20 suspects who want the hero dead and avoiding being shot, beaten up or imprisoned demands fast reflexes.

Hugh Ross-Fennell, managing director of Activision, said: "Only the movements of the private eye are controlled, the other bad guys' actions are sudden and unexpected, making the pace frantic".

Price, on disc, is £14.99.

## Lunar sequel

A SEQUEL to last year's short-topping adventure Red Moon has been released by Level 9 Computing to run on Atari 8000X and 1300X machines.

Price of Magik has more skills and independent creatures to control than Red Moon.

# The compact disc ROM has not been shelved

DESPITE rumours to the contrary, compact disc ROM players will feature prominently in Atari's plans for the future.

Reports that the company has shelved the project indefinitely have been strongly denied by sales and marketing manager Rob Harding.

He told Atari User: "Nothing could be further from the truth — Atari will definitely launch a CD ROM player, although the event won't take place for several months.

"There are two reasons for the delay, and both involve

issues beyond Atari's control.

"Firstly the ROM player is an extremely software-dependent piece of equipment, and there is a worldwide shortage of CD software capacity.

"Secondly CD mechanism prices are currently too high for us to turn out a product for the mass market that would meet Jack Tramiel's criterion of power without the price.

"And you have to remember we aim to bring out a machine with audio as well as data-recording capabilities along with other sophisticated features, all

of which add considerably to Apple's costs.

"While the CD ROM player is not a viable mass market product for us at the moment, the situation is improving.

"Our partner, Warner Communications, is setting up a plant to manufacture compact discs and this should be operational later this year.

"Also we expect the present high cost of CD mechanisms to come down sharply in the next six to nine months and create the conditions we need to go ahead with the project".

## COMPILER SPEECH PROGRAMS

STAND by for a host of new high quality programs for the Atari ST range.

A flurry of activity in software houses has been sparked by the launch by specialist programming language compiler Progress Software of Pro Fortran-77 for the ST.

The new compiler opens the door to 68000 architecture for professional programmers and developers and is likely to prompt a new generation of Atari ST software.

Pro Fortran-77 will also enable developers to recompile existing mini and mainframe software to run on ST machines.

Atari has enthusiastically welcomed the Progress initiative. Sales and marketing boss Robert Harding told Atari User: "This is an important milestone in the development of the market for the ST.

"We believe it will generate a wave of high quality software allowing users to fully exploit the machines' potential".

Fortran-77 is one of the most widely used high-level programming languages among engineers, scientists and academics — and the most popular medium for micro professionals writing their own programs.

Progress marketing manager Andrew Lucas said: "We recognised the possibilities offered by the Atari ST and other 68000 machines at a very early stage.

"Our compilers will allow micro professionals to unlock the vast library of existing technical software, such as state-of-the-art CAD/CAM for instance, and make it available to Atari users.

"With the power and sophistication of such a machine costing less than £1,000 there are now tremendous opportunities for developers".

Pro Fortran-77 for the Atari ST costs £129.

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As the president of Atari, Sam Tramiel — the eldest of Jack's three sons — is in charge of the day-to-day running of the world-wide organization. It is he, second only to his charismatic father, whose decisions will eventually make or break Atari. Here he talks to MIKE COWLEY about his life and the events which have influenced his current thinking.

To all outward appearances, Sam Tramiel comes across as super capitalist. Rich, relatively young — he's still only 38 — he wears the mantle of wealth easily as he tells the tale to a dynasty which one day may well be compared to the Rothschilds.

Yet it hasn't always been like that. An Italian friend brought vivid memories flooding back when he recently recalled the saying: "If you aren't a communist by the time you are 18 you haven't got a heart. But if you aren't a capitalist by the time you are 25, you have no brains".

For that's almost exactly what happened to the eldest son of the man who built Commodore into a billion dollar empire, then turned his back on it to give Atari the kiss of life.

It was 1968 and Sam Tramiel had just finished his first year at university. Like so many of his contemporaries, he was disconcerted with what was happening in the United States in general and in Vietnam in particular.

Soon he began associating with other radical thinkers on the fringe of an extreme left wing front organization known as the Students for a Democratic Society. Quite naturally his father, who even then was viewed as "the epitome of the capitalist", objected.

"My father was very straight with me", recalls Sam. "He called me in and said 'You cannot have a Jaguar E type, credit cards and be a communist'."

"I said yes I can. He replied: 'No you can't. The Jaguar is out. The credit cards are going'."

"Fine", I said. "Thank you very much. I don't need any of that ... and I took so more money".

So Sam Tramiel turned his back on

# Sam Tramiel, taking the international road



his wealthy father and went to work to put himself through university. He headed for Canada where schooling was cheaper and took to wearing a hard hat during his vacations while acting as a surveyor on construction sites.

"My father and I still loved each other", he remembers, "but there was a very basic philosophical difference between us. And he could not imagine supporting that philosophy financially — as was his right".

Yet Sam was to undergo a dramatic change in the next couple of years. "Having to support myself and

survived the horrors of Auschwitz to emigrate to the States.

By the time he was three young Sam had moved with his family to the New York District of Queens where his father, now a typewriter repair man, had acquired a house. "The truth of the matter was the house wasn't really much bigger than the apartment we had", says Sam.

And once again, they were living in a predominantly immigrant area where the Jews kept to themselves, as did the Poles, the Irish and the blacks.

So Sam could speak only Yiddish until he was five years old and left the shelter of what was little more than a ghetto to venture to kindergartens.

"Pledging allegiance to the flag of the United States was my first English lesson", he recalls. It wasn't to be too long before he found himself doubting the wisdom of it all.

At the age of five Sam was transported to Toronto, which his father judged would be an easier place to compete in than the United States.

By this time Jack Tramiel had set himself up as a dealer in typewriter and adding machines, importing stock from Europe. Little did he realize then but he was laying the foundations of an empire.

The stay in Toronto lasted five years, during which time Sam developed a passion for outdoor sports. Then it was back to New York, but by this time the Tramiel family

## By MIKE COWLEY

put myself through school, I began to realize what money was all about", he says. "So it wasn't long before I started to shift my ideologies. In fact by the time I finished school I was quite a capitalist".

Not that the mere fact of being without money itself was the prime reason for the transformation. After all Sam Tramiel had hardly been born with a silver spoon in his mouth.

Back in 1960 when Sam dropped in on the world, home was a cramped apartment in the tough tenement district of Lower East Side in Manhattan, New York. And the rent of \$15 a month took a huge slice out of the money his father was then earning as a cab driver, having

business had flourished sufficiently to warrant an up-market address in Long Island.

"The Commodore company had been started by them", says Sam. "We were fully fledged importers of editing machines from Berlin and typewriters from Czechoslovakia. And it wasn't long before my father was able to buy the factory making the editing machines in Germany."

Inevitably with both his father and mother actively involved in the family firm, Sam can only recall one topic ever being discussed around the dining table - business.

"It was always the same", he says.

Hong Kong.

He had been out there for a year when he remarried his second wife being a schoolteacher from Toronto.

By this time Commodore was booming with sales of close to \$800 million and growing in leaps and bounds.

However like many other sons of successful fathers, Sam Tramiel began to be torn with self doubt. "Could I do it on my own I began to ask myself", he says. "Would it have all been possible if I'd not been Jack's son in the Commodore framework?"

"So my father and I had a long talk and it resulted in my leaving

him back to California the following month and told Commodore he would be happy to stay on if required.

Five months later he too resigned after becoming frustrated through a seeming inability of the Commodore management to make decisions following his father's departure.

While working his month's notice Sam Tramiel had lengthy discussions with his father over what they would do in the future. "By this time my father had accumulated a vast amount of wealth", he revealed. "So we were faced with a number of alternatives.

"Should we become merchant bankers?"

"Should we just take it easy?"

"Should we go back into the computer business? What should we do?"

By the time he left Commodore the opportunity to buy Atari had arisen. With a number of outstanding design experts - including his own brother Leonard who had just gained a degree in astrophysics from the university of Columbia, the Tramiel clan began to think seriously about computers again.

"Our people went to talk to Warner Communications, and to cut a long story short, ended up buying Atari", says Sam Tramiel. "We had expected to find a slick company, but what we really found was a complete shambles."

It is Sam Tramiel's conviction to this day that Atari will only become a world force if it remains internationally minded. "We see this as the key", he says.

"When we designed the ST we emphasised the international aspect, so we had a German keyboard, a French keyboard, an Italian keyboard, a UK keyboard right from the word go - not coming along later. DOS was designed in four languages."

The man coordinating this global approach by Atari is Sam Tramiel himself. "I see myself as an international citizen", he insists. In fact, the Atari president holds a Canadian rather than an American passport.

"The reason for this is I feel much more like a Canadian who are more open in their views than the Americans who tend to be inward looking and chauvinistic.

"And perhaps there's just that little bit of radical left in me after all..."

## route to success

"so much was it part of my life that I was playing the stock markets when I was in my early teens".

Describing himself as "an OK student but not brilliant", Sam Tramiel is best remembered at college as an all round athlete. A champion wrestler, he made both the college football team and the record breaking 880 yard relay squad.

After his brief flirtation with the Karl Marx contingent Sam Tramiel returned to the field. Obtaining his newly-awarded economics degree he threw in his lot with his father at Commodore. "As a family, we had always had the idea of working together", he says. "The Rothschilds had always impressed me and I'd always thought that one day I'd like to see us like they were years ago".

Yet, because he was the boss's son, he was given no privileges. Starting at the bottom in the warehouse, he worked his way up through the departments. "I was always underpaid compared to the other employees", he remembers.

Two years after joining Commodore in California he was transferred to the company's London offices. By this time he was married to his high school sweetheart from Toronto.

Tragically after giving birth to their child, his wife came down with cancer and died some three years later. Accompanied by his baby daughter, Sam returned to California for a few months before accepting a posting to

Commodore and setting up on my own in Hong Kong".

Within two years Sam Tramiel had proved his point. He controlled four companies with the help of Chinese partners, making watches, telephones, computer peripherals and games. "We were typical Hong Kong OEM suppliers", he says.

It was the illness of a friend which led him back to Commodore. The man in question had been running the Hong Kong operation for the company when falling health forced him to take early retirement.

Who then could Commodore turn to to fill the gap in Hong Kong, the corporation's key manufacturing centre? Sam Tramiel was persuaded to help out for 12 months.

"It was a easy time", he recalls. "Every week I received phone calls saying 'Make more OS4's. Make more C16's. Make more simply couldn't get enough'."

And in the meantime his wife gave birth to their "Chinese, Jewish, Canadian" son. At the end of the year's contract, Sam Tramiel was convinced that his future lay with his father in Commodore.

So he kept control of the Far East situation but moved to Japan to get a better understanding of the key component market there. He remained in Tokyo for nine months until the news broke that his father had left Commodore following a bitter dispute with the chairman.

That was in January 1984. Sam

# Comp



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**IN-1-80 JOE**, the world famous archaeologist and explorer, triumphs again, finding the long lost treasure of King Muroobaga in the labyrinth below the king's recently discovered tomb.

It only remains now for Joe to escape. But it's easier said than done. For the caverns in which he is now lost are full of perils.

The king's ghost wanders these seeking revenge, assisted by a mindless zombie. The slightest touch by these will mean instant disintegration.

Treacherous sulphur pits wait to catch the unwary. The caves themselves are old and crumbly and it is easy to find yourself cut off in a dead end where the ghost will soon find you.

If this was not enough, the designers of the local underground have ensnared on the caverns and you are in constant danger of being run over by the 6, 16 to the city centre.

Your escape is also blocked by five doors and you must find the keys hidden somewhere in the caves before you can pass them. Joe

himself has lost his knife and trusty whip and ran clean out of bullets some time ago. His only weapons now are his wits and agility.

So you'll need plenty of luck as you guide Joe to freedom.

Playing the game is straightforward. When run for the first time the screen will go black for 80 seconds, but after this will start immediately. You may also see a vertical coloured stripe, but Don't Panic.

Joe is controlled by joystick 1 and he will move instantly in the direction commanded. The caves consist of a mass of 100 rooms and must be completed in the correct sequence.

I advise you to draw a map as you go along. If you hit a wall it will knock you into the centre of the room – and possible danger – and may dare you.

Picking up a key is performed by touching it. If you then touch the corresponding door it will open and stay open. The wrong key and you will be knocked back.

Occasionally the king's curse will result in your developing a shadow. Watch for this and if it occurs you must run over it to make it disappear.

If you are killed you will be

reincarnated, but you only get three lives.

The program itself fits tightly into 48k. It uses a complicated vertical blank interrupt to move the players, a redefined character set and Antic Mode 4 (Graphics 13 on XL/50A). It will however, work on all Atari with sufficient memory.

The lengthy initialisation is because of the large amount of data for the machine code routines, VBL, character set and players.

The maze is held in the data statements from line 2000 to 2069. The first four letters hold the exits, the next number is the type of cave, the next the information line and the last number is the degree of difficulty for that room. This is only relevant in type 3 and 4 rooms.

The difficulty of the game can be altered by changing these – the higher the number the more difficult, up to a maximum of 255.

By altering these lines you create a different maze without needing to rewrite the whole program.

I'll be providing an editing program in a future issue. This will enable you to redesign Cavern Escape at will.



# CAVERN ESCAPE

By MIKE ROWE



## PROGRAM MAP

100-199	Main loop.
200-299	Movements of Joe.
300-399	Collision with wall, key or lock.
400	Empty room subroutine.
500-599	Ghost and ramble guard subroutine.
600-699	Underground train subroutine.
700-799	Supernatural explosion and Joe dies.
800-899	Escape subroutine.
900-999	Joe hits by ghost, guard or train.
1000-1499	Interpret, draw and initialize rooms.
1500-2099	Cave data.
2000-2009	No more lives, Joe dies.
3000-3999	Initialize player initials and VBL.
5000-5999	Main initialization and create character set.
6000-6999	Character set data.

## MAIN VARIABLES

LIVES	Number of lives left.
R	Room number.
TYPE	Room type.
MAN	Joe's status.
DIFF	Room difficulty.
OFF	Direction Joe left room.
KEY	Presence of a key in room.
KEY1	Position of key 1-5.
LOCK	Presence of locked door.
LOCK1	Locked status of doors 1-5.
GO	Explosion flag.
TGO	Train approaching flag.
EXITS	Date of exits in room.
TEXTS	Information about room.
PM	Player initially sees location.
DL	Displays first location.
L	Machine code to load player status.
CLEAR	Machine code player clear out.
Y500	Machine code to load VBL.
Y545	Machine code to remove VBL.









# Prizes galore at the ATARI USER birthday party!

A complete Atari 130XE system

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£1500 of assorted software from Software Express and SECS

5 copies of Flipside and Lands of Harvest from Microdeal, and Brattacus from Psygnosis

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## Your FREE entry form

I consider that the nine cuttings from Atari User advertisements were taken from the following pages:

 Page No. _____	 Page No. _____	 Page No. _____
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The Atari machine I use is the:

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POST TO: Birthday Contest, Atari User,  
66 Chester Road, Hazel Grove,  
Stockport SK7 5NY.

This month sees the first birthday of Atari User – and to celebrate we're giving away a bumper collection of prizes worth more than £3,000 in our biggest, easiest-ever competition.

The prizes are amazing, covering the whole range of Atari products.

First prize is a complete 130XE system comprising an Atari 130XE, XC11 data recorder and joystick, courtesy of Atari, worth more than £170. And the second prize, also courtesy of Atari, is a disc drive.

It seems as if all the leading lights of the Atari world are helping us celebrate. Software Express is contributing more than £1,000 worth of assorted software and SECS a further £500 worth.

Not wishing to be outdone, US Gold has more goodies for Atari users in the form of 30 copies of its best-selling game Anytum.

And joining in the spirit, CDS has donated 10 Steve Davis Snooker games, Ariolasoft is giving away its fabulous T-shirts and badges and Slice Shop is providing software worth more than £100.

Yes, there's lots to win. And if all that wasn't enough, Database Software is giving away 100 £10 discs – that's 10 boxes – and 26 dust covers.

ST owners have not been left out either. Half the prizes from Software Express are for ST owners, and these include copies of Pascal and Ultima 2: Microdeal

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has donated five copies of  *Lords of Havoc* and five copies of *Flights*.

Paygrade has provided five copies of *Breastcancer* together with two limited edition Roger Dean prints for each of the winners.

Kuma is giving away two copies of each of its K software: K-Spread, K-Saha, K-RAM, and the just released K-Corner.

The contest itself couldn't be easier to enter. We've taken pieces out of nine advertisements in this issue and put them in a numbered grid. All you have to do is find the page number of the original advertisement.

Now comes the bit where you use your brain. We'd like you to tell us, in not more than 25 words, what you'd like to read about in a future issue of *Atari User*.

Provided the page numbers are correct the most original, entertaining or useful suggestions will go into the hat for the great First Birthday Prize Draw. That's not too hard, is it?

We'd also like to know what type of Atari machine you use, so there's a space on the coupon for you to enter that information too.

So get to work and let us have your entry not later than May 31, 1988.

Remember there are lots of prizes. So everyone has a good chance of getting an *Atari User* first birthday present.

# BASIC COMPILER

Part Three of the series by FRANK O'DWYER that helps you speed up your programs

YOU should now know how to compile any programs you write, so let's discuss Compiler Basic and what it is capable of. Rather than giving you a list of its keywords, along with explanations, I'll use Atari Basic as a starting point and explain how to translate it into Compiler Basic.

## • LET

A convenient starting point is the LET statement. Like Atari Basic, this keyword is optional in Compiler Basic. There are, however, the following major differences between the two statements — variable names may be A to Z only, expressions may be integer only (0-85535) and expressions are evaluated left to right, without operator precedence.

Expressions are also different in the two Basics. The allowable operations are:

- + for integer addition (no overflow check).
- for integer subtraction (no underflow check).
- \* for integer multiply (no overflow check).
- / for integer division (no divide by zero check).
- ∓ for integer remainder on division (no divide by zero check).
- | for bitwise logical OR.
- & for bitwise logical AND.
- ^ for bitwise logical Exclusive OR.

If you don't understand the last three you can think of "bitwise and", and "bitwise or" as being just Atari Basic AND and OR respectively, and "bitwise exclusive or" you can probably live without. As well as these operations all the relational operators — greater than, less than, equal to and so on — are available as you would expect.

One thing to be wary of is the lack of operator precedence. Take the following statement for example:

```
LET X=3+2*4
```

This means two completely different things in Atari Basic and

Compiler Basic. In Atari Basic X would get the value 11 since the multiplication would be done before the addition. In Compiler Basic X would get the value 20.

This occurs since the compiler does the operations strictly in the order they appear from left to right, in much the same way as a cheap calculator would. You can't use brackets to compensate for this either, since the compiler does not accept bracketing of expressions.

Don't worry though, there is always another way to write the assignment, perhaps using an intermediate variable, so that the operators are done in the order you want. The above example may be written:

```
LET Y=2*4+3
```

This expression will come out the same in both Atari Basic and Compiler Basic.

In Atari Basic you can use functions such as ASC, PEEK and so on, in expressions. Although you can't use these functions in the same form in Compiler Basic, they are available to you.

Figure 1 shows a list of Atari Basic functions and their Compiler equivalents.

The compiler also has a facility to pass expressions to the assembler cartridge — but they must be constants not variables. The advantage of this facility is that the expression is evaluated by the assembler before the program is ever run, so that the expression is evaluated only once and does not slow down your program when it is running. Here is an example:

```
X=A+(12*3+20)
```

This has the assembler work out what 12\*3+20 actually equals (58) and substitutes it into the expression — so it is as if you had originally written:

```
X=A+58
```

This obviously will be quicker to work out than if you had omitted the square brackets, thus leaving the program to unnecessarily compute 12\*3+20 each time this assignment



Atari Basic	Compiler Basic	Purpose
PEEK(A) ASC("A")	A "A"	Returns byte pointed to by A. Gives ASCII code of A, where A is a character.
PEEK(A+256*PEEK(A+1)) ADR("string") PRINT CHR\$(A):	ADR "string" PRINT A	Returns 16-bit word pointed to by A. Returns address of literal string. Prints character whose code is A.

In all the above, A may be an expression  
— so you can have the following assignments:

Example	Effect
X=888	Assigns PEEK(BB)+256*PEEK(BB) to X
X=BB	Assigns PEEK(BB) to X
X=1+X	Assigns ADR("1")+1 to X
X="hello"	Assigns ADR("hello") to X — this is a number not a string.
PRINT 1+2+43	Prints the character whose code is 46. Same as PRINT CHR\$(1+2+43) in Atari Basic.

Figure 1

is encountered.

Well, that's just about it for expressions, and the LET statement.

Here are some other statements supported by the compiler:

## • PRINT

PRINT is a simplified version of Atari Basic's PRINT command. As you have already seen, PRINTING an expression causes a character to be output, and not the value of the expression as you would expect. In fact there is no way to PRINT a number in Compiler Basic, except by writing a special subroutine which I will give you in a later article.

You can, however, PRINT a string. PRINT "hello" causes the expected output on the screen — except that the cursor does not move to a new line unless you issue a PRINT command on its own. In other words, PRINT "hello" in Compiler Basic is the same as Atari basic's PRINT "hello".

## • GOTO, GOSUB, RETURN

These work the same way in the compiler as in Atari Basic. You cannot GOTO an expression however, but

can you GOSUB an expression. You can however use labels, as in:

```
1000 LABEL LOOP ONE
1010 .....
1020 GOTO LOOP ONE
```

You can POP a return address in Compiler Basic — I don't recommend it though, since if you do it wrongly you can crash the computer, and will probably have to switch off and on, losing your program and data.

If you miss the facility to GOTO an expression, you can use the GOTO keyword. This accepts an expression, but consider the command GOTO 1000+10. It does not GOTO line 1010, but causes the machine language to jump to decimal address 1010. You can use this to implement a sort of USA call, or an DM...GOTO command. More about that in a later article.

```
1000 IF X=5 THEN GOTO 2000
1050 IF X=6 THEN IF G=2 THEN GOTO 3000 ENDIF
```

Figure 2

```
1000 IF X=5 THEN GOTO 2000 ENDIF
1050 IF X=6 THEN IF G=2 THEN GOTO 3000 ENDIF ENDIF
```

Figure 3

## • IF...THEN

IF...THEN is also available in Compiler Basic. Unlike Atari Basic you must finish with the ENDIF keyword. This allows the statements after the THEN to span several lines. For example:

```
1000 IF X=5 THEN G=1: G=0/4
1010 P=0: S=S+88
1020 ENDIF
```

In this example the four statements after the THEN keyword will be executed if X is equal to 5, otherwise the program skips to the statement after the ENDIF. Note that you must always finish IF statements with ENDIF, even if only one statement is to follow the THEN keyword.

I guarantee that most of your errors will be to do with omissions of ENDIFs. The compiler warns you if this occurs, so you should pick up the habit of using ENDIF quite quickly.

Figure 2 shows some examples of ENDIFs being left out and the correct way to write these statements is shown in Figure 3.

## • POSITION, SOUND

### SETCOLOUR

These are all available in the compiler. However, there is no check to see if the arguments are in range — so for example SOUND 100,50,10,8 would pass, unutilised by the compiler but might cause your program to crash — but you can use IF statements to check that the arguments are in range before executing the statements.

Don't worry about your program

running slowly if you do this – remember it is going to be compiled. Here is an example of using IF statements to trap out bad arguments:

```
1000 IF C > 3 THEN GOTO  
ERROR ENDIF  
1010 SOUND C,50,10,8
```

Here ERROR is some point in your program which you have labelled using the LABEL keyword (see the GOTO and GOSUB statements).

## ◆ DATA, READ, RESTORE

A crude DATA mechanism is provided in Compiler Basic. Each element in a data statement must be a number between 0 and 255, or an assembler expression. Here are some examples:

```
DATA 1,2,3,4,5,12+3  
DATA "hello",198,0  
DATA "a",1,23,45,87
```

In the case of a string ("hello" above) a data element is produced for each character in the string, so READING will first produce the ASCII code for h, then for e, l, l, o in the case of our example.

Preceding a character with a single quote, as in 'a', causes the ASCII code of that character to be READ from the data stream. Numbers and expressions (12+3, and so on) simply cause the appropriate value to be placed in the data stream.

RESTORE may be used to address a label or a line number. This line number or label must point directly to a DATA statement – the compiler will not scan for the first DATA statement in sequence as Atari Basic would.

DATA statements must be consecutive IF READING is to work correctly, and DATA statements should be placed out of the path of the executing program, for example at the end of the program, or between subroutines or procedures or else the program will crash.

You can use REM statements in Compiler Basic programs. For example:

```
1000 REM INITIALISE X=1,Y=1
```

## ◆ FOR . . . NEXT

These statements are available, albeit in a slightly corrupted form. In the FOR statement there is no initialisation part, so you write FOR X TO 200 rather than FOR X=1 TO 200. This means – FOR X counting in increments of one from its current value TO 200. In Atari Basic you would write FOR X=X TO 200.

If you want a loop which counts from 3 up to 1000, in Atari Basic you might write:

```
FOR N=3 TO 1000:NEXT N
```

To do this in Compiler Basic you would have to write:

```
N=3:FOR N TO 1000:NEXT N
```

It's a little strange, I'll grant you – but it simplifies the writing of the compiler.

There are no checks to see if your FOR . . . NEXT loops are properly nested, so be careful of statements like:

```
1000 FOR X TO 100  
1010 Y=1:FOR Y TO 99  
1020 NEXT X  
1030 NEXT Y
```

which will not give an error message despite being incorrect. If you use proper indentation you should have no problem avoiding this situation.

## ◆ OPEN, CLOSE, GET, PUT,XIO

These are all the same in both Basic except XIO. Take XIO 17,"05,0","S:" for example, which is the XIO command to draw a line in Atari Basic. In Compiler Basic you would have to change the two zeros to be the same numbers that you used when OPENing channel 5. Suppose you used OPEN 05,12,3,"S:" for example, then you should XIO 17,05,12,3,"S:" as well.

The commands, as well as allowing the use of cassettes, disc and keyboard devices from Compiler Basic also allow you to use colour graphics in your programs. You can replace Atari Basic's GRAPHICS, PLOT and DRAWTO commands

using OPEN, CLOSE and PUT. LOCATE can be simulated using GET. All you have to do is OPEN channel 6 to the "S:" device. For example, OPEN 06,12,3,"S:" gives you Graphics 3 without a text window. Unfortunately space does not permit a full discussion of the possibilities of OPEN and XIO, but I may return to this subject later.

In Atari Basic you can TRAP errors. Similarly, in compiler Basic you can TRAP errors which arise when using OPEN, CLOSE, PUT, GET and XIO. For example, TRAP 2000 will cause control to transfer to line 2000 in your compiler program in the event of any error, say while GETting characters from cassettes. To turn off the Trap use TRAP OFF. To turn it back on use TRAP ON.

To examine the cause of the error you can use variable 8. This is updated after every OPEN, CLOSE, GET, PUT and XIO command. In the event of an error 8 will contain the error code.

So if 8 equals 141, ERROR 141 has occurred (Error 141 being cursor out of range – see the Basic manual for a full list of error codes) – by the way, 8 is short for status variable.

As in Atari Basic you can POKE a byte to any address in memory. Compiler Basic also provides DOPE, short for double POKE. This POKEs a 16 bit number (0-65535) to an address in memory in low byte/high byte format.

To load the screen memory address register at location 88, for example, you might use DOKE 88,W – where W is the number to be DOPEd. To do the same thing in Atari Basic you have to resort to something like POKE 88,(W/256):POKE 89,W-256:PDE01000.

If you examine the games listings in magazines and books you will see that constructs similar to this occur frequently. For this reason, DOKE is an extremely neat and useful command.

◆ That's the end of the statements Compiler Basic and Atari Basic have in common. Next month I will discuss the keywords that are peculiar to Compiler Basic – these include keywords to handle direct interrupts and Atari variables, so stay tuned.

# NEWSLETTER

## MicroLink slashes the cost of Telemessages

OLD-fashioned telegrams have been projected into the Electronic Age - in the form of Telemessages. The difference is that today you compose the message on your own size, transmit it over a phone line via MicroLink, and it is delivered by the postman the following morning, neatly presented in a distinctive, eye-catching yellow envelope that just demands attention!

The Telemessage service was originally introduced so that people could phone their message to the operator. You can still do this, but it costs £4 for up to 50 words.

Now, using your computer and MicroLink, it only costs £1.48 for up to 250 words! Which is sufficient for an average business letter - and a small price to pay if it means you lose the opportunity to check that all important content.

What's more, for an extra 65p your message can be delivered inside an attractive

greeting card.

So if you've almost forgotten your loved one's birthday, or it's too late to buy a card - or you've simply missed the last post - Telemessages can be a real godsend.

To ensure delivery by first post the following morning you have to send your message before 9pm. It is instantly transmitted, clearly in the form you keyed it in, via the MicroLink mainframe in London direct to the postal delivery office nearest the recipient's address.

There it is printed out, put into the special envelope, and passed on in the local postman's delivery.

It's so simple so that you'll save you could only send electronic mail if your recipient also had a computer. Now you can send a Telemessage to any address in the UK - all 22 million of them. And there is also a next-day service for any of the 90 million homes in the USA.

What it costs to send a Telemessage:

	By phone	By MicroLink
Up to 50 words	£4.00	£1.48
Up to 100 words	£6.25	
Up to 150 words	£8.50	
Up to 200 words	£10.75	
Up to 250 words	£13.00	
Up to 300 words	£15.25	
Up to 350 words	£17.50	

**YOUR chance to join  
MicroLink - Page 35**

## Takeover boosts e-mail service

BRITISH Telecom's takeover of Dialcom, the world's largest electronic mail service, has been welcomed by Derek Mandin, head of MicroLink.

"Dialcom has a head start over all the other companies engaged in electronic mail on a global scale and is in the best position to take advantage of the dramatic increase in international messaging that is now under way", he says.

"MicroLink will be able to benefit in many ways from the revitalised Dialcom that will result from BT's involvement."

"We can expect many technical developments that will considerably enhance the service we offer our subscribers."

Dialcom has been sold to BT by IFF, the US conglomerate, which has recently been divesting itself of a number of its subsidiaries.

Last year it had an income

of \$19 million from its 100,000 mailboxes in the USA and from the fees it charges its licensees, the largest of which is the UK's Telecom Gold, of which MicroLink forms part.

But its growing revenue will wasn't sufficient to stop Dialcom running up heavy losses. BT is putting in its own management and expects Dialcom to be back in profit by 1986.

In addition to the USA and UK, other countries on the Dialcom network are Australia, Canada, Denmark, West Germany, Hong Kong, Ireland, Israel, Korea, Netherlands, New Zealand, Philippines and Singapore.

Subscribers in all these countries can have instant communication with each other by electronic mail, in addition to other message services such as telex and teletypes.

## Dutch delight..

DUTCH subscriber J.W. Banzett says MicroLink is the most painless way to communicate with friends and colleagues all over the world - and he should know because he's a doctor.

"When he isn't filling or pulling teeth at his surgery in Rotterdam he can often be found at the keyboard of his Micro.

"I use the fabulous MicroLink in communication - that's what computers are made for", he says.

"As a dentist who is interested in computers I find

the system is a good way to send letters to the USA and England very quickly.

"It also makes it easier to get answers to my questions about computing - it is sometimes very difficult to get computer information in Holland, so we are not so much into these things as you are in Britain.

"I have a lot of friends in England who I often surprise with a little card on the Telemessage service and I'm also able to send fax messages to professional magazines and organisations like the Dental Association in America."

# Sterile approach to maths studies

THE Software Factory has produced a series of five discs called **CSE and GCE O Level Maths** to match the five years the children would study mathematics in a senior school.

Although referred to as a course, they are at best a simple aid to learning, and at worst just a series of mathematics tests.

The authors say the programs are designed to assist those studying CSE and O level mathematics and that using them will increase the pupil's abilities in mathematics.

Yet the first four discs merely offer tests where they are marked and timed and the help pages offer little more than a traditional textbook would.

The questions are difficult, those appearing to be so common thread and the pupil can get the correct answer by entering incorrect inputs.

Failure results in an explanation, but even this is inadequate if understanding is to arise.

The language used is difficult to understand, for example: "A number in standard form is a number expressed as a number between 1 and 10 multiplied by a power of 10".

Disc 5 amounts to a test of tests. It is the revision section and as a reflection of the efficiency of the course you are given three attempts to get the correct answer instead of two.

Success at this level would guarantee a pass at O level as the pupil would have to be well above O level standard to understand the questions — and some of the explanations.

There is a market both in school and at home for revision software, but for it to be of real value it needs to be sound in its subject content and to take into account how the child learns.

The traditional approach of this software might be acceptable for the grammar school where it would be backed up with teaching and an in-depth explanation.

But the course is no use for pupils who wish to teach themselves. Even if the computer is used to the full it will require a skilled teacher to enable the average and above average child to learn from this package, and a skilled teacher would find little in this software to excite them.

The computer has to screen graphics to speak of

and little interaction and the documentation is limited.

Children using the programs felt demoralised by them and showed little motivation — an unusual state considering they were using the computer.

With exciting software available to help the pupil develop an investigatory approach to mathematics there is little room in school for such sterile software.

Although it could provide a revision aid for a bright child who had already attained the required standard, it does not



provide the careful explanation that most children need.

I suspect that the children who would most benefit from this sort of program will already enjoy using textbooks anyway.

Alan Coode

# Spying isn't easy, but

IF you're a fan of *Mad* magazine you will undoubtedly know about the *Spy vs Spy* comic strip. For those of you who don't, the stories follow a deadly duel between two opposing spies, one dressed in black and the other in white.

After the success of the first *Spy vs Spy* computer game the spies have now returned to continue battle in ***Spy vs Spy II: The Island Capers***.

The game begins up with an attractive title page. After a short game a plane flies past shooting holes in the title, then another follows in to destroy more of the picture. The pilots are the spies and, after wrecking the screen they fly off and the display changes to the main screen.

A big selling point with the *Spy vs Spy* games is the way in which they display the action. Star Software has designed a screen with two monitors connected to a main computer via ribbon cables.

The two monitors show the position of the spies — this is called simulation. They also update in real time, and this is

called stimulus. A monitor will display a 3D view of the landscape and you can move your spy away to the distance, towards you and left and right.

Moving to the edge of the screen forces more landscape to scroll on, and little gaps at the top and bottom of some screens allow access to the north and south of the island.

The object is to recover all five parts of a top secret missile. In the *Mad* fashion this missile is not an *Atom* or a *Pluton*, but an *L.M. 1/4*.

It has crashed on *Spy Island* and broken up into the three parts that you must retrieve and assemble. The island has only one resident, an alien volcano which is about to erupt, so quick completion of your mission is essential.

The spies have been equipped with the latest spy technology, the *Transputer Model P55 85*. This technological gadget aids you in your fight for the missile. It shows what you have in your inventory and also allows you to access the equipment that you have acquired.

You have a good selection of devious weapons with which to trap or attack your foe — from magnets to a correct gasoline barrel. You can also dig holes and put sharp sticks down them. This has a nasty effect on any spy unlucky enough to fall into a pit.

My favourite is the rope snare. You select the rope from the transporter and climb up a tree tying one end to the tree top, you then stretch the other end to the ground.

Once the snare is set it becomes invisible, so you must remember where you set it.

If a spy triggers off the snare he will be lifted in to the air and left dangling from the tree.

All of the traps deplete your strength and delay you for a few seconds, giving the other spy time to do more dirty work.

If you want spy to spy combat then you must confront your enemy. When a spy enters the same area as his opponent the simulation ends and all attention is switched to just one monitor.

You are also unable to

## Hit a trifle below the belt

In Granlin Graphics' **King of the Ring** you are the manager of a boxer, it's your task to guide your fighter through four fights before taking on the world champion. You must use skill to select the correct training strategy and tactics to guide your boxer to victory.

That's what the cassette inlay said, but all I found in this game were two jerky page flipped boxes and lots of tedious typing.

The game starts off with a list of 30 opponents from

which you pick a contest — if the opponent you choose is considered too high grade you try again.

After that you are given a screen of information on your opponent ranging from his age to his fight record. You should be able to get an idea of what sort of fighter he is from this.

Next you train for the fight by choosing four out of the following six routines — sparring, punch bag, weights, gym work, footwork and road work. Each is supposed to develop



you in a different way, for example road work increases stamina and weights will improve punching power.

After assessing your training you choose a strategy from another list. You have four set

fight strategies. Once one is picked then it's on to another list, this time awarding priority points for the way you fight each round. Options available are footwork, infighting, attack and defence. The more points awarded for an option, the more effort is put into that choice.

By now my fingers were developing cramp and I was wondering if I was ever going to fight. But the bell sounded and I got a chance to watch my boxer's progress. At this point you have the excitement of watching the other boxer belt the living daylight out of you while assessing a large punch count.

This goes on until you either win or lose and then it's back to the start for a new opponent. Four wins and you fight the World Champion who generally pulverises you.

After playing the game for more than three hours I lost interest. It seems to lack action and strategy, as you only have limited set choices.

There is sparse use of sound and graphics. The fighters themselves are outlines which are well drawn but badly animated.

This is one of Granlin Graphics' first releases for the Atari but it is well known for its quality games in other releases. So let's call this a start and hope they work their way up.

Not the best of games but it will please some people — but I'd better see you buy, otherwise you may feel you have been hit below the belt.

Paul Irvine

## it certainly can be fun



cross your propeller while in combat range. You have two methods of attacking an enemy ship. You can either jab your opponent with a sword that appears when you enter combat mode, or smash him over the head with the sword.

There are also natural hazards you need to look out for. The island has small areas of quicksand, which when stepped in can be hard to escape from.

The sea looks nice for a quick dip but if you wander into deep waters you find that spies are poor swimmers and

you will soon drown.

In these parts the sea is infested with hungry green-gilled mad sharks with an appetite for spies. The only need for venturing out to sea is for a player who has assembled the missile to find his off-shore submarines which will see him home.

The spy who achieves his goal first gets onto the submarine and a girl jumps out of the hatch to give her hero a small kiss on the cheek. Finally, they both jump into the sub and olive daze James Bond style. Altogether I found

Island Capers a great game especially in the two player mode, but the computer is very hard to beat.

To overcome this problem I just changed the computer's IQ level.

One pleasing feature was that the program could be played via the keyboard as well as joystick. You also have control over which level you wish to play. On top of the levels there are two islands, making the game longer and much more fun.

The only disappointment was one small bug which I found. I somehow managed to get a screen where a tree had been split in half and all the perspective went wrong — this only happened once in many hours of game playing, so it wasn't too bad.

Spy vs Spy II is a well presented and exciting game. It is slightly difficult for younger players to get to grips with but great value for money.

Disc price is £14.95, cassette £8.95 and you need a minimum of 48k RAM.

Richard Warner

# Player missile graphics offer more than lasers

By STEPHEN WILLIAMSON

MY Atari 800XL came with an inadequate nine page reference guide that told me little of the computer's capabilities and nothing at all about the player missile graphics system.

And that's a pity, for player missile graphics—henceforth PMG—deserve a prominent place in anything that claims to be a guide to the Atari computer.

The name is derived from the days when most computer games featured fierce battles with alien invaders. The alien shape and the spaceship used to zap them are known as players, with the laser beams or missiles tearing through the screen appropriately known as missiles.

PMG were invented to make the art of the shoot 'em up games programmer easier. The system processes such things as animation, collision detection and shape priority. The name is misleading, for PMG can be used for all sorts of things, in

some Atari graphic art programs the system is used to draw and move a crosshair pointer across the screen that does not erase any shape that it passes over.

It can also be used to display graphs or charts in more business oriented programs.

Other computers, such as the Commodore 64, have similar graphic systems, but generally these are known by the updated and I think better name of Sprites.

Inside Atari 8 bit computers—these include the 400, 800, XL and XE series—see two microchips called Anic and GTIA which are separate microprocessors dedicated to handling screen displays.

If you followed Mike Row's series in last year's Atari User you will have seen how, by using display list interrupt techniques, Anic and GTIA can be accessed to produce spectacular multi-coloured effects. These chips also process the player missile system.

The Anic chip receives data from a program which is processed using Atari's own built-in programs and then the relevant information is passed on to the GTIA chip which takes care of putting the display on to the TV screen.

Unfortunately Atari has not seen fit to support player missile graphics with any Basic commands. There are some extended Basic programs that add extra commands which can be used to control the system, for example Basic XL, reviewed in the December 1985 issue of Atari User.

Without the advantage of extended Basic you must resign

yourself to lots of POKE statements if you wish to use player missiles in Basic programs.

This can be complex, but the effort required to understand the system is well worth it. Incorporating PMG can add a touch of class to a Basic program.

This month's program demonstrates some aspects of the system and illustrates how some of the jargon associated with PMG is employed.

The first part shows the screen area on which text and graphics can be displayed. This screen display area is called **Playfield 0**. The border around the display area is known as the background.

Anything appearing on the top of **Playfield 0** that is not a player or a missile is **Playfield 1**, **Playfield 2** or **Playfield 3**. These playfields are created by plotting points using the **PLOT** or **DRAW** commands or by directly **POKE**ing into the screen memory area.

When you use **COLOR 1** and **DRAW** or **PLOT** on to a graphics screen you are plotting **Playfield 1**, with **Playfield 2** and **3** plotted by using **COLOR 2** and **COLOR 3**.

PMG supports up to four playfields (0 to 3). Computers insist on counting from 0, unlike humans who prefer to start at 1, so **Playfield 1** is actually the second playfield — confusing isn't it?

In the demonstration we are using **Graphics Mode 5**, a four colour mode which consists of a 40 row by 80 column graphics display area on which pixels may be plotted, and a four line text window at the bottom of the screen on which the text appears.

For the purposes of PMG the text window is also part of **Playfield 0**. It follows from this that the text that appears on this window is also a **Playfield** — **Playfield 3** in this program.

Lines 180 and 190 draw a line around the edge of **Playfield 0** to outline the dimensions of the **Playfield 0**. This line is drawn in **COLOR 3** and is therefore **Playfield 3**.

In lines 220 and 230 a rectangle is drawn on **Playfield 0** in **COLOR 2** to become **Playfield 2**, with **Playfield 1** drawn inside the rectangle in **COLOR 1**.

The next part of the program shows what is meant by a player stripe. If you look closely at any of the standard Atari characters that appear in the text window when you run this

program, you will see that they are made up of a series of small dots known as pixels (short for picture elements). This is more noticeable on large screen televisions than small portables.

Each character is designed on an 8 x 8 grid which means that a character can be a maximum of 8 pixels wide and 8 pixels high.

A player is a shape made up of pixels in a similar manner — but instead of using an 8 x 8 grid, the player missile system uses either a 8 x 256 grid or an 8 x 128 grid.

The 8 x 256 grid is used for single resolution players, the other for double resolution players which take up less memory space but are much chunkier looking and made up of larger pixels than the single resolution players.

The demonstration program lights up all the pixels within a player stripe area to form a ribbon of colour that stretches from the top of the screen to the bottom.

While all playfields must be plotted within the **Playfield 0** area, shapes plotted within the player stripe can leave the playfield area and travel over the border at the top and bottom.

By altering the horizontal position of the player stripe, players can also reach the border area at the left and right hand edges of the screen.

In most applications only a few pixels within the player stripe are switched on, and the next part of the program shows the shape of a blob when selected pixels are plotted. This shape is known as a player which is plotted within the area of the player









## The adventurer's world is really looking up now

I SPENT some time at the Atari Show in the Champagne Suite at the Newotel, Hammeswiltch. Apart from the fact that the show was an absolute smash hit from everybody's point of view, there were some exciting developments in the world of adventuring.

The show was the first opportunity for everyone to see what sort of support the ST was going to get. So far Talent was the only software house fresh to the scene, although the Infocom range was there almost as soon as the ST.

Now comes The Pawn from Rainbird Software. Quite honestly this adventure features the best graphics I have ever seen in an

adventure on any machine. They are absolutely brilliant - and this from a confirmed graphics-hater, if you have an ST I urge you to rush out and see for yourself. I only wish I had one.

As it is, I shall have to wait for the 8 bit version, which should retain the graphics but in a somewhat different form.

Also at the show our old friends Level 9 (even if the friendship seems to be a little strained of late) showed the preview of The Prince of Magyk

### By Brillig

which I am sure I have spell wrong. This is the first of the games they will be releasing for the ST although the rest of their range are to follow.

The version they were showing was far from complete, as you could do little more than move around. The notice above the game did say that the authors knew there were bugs in it, so hold on all you glitch hunters.

Obviously it is too soon to try to review either product but in comparison with The Pawn the Level 9 graphics came a poor second. I feel that their ST graphics are the same as will appear in the 8 bit version, and hence could only be disappointing on a machine like the ST.

When you consider the power of packages such as Degas for the creation of artwork on the ST, 8 bit graphics are really not good enough.

### Glitches of the Month:

It is held off to Gavin Jones, winner of this month's T-shirt lot, wait for it, TWO Infocom bugs.

In fact they are similar bugs in the parser routine but I am determined to have an Infocom Glitch, so with apologies to the typesetters here goes.

In Zork II, type in TASTE MOCKLEK (don't ask me who he typed it) to receive the helpful prompt of "I don't think the gdar slyic awshjokpek-

lrghts enj would agree with you".

Not so much a bug as a complete Vogen dictionary, speaking of which, if you type EXAMINE ZEMGCK in HMOTG the computer says "How can you read a [jokew]?" How indeed?

Gavin reveals he is the possessor of Zorktools for his IBM which also allowed him to list out the complete vocabulary of HMOTG - all 800 words plus.

Now can anyone tell me the use of the words 'winings' and 'wesebe' in the game? A bonus T-shirt to be won for the best answer.



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**Filing charge:** 20p per unit of 2048 characters (per minute).

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**Information Databases:** Various charges. Any charges that may be applicable are shown to you before you obtain access to the database.

**MicroLink F505 service:** 2.5p per minute or part (1000 baud); 5p per minute or part (1200/75 baud).

Only applies to users outside the ECU London office.

**Telex registration:** £10.

**Outgoing telex:** 5.5p per 100 characters (S.P.); 1.5p per 100 characters; 1.5p per 100 (N.America); £1.25 per 400 (Rest of world); £2.75 per 400 (50p per sec).

Delivered messages and on the right answer are subject to a 25p per unit charge.

**Incoming telex:** 10p for each correctly addressed telex delivered to your mailbox. Obtaining a mailbox reference from the sender incurs a further charge of 10p.

If it is not possible to deliver a telex without a mailbox reference, if a telex is received without a mailbox reference the sender will be advised of non-delivery and asked to provide a mailbox address.

Each user validated for telex and using the facility will incur a charge of 1p storage per a month. Further storage charges could be incurred depending on the amount of telex storage and the use made of other code and message facilities.

**Telex messages:** £1.25 for up to 300 words. Telex messages sent via the wire with an illustrated greeting card for 40p extra.

**Kilobuying/Recharge.**

If you have a BT Payphone you can be paid automatically whenever a message is coming in your mailbox.

**International Mail:** For the first 2048 characters - 20p in Germany and Denmark; 30p in USA, Australia, Canada, Singapore, Hong Kong and Israel. For additional 1024 characters - 11p, 11p.

These charges apply to the transmission of information by the London service to other London services outside the UK and the UK of Main. Multiple copies addressed to the same system have twice only one transmission charge.

**Billing and Payment:** All charges quoted are exclusive of VAT. Currently all bills are rendered monthly.

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This authority you will further authorize in writing to charge to my/our account with you on or immediately after 15th day of each month pre-agreed amounts which may be defined therein at the instance of Bank/Telecommunications Ltd - TELECOM GOLD by Direct Debit. Bills are issued 10 days before date processed.

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Account Number

### B. Please debit my/our

Account/Visa / American Express  
account number

\* Debit card users only

I/We authorize you until further notice in writing to charge to my/our account with you on or immediately after 15th day of each month pre-agreed amounts which may be defined therein at the instance of Bank/Telecommunications Ltd - TELECOM GOLD by Direct Debit. I/We authorize charges supplied to your account.

Signature \_\_\_\_\_ Date \_\_\_\_\_

### C. Please invoice the company/authority.

If you select this option, which is ONLY AVAILABLE to government establishments and Public Limited Companies you will be sent an authorization form for completion which will require an official order number to accept unquoted amounts.

## "Match of the Day" replay for Horse Play

A NEW feature can be added to the excellent *Horse Play* from the March issue by entering the lines on the right.

They enable scores to be replayed instantly — just like Match of the Day.

An error keeps most of the X,Y values. These are then used to replot the track squares — see line 8020.

After the replay there's a short pause before the program returns to the end screen. — **P.J.S. Dean, Wellington, Surrey.**

## Cost of expansion

In reply to G.T. of York about expanding his 60001, the RAM pack he is after now costs £85.00. The cost of a new 60001 is only £40 more.

How does Atari account for this? If they can cut 50 per cent of the 60001, then allow us this with the RAM pack.

Recently Jack has cut the cost only on the computers that did not sell. The reason that they did not sell was that the add-ons were over priced.

If Atari can price their goods more reasonably they might sell a few more computers.

Atari has left all 60001 owners with a computer that seems too much to expand. — **T.J. Keane, Beaconsfield.**

## Attack that fails

HAVING recently bought an Atari 60001, I started buying the Atari User.

I thought I would have a go at typing in the *Atari Attack* game by S. Williamson from the January Atari User.

I typed it out and double checked. When I ran the game I kept getting 0 on line 20, which is a data loading error.

Could you please let me know if there has been a printer's error on this game or can you tell me why I keep getting this error? — **M.**

```

100 DIM BALLE
101 DIM
102 IF T=1 THEN RETURN
103 ADDIC(200+1)ADDIC
104 POSITION 1,117 PRINT"WINNER REPLAY"
105
106 IF PERCENTAGE THEN END
107 ADDIC(200+1)ADDIC(200+1)
108 DIM
109 PRINT"SCORES: 200+1 200+1"
110 PRINT"200+1 200+1"
111 ADDIC(200+1)ADDIC(200+1)
112 END
113 FOR I=1 TO 2000000
114 NEXT I
115 END
116 END
117 FOR I=1 TO 2000000
118 NEXT I
119 END

```

Leppage, Bagenham, Essex.

■ You've made a typing error — not in line 103, but probably somewhere in the DATA in lines 180-820.

## Seeking an arrow

I RECENTLY bought an 60001 computer and was typing your *Edge* game when I came across a character of which I couldn't figure out how to print.

It was in the 60000 and on 6010. The character was the problem: was I couldn't print the arrow. — **Nigel Street, Boreham Wood, Herts.**

■ The left-facing arrow is achieved with ESC CTRL +. See page 61 of our December 1985 issue for a complete list of those elusive special characters.

## Well bugged ST basic

I BOUGHT my Atari 60001 in October 1985 and it may well

be a wonderful machine but how can I tell?

I was promised that a Pascal compiler was ready and set off my money in October. The latest word is that I will get it this month, but I've given up hoping. It is all too disappointing.

I was promised that a Basic would be sent within four days of my purchase. Atari took four weeks and it is full of appalling bugs.

There is no accurate cursor control command and Gen keeps interrupting programs at run time unless I remember to hit them in full words. The manual is incomplete — vital tables and portions of example program listings are missing.

Atari Machines are very expensive — they accurately indicate that a lower Basic is better than no programming language at all, for they are only just right.

By the way, don't ring Machine unless you are prepared to pay. Telecom at least 25 minutes in pay music through the phone — not a pleasant experience.

Don't buy a book called the ST Companion by Jeremy Vint, too much of it is about things that Atari won't give us.

She Gen Drive and Paint and Write.

Congratulations to Andrew Bennett, who tells us how to use the Gen INSTALL option — I've never seen a 60001 where this worked.

I long to see my machine — my business needs it and here it sits, waiting to do but look at it and play with the word processor which is vastly inferior to the Microsoft I use on my 60001 Mark One Machine eight years ago. Heck, it doesn't even tell me when I reach the end of a page.

The line counter counts the lines from the top of the screen, so unless a piece of information as one could hope to be plain.

Four, still hoping that the book I own had for a total write, but hope is waning. — **Marvin Frey, Appleton, Kent.**

## Happy victim

DO I think a note of appreciation in *Atari User*, Palmer's letter from the February edition of Atari User, concerning the bargain priced 60001 units. Could it be that he has paid twice the price for his?

As a happy victim of the Atari master plan to grab a larger slice of the market I can confirm that I and at least three other new owners have units which are fitted with the Revision C ROMs, as Mr Palmer you have badly misjudged Atari and all that it stands for.

With regard to the comments about the staff of outlets such as Orons, Becks or Lanks — more power to them. They provide just as good a service if not better than the so called specialist

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computer shops which, in my area appear to have a major interest in Atari and associated software — if you happen to own a Commodore or Sinclair that differs.

Apologies for sounding off but that letter particularly annoyed me. — **A. Abenrabnia,** Plymouth, Devon.

## Contact needed 1

I OWN an Atari 1300X Data Recorder and TOS8-Disc Drive which I have just bought, and would like to correspond with Atari users anywhere in the world. — **Sergio Trigo, Rua General Silva Froese 151, 4D 1806 Lisbon, Portugal.**

## American source

IN the February Atari User there was a letter asking for information about software for birds.

While researching some of my older computer magazines I found an advertisement in the October 1984 edition of Atari which offers a Bridge Pro for the Atari which should work OK on the 800XZ.

The Californian company concerned was Computer Management Corporation, 2624 Robinson Court, Walnut Creek, CA 94596 (415) 935-8076. — **A. J. Daniels,** Warrington, Suffolk.

## Bridge in sight

A.S. HERMOY of Copenhagen wrote to you regarding Bridge for the 1300X.

I own an 800XZ and decided in October to buy Computer Bridge for my husband for Christmas. I eventually located down a supplier who imports it from the States. Unfortunately due to problems with the manufacturer it took over three months to arrive but it was well worth the wait to see the pleasure an

# ATARI USER

## Mailbag

WE welcome letters from readers — about your experiences using the Atari machines, about tips you would like to pass on to other users... and about what you would like to see in future issues.

The address to write to is:

Mailbag Editor  
Atari User  
Europa House  
55 Chester Road  
Hazel Grove  
Stockport SK7 5NY

my husband's face when he opened his birthday surprise present.

The staff of the company concerned, Software Express, were very patient and sympathetic when I kept chasing them as Christmas drew nearer, and did all in their power to get the package on time. — **Mrs S.D. Morgan-Gibbins,** Ashford, Kent.

## Flight simulator

I AM interested in Night simulation programs and have all the programs that I know of. I'm sure there are more.

I am looking for an interested party to assist in designing a definitive flight simulation program.

Through my knowledge of actual flying, general interest in aviation and seeing the good and bad parts of the many flight programs, I feel I can offer the basis for a realistic program.

Although I have no knowledge of programming the Atari 800XZ or BBC if that I own, I do have basic knowledge of the machine operation.

I would be pleased to hear from anybody who has a flight simulation program that is not generally available, or from anyone interested in helping me get this project off the ground. — **Alan J. M. Ford, 27 Colne Avenue, West Dinton, Middleson.**

## Loading routine

IN the January Mailbag you advised a reader who wanted his basic programs to run automatically when loaded, to use SAHR "C".

However this was a bit more complicated than with CSAVE, so your reader might be interested in the small routine below, which loads and runs CSAVD programs.

First, SAVE" C": the routine on its tape and then CSAVD your basic program after it. To load, Rewind the tape, type RUN" C" and sit back. — **P. J. Nixon, Shiffield.**

```

00 2500 0000 0000
01 2501 0000 0000
02 2502 0000 0000
03 2503 0000 0000
04 2504 0000 0000
05 2505 0000 0000
06 2506 0000 0000
07 2507 0000 0000
08 2508 0000 0000
09 2509 0000 0000
10 2510 0000 0000
11 2511 0000 0000
12 2512 0000 0000
13 2513 0000 0000
14 2514 0000 0000
15 2515 0000 0000
16 2516 0000 0000
17 2517 0000 0000
18 2518 0000 0000
19 2519 0000 0000

```

## Contact needed 2

WHY don't you modern users give England's biggest Atari bulletin board a call?

It has advanced specialist interest groups, catering to most home users and it also has a sig for Synops only, which is for Synops of only BBC to use for exchanging information.

Some of us Atari users are trying to organize an Atari users club to help each other. For more details yell for me on

the board.

The board is on DISK 5007 11 ring back 24 hours a day. It is a 300 baud system. — **SYNOPSIS BOY** Webbs, Worthing, Sussex.

## Interface advice

I HAD just bought a printer to go with my 800XZ. Having used an Atari 1002, I decided it was too noisy and slow for me so I purchased an 800 Interface and a Smith-Corona Master 80 dot matrix printer.

I acquired them both from a shop in Warrington called AB computers. I had recommended them as being extremely helpful and keeping a great selection of software for the Atari.

When I looked up the printer and Interface and filed out my Home File Manager I discovered it would only print out the letter A in place of a character.

In borrowing an Epson MX80 from work, I linked this to the interface and tried again. This time it printed out the data, only it was all in italics.

Searching the Epson and Smith-Corona manuals I discovered that the Home File Manager was sending out ASCII character codes in the range of 128 to 255. This was too high for my printer, and provided italics on the Epson.

So I ground the MISE on the data line by putting the wire on pin 18 on to pin 11 on the plug going into the 800 interface.

I hope this information comes in handy for other Atari users who are in the same position. Could we have a disc of the best of Atari User programs in the near future? — **Gary S. Bates, South.**

## Ribbons available

FOR all those frustrated owners of the Atari 1002 printer who are experiencing difficulty in obtaining replace-







**THIS program was written in response to my youngest daughter's request for something to administer her weekly spelling test.**

It illustrates string storage in a loop by string joining, as opposed to a string array which the Atari lacks.

The user is invited to enter spellings that are to be tested. The words are then displayed singly on the screen and the user is invited to enter the spelling.

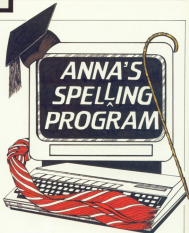
If the spelling is incorrect the word is redisplayed until a correct response is given. The number of wrong responses is counted and suitable reinforcements are displayed at the end of the program. These can be altered to suit the individual child.

Although the program works as it is, readers could use it as the basis for a more ambitious program. For example, you might want to allow no more than three wrong responses or you might want to give different feedback depending on the nature of the error.

Adults could make use of the program as part of a foreign language learning exercise, or even to improve their own spelling.

Make sure you enter the words correctly in the first instance.

Mike Rooker



## MAIN VARIABLES

- AS** Main string that substrings are joined onto.  
**MME** The substring name.  
**X** Number array to record number of letters in substring.  
**SC** Spelling attempt.  
**T** Error counter.

## PROGRAM STRUCTURE

- 30** Dimension strings and arrays.  
**50** Initialize variables.  
**80** String joining and counting sequence.  
**110** Printing substrings from main string.  
**140** Error counter.

```
10 DIM M(20) : SPELLING PROGRAM
20 DIM M$ BY REF : MME
30 MME = ""
40 DIM SC(26) : DIM X(26) : DIM T
50 PRINT "WHAT IS THE NEXT SPELLING?"
60 M$ = IN$ : MME = M$
70 PRINT "PLEASE ENTER SPELLING" : GOTO 10
80 M$ = ""
90 PRINT "SPELLING OK" : GOTO 10
100 DIM M$(26) : DIM SC(26) : DIM X(26)
110 NEXT M$
120 PRINT "ENTER WORDS TO BE TESTED"
130 FOR I = 1 TO 10
140 PRINT "WORD " I : GOTO 10
150 NEXT I
```

```
160 PRINT "GOOD"
170 PRINT "ENTER THE SPELLING" : GOTO 10
180 M$ = ""
190 IF M$(1) = "A" THEN M$ = M$ + "A"
200 IF M$(2) = "A" THEN M$ = M$ + "A"
210 IF M$(3) = "A" THEN M$ = M$ + "A"
220 IF M$(4) = "A" THEN M$ = M$ + "A"
230 IF M$(5) = "A" THEN M$ = M$ + "A"
240 IF M$(6) = "A" THEN M$ = M$ + "A"
250 IF M$(7) = "A" THEN M$ = M$ + "A"
260 IF M$(8) = "A" THEN M$ = M$ + "A"
270 IF M$(9) = "A" THEN M$ = M$ + "A"
280 IF M$(10) = "A" THEN M$ = M$ + "A"
290 IF M$(11) = "A" THEN M$ = M$ + "A"
300 IF M$(12) = "A" THEN M$ = M$ + "A"
310 IF M$(13) = "A" THEN M$ = M$ + "A"
320 IF M$(14) = "A" THEN M$ = M$ + "A"
330 IF M$(15) = "A" THEN M$ = M$ + "A"
340 IF M$(16) = "A" THEN M$ = M$ + "A"
350 IF M$(17) = "A" THEN M$ = M$ + "A"
360 IF M$(18) = "A" THEN M$ = M$ + "A"
370 IF M$(19) = "A" THEN M$ = M$ + "A"
380 IF M$(20) = "A" THEN M$ = M$ + "A"
390 IF M$(21) = "A" THEN M$ = M$ + "A"
400 IF M$(22) = "A" THEN M$ = M$ + "A"
410 IF M$(23) = "A" THEN M$ = M$ + "A"
420 IF M$(24) = "A" THEN M$ = M$ + "A"
430 IF M$(25) = "A" THEN M$ = M$ + "A"
440 IF M$(26) = "A" THEN M$ = M$ + "A"
450 PRINT "GOOD" : GOTO 10
460 PRINT "BAD" : GOTO 10
470 PRINT "GOOD" : GOTO 10
480 PRINT "BAD" : GOTO 10
490 PRINT "GOOD" : GOTO 10
500 PRINT "BAD" : GOTO 10
510 PRINT "GOOD" : GOTO 10
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960 PRINT "BAD" : GOTO 10
970 PRINT "GOOD" : GOTO 10
980 PRINT "BAD" : GOTO 10
990 PRINT "GOOD" : GOTO 10
1000 PRINT "BAD" : GOTO 10
```

100 IF T(1) THEN PRINT "ONLY ONE  
WORD. BOTH GOOD. TRY AGAIN."  
110 IF T(2) THEN PRINT "YOU WERE  
TO LOOSE FOR THIS ONE. TRY AGAIN  
?"



PROGRAM STRUCTURE			
Line	Code	Code	Code
10	30	50	70
20	40	60	80
30	50	70	90
40	60	80	100
50	70	90	110
60	80	100	120
70	90	110	130
80	100	120	140
90	110	130	150
100	120	140	160
110	130	150	170
120	140	160	180
130	150	170	190
140	160	180	200
150	170	190	210
160	180	200	220
170	190	210	230
180	200	220	240
190	210	230	250
200	220	240	260
210	230	250	270
220	240	260	280
230	250	270	290
240	260	280	300
250	270	290	310
260	280	300	320
270	290	310	330
280	300	320	340
290	310	330	350
300	320	340	360
310	330	350	370
320	340	360	380
330	350	370	390
340	360	380	400
350	370	390	410
360	380	400	420
370	390	410	430
380	400	420	440
390	410	430	450
400	420	440	460
410	430	450	470
420	440	460	480
430	450	470	490
440	460	480	500
450	470	490	510
460	480	500	520
470	490	510	530
480	500	520	540
490	510	530	550
500	520	540	560
510	530	550	570
520	540	560	580
530	550	570	590
540	560	580	600
550	570	590	610
560	580	600	620
570	590	610	630
580	600	620	640
590	610	630	650
600	620	640	660
610	630	650	670
620	640	660	680
630	650	670	690
640	660	680	700
650	670	690	710
660	680	700	720
670	690	710	730
680	700	720	740
690	710	730	750
700	720	740	760
710	730	750	770
720	740	760	780
730	750	770	790
740	760	780	800
750	770	790	810
760	780	800	820
770	790	810	830
780	800	820	840
790	810	830	850
800	820	840	860
810	830	850	870
820	840	860	880
830	850	870	890
840	860	880	900
850	870	890	910
860	880	900	920
870	890	910	930
880	900	920	940
890	910	930	950
900	920	940	960
910	930	950	970
920	940	960	980
930	950	970	990
940	960	980	1000

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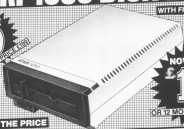
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# American Scene

EDWARD SHARR reports

FOR many years the availability of new software and peripherals for Atari machines has depended heavily on America as the main source of supply. Recently this has begun to change, with more and more UK software houses turning to the development of software for the Atari.

Even so the majority of software released in the UK is of US origin, imported by companies such as US Gold, Aristolsoft and more recently Databyte. They are all engaged in licensing programs from American software houses and releasing them on to the British market and usually at lower prices than in their country of origin.

However even when a US company licenses a newly released US title for manufacture in Britain it can take some considerable time to see it finally arrive in local computer stores.



Since Atari first started making an impact in Britain, back in the days of Cherry Labs — the first company to import Atari products — UK users have found difficulty in obtaining American software as soon as it was released. More recently we have seen increased activity from two major Atari distributors, Software Express and Silica Shop, who both specialise in getting new software into the UK from the States.

Looking at developments in the two markets, it becomes apparent that the British are beginning to show much more independence, illustrated by the arrival of new software houses on the Atari scene, but British users still have to rely heavily on their cousins across the ocean to feed the way.



Many software houses have taken advantage of the \$12k of RAM in the ST and developed sophisticated adventure games with both text and graphics.

Penguin Software has released

Transylvania and a follow up called The Crimson Crown (Return to Transylvania), the first in a series of illustrated novels with a 1000 word vocabulary and 100 detailed graphic pictures. However these are not up to the quality of these pictures to be found in The Paws from Magnetic Scrolls.



Sandog: Frozen Legacy will turn a few heads. Available for the colour monitor version only, this is a massive science fiction adventure covering 60 cities on 16 worlds in 12 star systems. The real-time 3D action with scrolling display has its roots in Elite but you can also walk into buildings and barter with the animated characters you meet there. A very impressive piece of software.

For younger people there is Walt Disney's Wonderful World in the Hundred Acre Wood, produced by Stern On-Line. This sophisticated adventure, for 7 year olds and upwards, features all the favourites — Tigger, Eeyore, Piglet, Kanga, Roo, and, of course, Christopher Robin.

The package comes complete with a large map and a colourful booklet. Future releases include Mickey's Space Adventure, Goofy's Word Factory, and Donald Duck's Playground.



Activision's latest acquisition, Infocom, has released its latest adventure, called Ballyhoo. In this you join a travelling circus and find yourself engaged in the search for the owner's daughter.

It's an adventure that really lives up to the Infocom name. It has just started arriving in Britain and is currently retailing for £34.95 and is available for both 8 and 16 bit Atari machines.

One exciting new company in the ST field, based in Los Gatos, just outside Sunnyvale, California, is

quantity called Hippopotamus Software. Hippo, as I affectionately call them, have been engaged in producing software for the ST range for the last few months, but I was thrilled to find out what was in two new packages they are developing. Both are aimed at the music market, one for the home user and the other for the professional musician.

They are both sound sampling devices. Basically they are programs that allow you to record a sound, either from a microphone or a synthesiser and play it back through your computer. But there's much more to it than this because you can edit its characteristics in many different ways.



For instance you can speed up or slow down the playback, or reverse the sound wave so that it is played back in the opposite direction to the way it was recorded. Or you can take the middle of the sound wave and place it at the end or at the beginning. Put like this, it might not sound that fantastic, but the resultant effect is quite outstanding.

Quincy Jones, one of the world's most talented musicians and producers, has already placed his order for the package.

If you would like a better idea of just some of the effects sound like, just listen to groups like Go West, Sigue Sigue Sputnik and Paul Hardcastle.



In these articles I hope to bring you first news of new products appearing in the States, although I will not be attempting to give you detailed reviews. This I will leave to Atari Owner's team of specialist reviewers.

Next month I will be bringing you a lot more gossip about new products and some still in development, plus some exciting news from Atari in the USA.

## These back issues are still available

**May 1988 issue:** Featured Jack Travençolo, creator of the new machine, Atari's Special Advertising Section, Tom, Heron utility, Software review, Reviews of the 8002 Microscope, Atari Insights - *Hi Vis, Registers and Graphics.*

**June issue:** Analysis of the 13002, Software Advertising, Keyboard shortcuts, Software reviews, Tony Jump, Microscope, Reviews, Atari Insights - *Hi Vis, Registers and Graphics, special 12 page feature on Communications.*

**July issue:** Interview with Scott Ray, DDK's 175 Communications Advertising, Display List Tutorial, Software review, Power Functions, Feature Hunt, Register News, Microscope Insights - *Hi Vis, Registers and Graphics.*

**August issue:** Analysis of 52001, Software reviews, reviews, From Canada, Advertising, Stock Letter program for sale at Logo, Super 1000, New 3.5 upgrade utility, Display List Tutorial, Microscope, Software review, Insights - *Hi Vis, Registers and Graphics.*

**September issue:** 8 page special on the 52001, Made in Canada, Jump routine, New March, Data Maker, Display List Tutorial, 80000 addressing routine, in connection with Logo, Software review, Insights - *Hi Vis, Registers and Graphics.*

**October issue:** Computer Control graphics program, Update for 800 8000 controller, 13002 Keyboard utility, New Atari memory-mapping utility, Feature, Software reviews, 80000 operating instructions, Register, Insights - *Hi Vis, Registers and Graphics.*

**November issue:** Console program, Mouse operator utility, ST graphics examples, ST software for Guy Fawkes game, Display List tutorial, Advertising, Microscope, Software review, Insights -

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**December issue:** Cheat code program, Special keyboard characters, Atari II review, GameWise and GameDraw, Controller game Demo, Display List tutorial, Software review, Left-handed joystick, Advertising, Registers and Graphics.

**January 1989 issue:** Machine code game (P. 1), Atari education, Song ST monitor review, Hardly game, Character update, Listing utility, Database game, 1025 review, Display routine, programming in C on the ST, Advertising, Software review.

**February issue:** Machine code game P. 1, Dragon games in Logo, Finding colour utility, Microscope introduction, Atari project, Memory management techniques, Interrupt driver check, Reviewer's queries, ST problems page, Advertising, Software review.

**March issue:** Machine code game P. 1, Insights four pages, Console P. 1, Supercolours, Check rates for each game, Book review, Advertising, Software review, PLUS! Atari ST Exam K Special review and Micro and Colour game, Plus P. 1, Making the most of the ST.

**April issue:** Sound synthesizer, Console P. 1, Using modes 10 and 10, Reviewer's queries, Also drawing printing utility, Advertising, Software review, PLUS! Atari ST Exam Review of ST's Model 2, review on the Multigame, Making the most of the ST, and all the latest news.

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