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News
All the latest developments in the expanding world of Atari computing.

Sounds
Use Stephen Williamson's synthesiser program to coax sounds you never thought possible from your Atari.

Software
Mike Rowe and Bob Chappell share the work to bring you this month's reviews – Spellbreaker, Alternate Reality, Whirlinurds and Lands of Havoc.

Adventuring
Brillig checks out his acne rating with a look at Adrian Mole, plus hints and glitches.
Compiler
Part 2 of Frank O'Dwyer's series aimed at speeding up your Basic programs.

Utility
Keep track of what's on all your discs with Douglas Ewan's utility program.

Graphics
John White will help you make better use of Modes 12 and 13.

Mailbag
Lots of letters from you, the readers. Have you written recently?

Game
If you thought Mancuna was something to do with a Northern town, take a look at this fascinating strategy game from David Reeves.

Order Form
Take your choice of two special offers if you subscribe to Atari User this month.

You can save up to £8 off the exciting Steve Davis Snooker or £4 off the fact-packed Working with the Atari ST.

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UK release of two new ST machines, Unix on the ST, and more.

6 Advice
Andrew Bennett helps you to make the most of your ST. This month there's more on using GEM, plus hints and tips.

9 Programming
Sol Guber gives an enthusiastic reception to TDI's Modula-2, a powerful language invented by the man who created Pascal.

14 Music
Anthony Ginn goes looking for software to drive the ST's Midi ports.
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Atari denies 8 bit customers ignored

ATARI has denied that it is treating 8 bit customers as poor relations. The criticism was levelled against Atari during a poll of 100 users drawn equally from the ranks of 800XL and 130XE owners.

More than 80 felt the company had turned its back on the 8 bit machines in favour of the ST range.

Typical of the comments was: "The arrival of the ST machines meant that Atari just doesn't want to know us any more. It is annoying when you think that although the ST may be the icing on the cake, we make up the cake itself".

When the dissatisfaction among 8 bit users was brought to the attention of Atari boss Max Bambridge, he was quick to give assurances that the complaints were unfounded.

However, he did admit the publicity that has surrounded the arrival of the ST machines has tended to put the less powerful models in the shade.

**Sensitive**

"We are very sensitive to this", he told *Atari User*, "for in no way do we want any of our customers to feel as though they are being treated any less fairly than others."

"The truth of the matter is that we are totally committed to the 8 bit market - just as we are to the 16 bit."

Max Bambridge points to the launching of a new low cost colour monitor for the 130XE as being an example of the company's on-going support.

"It is our intention to see that the 130XE remains the leader in its own sector of the market", he said.

As part of this plan the Atari UK boss has pledged his support for companies wishing to develop projects for the 8 bit machines.

"We are eager to help anyone in this area, whether it be with the loan of development machines, programming tools or just advice", he said.

"That's how important the 8 bit market is to us".

**ST TOOLBOX**

A COMMAND line processor has been released for the 520ST by Paperlogic.

Called the ST-Toolbox it is a productivity tool aimed at enhancing the machine's efficiency and performance.

It costs £29.95.

GAMES BOOM IS ON ITS WAY

THIS year will witness a massive increase in the amount of software available for the Atari 8 bit machines, the 800XL and 130XE.

An industry survey carried out by Atari User has revealed that the boom is already underway, with at least 100 new titles expected to come on to the market in the next few months.

More programs - and more outlets stocking them - should end the longstanding complaint by Atari 8 bit enthusiasts that software for their machines is often hard to find. There are two main reasons for the brighter outlook.

One is the deal with High Street giants Dixons and Currys which increased the 800XL user base by 100,000 at Christmas. The second release here of a host of 8 bit titles from the United States.

Software Express distribution director Ken Howells told *Atari User*, "A lot of software companies have suddenly realised there is a big market for products for the Atari 8 bit range."

"Firms that previously wouldn't have bothered to convert their titles for the Atari are now doing so in increasing numbers and programmers all over the country are being snowed under with conversion work."

"American software houses are licensing large numbers of their Atari 8 bit programs to British firms. Some are even opening their own offices over here."

"We are in the process of introducing 50 new titles to this country, many originating in the USA, and I expect that total to be easily doubled by releases from other companies."

Two or three new outlets a week are contacting us to order Atari programs. If any users have problems getting Atari 8 bit software these days they should change their retailer!".

Distributor Microdeal reports that all its Atari 8 bit software is selling extremely well.

A spokeswoman said: "We carry six titles at the moment. Perhaps we should be handling more - there's obviously a big demand for them".

Silica Shop is currently releasing 30 new products, many of them American imports for Atari 8 bit machines.

BACKING FOR ATARI PROJECTS

HALF a million pounds is available for projects for the Atari range. The man with the money awaiting investment is Barry Kite, managing director of DataStar Systems.

"I am prepared to invest in likely looking products, existing ones that may need a boost, or any which still may be at the idea stage", he says.

"As a nation we are notoriously bad at ideas but terrible at putting them into practice - or distributing lack of capital".

DataStar System manufactures the Magic Modem. It was this project with its heavy development costs which set Barry Kite thinking about investing in his own personal venture capital fund.

**Flounder**

Rembering the problems he had, he said: "We realise how easy it could be even for an exceptional product to flounder if you did not have enough capital behind it.

"Really there is no one out there you can turn to if you do not have money available."

"That is why I decided to make the offer, not just for profit for myself, but to help the industry as a whole".

April 1986 *ATARI USER*
Inspired by years of listening to the electronic sounds of rock groups like Tangerine Dream and Pink Floyd, I have written a synthesiser program that activates the hidden depths of the Atari sound chip.

It may not be up to the standard of Jean Michel Jarre, who uses electronic sound generating equipment costing many thousands of pounds, but the program is certainly fun to play with.

For best results connect your Atari directly to your stereo system via the monitor output and suitable leads. Alternately use a television with an earphone output and connect this to your amplifier. Turn the volume up.

Fortunately, you don't have to know a great deal about music or even computers to operate the program and produce a wide variety of sound ranging from the melodious to the cacophonous.

To control the program I have imitated Atari's big brother, the ST. Well I admit that the program is not quite as sophisticated as the ST, but the principle is the same. The joystick acts as a poor man's mouse. Each screen display presents a number of options. The joystick moves a cursor to the chosen option and a press of the fire button activates that option.

This user-friendly approach is an ideal way for those unfamiliar with computers or the qwerty keyboard to operate the program. Inverse characters indicate that an option has been activated.

For example, go to the One Channel Sound page and you will find that the sound is pre-set to a 64kHz main base clock and pure sound. To switch on other sound attributes the cursor can be positioned anywhere on the line where the chosen option appears.

The program will not allow you to switch on incompatible options. For instance, if you switch on Distortion 2 any other distortion option previously turned on will automatically be cancelled.

When the desired combination of sound attributes has been chosen place the cursor over the Play box and press the fire button. Control then passes to the middle two rows of the keyboard.

The display at the bottom of the sound pages shows how the musical
notes have been allocated to the keys in a similar way to the piano keyboard with the sharps positioned above the natural notes.

The musical scale is true for the preset sounds, but other sound options may give various degrees of discord.

To exit from the play mode press the Select key and a keyboard music key at the same time. To return to the main menu go to the Return box.

The ADSR section enables you to define a sound envelope. If you are unfamiliar with the ADSR envelope study Figure I which shows a graph of the sound envelope.

Attack is the time taken for a note to reach full volume and Decay the time taken to reach the Sustain Level. Sustain is a measure of how long the note stays at the sustain volume level before the release when it fades to silence.

When the cursor is over one of the ADSR labels at the bottom of the option menu and the fire button pressed the label will flash to prompt a keyboard input. For Attack, Decay, Sustain and Release, enter a value of between 1 and 255. If the number is less than three figures press the joystick button or the Return key to pass control of the program back to the joystick.

The Sustain Level requires a value of between 1 and 14 and only needs the joystick button or Return key to be pressed if a single figure is entered.

The program will not allow an invalid number to be entered in the ADSR envelope parameters. To demonstrate the ADSR sound envelope enter Attack 2, Decay 10, Sustain 40, Release 50 with a Sustain Level of 9 to produce a crisp piano type sound.

To obtain a woodwind type sound try Attack 20, Decay 30, Sustain 50 and Release 50 with a Sustain Level of 6.

A snare drum type sound is made by setting the 64kHz clock (option 1), the 1.79 MHz clock (option 4), the Distortion 3 (option 8) and the 9 bit poly counter (option 9), followed by Attack 5, Decay 5, Sustain 5, Release 10 and Sustain Level 6.

In order to understand what each of the program options does it is useful to know something about how the Atari sound chip functions. For a more detailed introduction to the subject see the May and June 1985 articles in Atari User by Pete Bibby.

In Basic there is just one command to control sound - called appropriately enough SOUND. As well as accessing the sound system by means of this command it is possible to work directly on the sound registers which are found at addresses 53760 to 53768.

53760, 53762, 53764 and 53766 control the pitch of sound channels 0 to 3 and addresses 53761, 53763, 53765 and 53767 affect the distortion and volume for each sound channel.

For example, a sound can be switched on using a command such as SOUND 0,90,10,10 or alternatively the same sound can be achieved by POKE 53760,90 followed by POKE 53761,234.

In the program the play mode runs generated using a 64kHz system. The lower the frequency of the clocking, the lower the note that results. Therefore lowering the 64kHz clock to 15kHz by choosing option 2 changes AUDCTL to give notes of a lower pitch.

The 1.79MHz clock (option 4) gives notes of a very high frequency.

The high bandpass filter (option 3) filters out lower frequency sound to give a higher tone.

During the distortion options (5 to 8) the distortion effect is achieved by something known as a poly-counter which merges random waveforms with pure sounds.

The value of the poly-counter affects the speed of these waveforms. Normally the Atari is set to a 17 bit poly-counter.

To see this in operation, switch on distortion number 3 in the One Channel mode, but without the 9 bit poly-counter. Enter the Play mode and press Key L.

Exit from the Play mode and switch on the 9 bit poly-counter. Again press Key L in the Play mode and you will notice how the change of poly-counter speed affects the distorted sound.

Of course when using pure sound the 9 bit poly-counter has no effect, and in other distortion and poly counter combinations, the change may be difficult to detect.

Option 10, Repeat, is used only during the ADSR section and, as the name implies, causes notes to be repeated rapidly.

The best way to use a program like this is to experiment and see what you can find among the Atari's vast range of sounds. Have fun, but spare a thought for your neighbours.

Note: The program will not run on a 16k machine.
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April 1986 ATARI USER
Have fun with the NURDS

WHIRLINURDS is one of the latest releases from US Gold, who have a reputation for quality Atari software. This is no exception.

The plot behind the game is that the four Nurd brothers have run out of food and decide to raid their friend's house, a greengrocer called Squelch.

He is on holiday and has boobytrapped his house and the Nurds have to avoid the traps and eat all the food.

Whirlinurds is basically a game of exploring rooms, avoiding traps and getting prizes. It may sound all too familiar but is in fact significantly different from other such games.

It is for one to four players who can work individually or as teams.

It consists of 50 rooms, each with a different set of problems or traps. You can start at the beginning of any block of 10 rooms by selecting A-E at the start.

However the last 10 rooms are known as the Ultimate Feast and can only be entered by means of a password. This is gleaned in four parts by completing each of the previous groups of 10 rooms and is not easy.

Each room covers an area equivalent to about six screens, and the area shown on the screen scrolls very smoothly as you approach the edge.

You can imagine 50 rooms like this mean that the game is big and will not be exhausted quickly.

Your man is a Nurd, a squat plump figure with a stupid grin and a propeller stuck out of his head.

The four players are known respectively as Haymish Pupkin, Naples Yertz, Hoosie Nurd and Melvin Lugh. They are identical apart from the colour of their shirts.

The control of your Nurd is quite novel. When walking it is standard -- he will walk left when the joystick is pushed left and right when the joystick is pushed right. However when the trigger is pressed the propeller starts to rotate and your Nurd will begin to rise.

If you release the trigger or if he hits a wall or platform he will begin to descend slowly and will not rise again until he has had his feet on firm ground.

He does have an emergency super leap which can be obtained by pushing the stick up. This is called a retro boost.

You get only one leap per screen or life and here lies a small problem.

It is far too easy to accidentally use this leap in the excitement of play and jump straight into disaster or at the least be deprived of it for later use.

Your man is manoeuvred around the room collecting food. Strange creatures, Nurds -- they eat anything from pizzas to light bulbs and bicycles.

The walls, platforms and floors are safe to land on or bump into, but anything flashing is deadly.

These hazards are exotically named and include slinky snakes, bug eyes, jump bugs, globos, spudniks and the Nipple of Death.

In addition there are keys which can be used to unlock closed off areas of the rooms, but beware -- they can also unleash further hazards. Small boxes on the floor known as blast squares will give you the same effect as a super leap, but also use up your ability to perform these at will.

The graphics are very good, if not spectacular especially the Nurds. They turn slowly in a 3D effect on changing direction.

The sound effects are also good and add considerably to the feel of the game.

The background music especially adds to the excitement. As the time limit for each room runs out the music gradually quickens, instilling a sense of urgency in your play.

There is also a second level in which the rooms are invisible, except for the flashing obstacles. The Nurd has a torch illuminating only a small area around him.

Whirlinurds is certainly well worth the price of £9.95 or £12.95 on disc. It is novel and has a definite goal to achieve which I feel always keeps a game's interest alive.

I certainly don't think I'll tire of this quickly.

Some of the rooms are extremely difficult and will keep even the most experienced player occupied.

Mike Rowe

Living dangerously in the city

YOU don't come across many fantasy role-playing games for home computers, and I don't class adventures as being in that category, so when one appears on the scene it's well worth taking a closer look at.

Alternate Reality is such a game and is the best of its kind I've seen. It has excellent graphics, bags of action and options and uses music to good effect.

You've been kidnapped by aliens and dumped in a room with only one exit. At the start you are presented with a view of the exit gate through which the impressive city of Xebec's Demise can be seen.

Search me who Xebec was, but since he's described as deceased you can draw your own conclusions about the city's safety.

Near the gate, which is itself barred by a force field, are a collection of revolving numbers. These relate to your individual characteristics -- strength, intelligence, stamina, charm, wealth, wisdom, skill and hit points.

As you pass through the gate the numbers freeze and those values then determine your character's attributes. The higher the numbers, the better your chances.

The aim is to explore the city, increase the value of your attributes and above all survive.

During the first few days (game time) you are very
vulnerable to foul play so must take care to build up your qualities gradually.

Details of your status can be called up by pressing the Select key at any time. Movement through the maze-like city is controlled by joystick or keyboard.

All other commands, mostly single characters, are entered through the keyboard.

Your current position in the city is shown in the top half of the screen, the lower portion being reserved for commands, options and other text.

Much of the city consists of walled avenues. Closer inspection of any wall may reveal the entrance to a building or even a secret passage.

When you enter a building the screen changes to show a hi-res picture, often animated, of the building’s inhabitants and interior.

There are many buildings in the city. Some are for your rest and recuperation. Inns offer lodgings and give time and date information.

Taverns, whose menus change hourly, sell food and drink. Alcohol, as you’d expect, should be taken in moderation. Get drunk and your movements will be inhibited – you may even black out.

Smithies, easily detected by the sound of an anvil being struck, provide weapons. Prices and quality may vary and you’ll almost certainly need to haggle.

You can earn interest on your money by leaving it in a bank and can exchange gems for cash. Shops sell a variety of clothes and goods, mostly ornamental. If you become ill or wounded visit a healer.

Weapons can be magical (special or cursed) or just normal, and can be found or purchased. If you want to rid yourself of a cursed weapon try a Guild.

There are many life forms in the city. Guards, gladiators, merchants, dwarves, mages, assassins and imps are just a few. All have their own specialities.

The worst is reported to be the legendary Night Stalker, an extremely powerful creature of the night.

Encounters are common and take one of five forms – you surprise a life form, it surprises you, you see each other at the same time, it sees you first or you see it first.

At an encounter you are either engaged or disengaged. Engaged means you do battle and options include lunge, attack, parry and sneak attack.

If disengaged you may try less violent means – charm or trick an opponent, for example. The use of magic cannot be ruled out either.

Other hazards include being poisoned from a variety of sources – like being clawed by a poisonous creature, and catching a disease – such as contact with bacterial spores of mould.

Potions can be acquired and take four forms: benign, advantageous, disadvantageous and dangerous. Each can be opened, examined for colour, sipped and used. All text is presented in olde English type script and musical effects are used throughout the game. Both add to the atmosphere while the latter can hold clues – the songs played in the taverns often provide important hints.

The city is intended to be the first in a linked series, and since you can save and later reload your character, you can retain any character for use in later releases. Future additions include the dungeon, wilderness, arena and palace.

The game plays a bit slowly, mainly because it has to make so many accesses to the disc during play (the program and data is spread across four sides of two discs).

This is really to accommodate the varied content and the planned expansion route make Alternate Reality an excellent buy at £19.95.

Bob Chappell

**Spellbreaker’s something**

ONCE upon a time when I was but a mere apprentice necromancer to whom the word grue meant nothing, I had the good fortune to thwart the evil warlock Krill.

He was an ambitious wizard, aspiring somewhat immodestly to rule the world. I managed to frustrate his little game, my inexperience succeeding where others more learned had failed.

For my efforts I was admitted to the famed Circle of Enchanters and regarded as second only to the great Belborz.

Then Belborz himself landed in the newt soup and I had my work cut out trying to rescue him from the clutches of the odious Jeevar. That’s how I came to be where I am today, top dog of the Circle of Enchanters.

Having thus completed those two superb Infocom adventures *Enchanter* and *Sorcerer* (rated as standard and advanced level), it was with anticipated pleasure and a touch of smugness that I took delivery of the third in the *Enchanter* trilogy, *Spellbreaker*.

Those obliging people at Software Express waved their magic wand and sent a review copy of Spellbreaker winging towards me as soon as it arrived in the UK.

Removing the usual glossy and handsome box from the sturdy packaging my eyes fell on two words which gave the old ego pause for thought – Expert level.

Spellbreaker begins in the council chamber of Borphoe where the Guildmasters are up in arms. You stand at the edge of the gathering, listening to the complaints.

Sneffle the baker moans that he now has to make his butter pasties by hand. His usual method of casting a Ghlo spell to fold the pastry 83 times is no longer reliable. Hoobly the brewer grumbles that his spells are not working either and as a result he’s getting chummy flavoured liquid from his vats and the beer tastes like grue have been bathing in it.

Gzompaltz the huntsman says wild animals are overrunning the town. The Fripple spell no longer keeps the animals out of the boundaries and only recently one of his men was attacked by a troop of rat ants.

The Guild think the Circle of Enchanters have a lot to answer for and many eyes turn contumaciously on you.

Ardis the poet starts to speak about magic rhyming and spellcasting aids when, in the midst of his splendid oration, just as he’s sketching out a mythological skit in iambic hexameter, he turns green (well, greener than usual). His chain elongates, his skin slimes up and he promptly turns into a newt.

He’s not alone – all the Guild have turned into frogs, salamanders or other amphib-
The ST deserves better graphics

LANDS of Havoc was one of the first graphics games out for the ST. Not surprising though, as it is a translation of a program for the Sinclair QL which uses a cut down version of the 68000 microprocessor in your ST.

This is a graphics adventure game boasting over 2000 screens. The theme is laid out in a small, attractively printed book format.

The land of Haven, which was cared for by a benign magician, High Vanish, has been turned into an evil land, Havoc, by the Dark Lords.

You play the role of Sador, half man - half reptile and have to find your way around Havoc following clues and instructions left by the magician. The program is well packaged in a sturdy box which also contains nine colour maps.

The game starts by setting out the nine areas these maps cover in a random pattern and you lay out the maps in the same pattern.

Each map covers nine screens giving a total of 81 screens to explore in the opening section.

The screens are similar, consisting of passages and junctions separated by walls. The walls in each screen are always made up by the same blocks of graphics characters in one colour only.

However they vary from screen to screen and are effectively detailed. The passages are colonised by various creatures including scorpions and ghosts who try to attack you, sapping your energy on contact.

You have a gun but can only fire horizontally. The creatures move smoothly and are vividly animated but unfortunately Sador flickers badly. In this part of the game you must find the entrance to the following part by collecting or touching various items in a specific order.

Instructions are given as you go along after finding the first item, the Book of Change. Which is the most difficult to spot.

As you find objects the creatures chasing you get faster and more deadly.

After the first 81 screens are completed you are transported to the underground caverns, the Lair of the Trolls.

The graphics and game is similar except that the walls are all in one colour.

Here you must collect five tokens and then touch the portal to the next section.

By now the creatures are even faster and are difficult to avoid.

The maze of corridors is challenging, as you can often see where you want to be but may have to traverse many rooms in a round-about fashion to get there. I suggest you make a map as you go along.

On completing this task you enter the Keep of The Dark Lords. This is similar to the last section except more difficult still.

You are told that here you must destroy the Lords by touching all nine of them in turn - your gun has no effect on them.

This is as far as I have been able to reach. The game is obviously considerably larger because when killed off I was told that I had only completed 8.5% of the adventure, even at this stage.

Overall the program is somewhat disappointing considering the capabilities of the ST. Graphics are mediocre, sound consists of occasional hisses although the music is good. The flickering is not really good enough.

On the plus side the plot is good, and it is quite playable, but with little variety.

At £19.95 it is good value.

Having said the game was a slight let down, I did have the urge for one more go to get further on - this is often the sign of a game with lasting appeal.

Mike Rowe

Bob Chappell

of a spellbinder

ions. All except you - and one other, a shadowy figure in a dark cloak who slips out of the door. You pursue him to the town square where he disappears, engulfed in a cloud of orange smoke, leaving behind (once the amber fog has dispersed) nothing but a featureless white cube.

And so the battle of good against evil begins. Magic is going awry, it is your task to get to the root of this paralysing blight that threatens to destroy the kingdom.

Your journey will take you to strange places where you'll meet even stranger beings.

Among the earlier curiosities you'll encounter is a tall-swallowing serpent whose mammoth body forms a huge loop through three tunnels of a cave.

Another is a beautifully described mountain ague. He has brilliant purple carbuncles and hair matted down with something slick and pungent.

Watch out for a roc the size of an elephant whose unhatching egg is itself as big as a small wagon.

As well as a knife and magic burin (engraving tool), you also start out with your indispensable book of re-usable spells.

Other spells can be added to the book by finding spell scrolls, of which there are many scattered around the kingdom, and then writing them into the book by using the special Gnusto spell.

Some spell scrolls are too powerful to be written in the book. These spells can be used directly from the scroll but will only work once.

If you've played Enchanter or Sorcerer you'll be familiar with casting such spells as Yomin (mind probe), Rezrov (open a locked or enchanted object), Froiz (gaze light from an object) and Malyon (animate).

There are plenty of new ones here - how about Casky, Throsk and Girgo.

This is Infocom's 18th adventure and the standard remains as high as ever - just how many companies can you recall that have produced almost a score of first-rate pieces of software in a row?

They've even added a new command to their already sophisticated parser.

If you type in a sentence with one word wrong, for example: "Put the silver cube in the green box" you can correct yourself simply by making your next command OOPS word (Oops cube). This saves you typing in a long sentence all over again.

A gripping story, huge vocabulary - over 900 words - vivid descriptive prose, tantalising puzzles and delightful humour. In a word, Spell-breaker.

Don't hang about - Razrov your cashbox, Malyon those legs down to the nearest phone and order Spellbreaker from Software Express or your local dealer now.

April 1985 ATARI USER 15
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The Mole with a personality crisis?

By Brillig

Alternatively, as the game suggests, you could try to become as unpopular as possible.

Each chunk of the game covers three months of the unfortunate Mole's life. You are presented with a scrolling diary in the normal Level 9 text fashion, below the now obligatory graphics.

Occasionally you are asked to select a course of action for Adrian to follow from the three or four provided. Sometimes you are given a percentage score and a comment as to your status.

And that is about all that does happen. It is a shame that such a good idea has been wasted.

The text is excellent not only, as you would expect from the best selling books, but also from the extra text added by Pete Austin.

But the graphic screen at the top adds nothing to the atmosphere of the game, and yet its very existence results in the increased requirement of the "Press any key to continue" prompt which dogged my progress throughout.

The scoring routine adds little either, firstly because the remarks are rather wearisome once into the second half of the year, and secondly because as it appears to be one shot during the diary you can not see how your actions are affecting the score.

I must stress that at times the game did make me laugh at the antics of Master Mole. The beauty of the books, however, was that the themes were developed throughout, with notable hilarious incidents woven around them. In the game the themes such as Mrs Mole leaving home and the red socks episode become small incidents that suddenly happen. The

Help!

I've had some appeals for help.

Craig Fippard offers his maps of Voodoo Castle, Zork I, Colossal Adventure and Feasibility Experiment. Quite a mixed bunch there and although we offer no prizes for such contributions, they are most welcome. Craig is trying to repair the lantern in Feasibility Experiment and wonders whether anyone else can help him.

S. Goring has gone one better and sent his map of Colossal. However, this does not include the 70 location end game of Level 9 as it was taken from a DEC mainframe.

The map is detailed and well drawn — obviously the culmination of several month's lunch breaks.

Compass directions are freely noted for reference, a point often neglected by adventurers when they play but regretted when they return to the game several weeks later.

Dawn Ward would like some hints on Mordon's Quest. I did not know it was available on the Atari,

but diligent research has discovered you need to drop the blanket to prevent that sinking feeling, a gallic kind of sacrifice is called for to get through the waterfall and there is a place where you can fill the aqualung to stop drowning.
books were in the first person and succeeded because everyone who read them identified with and, to an extent, became Adrian Mole.

The game is purely an exercise in route finding through a series of set pieces, and the player becomes essentially a reader, without the benefit of real involvement.

Often just as I was getting into a route which appeared to be entertaining, up would come a screen full of text and the game would change direction once again.

I think this is a great shame. We saw what can happen to a comedy classic in Hitchhiker's Guide to the Galaxy. The Secret Diary of Adrian Mole had the same potential. Unfortunately it seems to be left peering contemplatively at itself in the bathroom mirror.

● Next month I hope to review a load of new adventures released at the Atari Show, as well as seeing what is new and exciting in the world of Atari.

Glitches of the Month:

Glitches of the Month brings two similar problems in different Level 9 games.

As in Mordon's Quest breathing underwater features in both Red Moon and Adventure Quest. In the latter S. Watson points out that if you enter the river with nothing, go to the shelf, get the fish, enable your breathing and return to the river you no longer need go through the process of getting and dropping the fish to be able to breathe in different environments.

S. Calkin has found in Red Moon that once you have the pipes and helmet you can wander for miles underwater without ever having to fix the pipes or worry about them being too short.

Thank you folks, your T-shirts are in the post. Not so the T-shirt for Geoffrey McHugh, who supplied our December Glitch. Sorry but we've lost your address in the editorial maze. If you contact the office all can be resolved.

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April 1986 ATARI USER 19
HERE is the second part of the Basic compiler program – the compiler library. You should type it in using the Atari assembler/editor cartridge or compatible assembler, and save it on a cassette by itself.

This cassette, and the one containing the compiler program given last month, will be required every time you compile a program.

You don’t really know enough about the compiler to begin to write and compile your own programs yet, so for now let’s try to compile the Basic program given as Program II.

This is simply a demonstration program – don’t worry about how it works for now. It produces random sounds and patterns until a key is pressed. An equivalent program, written in Atari Basic, is given as Program III. You can type this in to compare the speed of Atari Basic with Compiler Basic.

Compilation is essentially a three stage process. First you create your program – this is called editing. Then comes compilation, where the program is translated from Basic into Assembly language. Finally comes assembly and execution. Here you assemble the program and run it. If at any stage you make a mistake you must go back to stage one.

Let’s go through the three stages with the example, Program II.

● Editing

For this you will need a text editor. If you are using the Atari assembler cartridge this is no problem since one is included in the cartridge. If using some other assembler program then you can probably use its text editor for this purpose. If not you will have to beg, borrow or steal a text editor from somewhere.

Type in your program using the text editor – the NUM command of the Atari assembler/editor cartridge can be used to supply automatic line numbering. Type in Program II in this way, making sure you have the assembler cartridge plugged in since Atari Basic will reject Compiler Basic with syntax errors.

Type in the program as given. Note that the compiler does not recognise abbreviations such as POS. for POSITION and ? for PRINT. When sure you have typed the program correctly save it on its own cassette.

Use the LIST#C command of the assembler cartridge. This saves the program in Ascii character form on the cassette and is the only form the compiler will recognise – so if you are using an assembler other than the Atari version you must use an equivalent command. The cassette you have just made will now be referred to as the source program or source file.

● Compiling

Plug in the Basic cartridge and load the compiler program given last month. Now insert the cassette containing the source program. Don’t forget to rewind the tape. RUN the compiler which will prompt you for the source file name. The correct response is C: for cassette. Press Play on the cassette drive, and Return on the computer as if you were loading a program.

You should see Program II being listed out on the screen and the compiler will prompt you for the start address of the Assembly language. The answer to this is really up to you, but I suggest 14336 for this example which is the address of the last 2k on a 16k Atari.

Now you will be prompted for the start line number for the Assembly language – almost any number greater than 1000 will do here, so just enter 1000 for now. Almost invariably you will enter 1000 in response to this question – other responses are only required if you want to have more than one compiled program share the same compiler library, and this is a topic which I will return to in a later article.

The next question to answer is the Filename for the Assembly language. Assuming you are using cassette, the correct answer is C:. Before you respond you should insert a cassette ready to take the program which the compiler is about to generate. Press Play and Record on the cassette, then Return when you hear the two beeps.

The compiler will display each line number as it is compiled, and will finish by telling you how many errors it discovered in your program. If there were none you can proceed to the next step. If there were errors then you must go back to stage one.

● Assembly

Insert the assembler cartridge and rewind the cassette you have just made. Type ENTER#C to load the
Assembly language. Now insert the cassette with the compiler Library on it, and merge it with what you have already using ENTER #C.M.

If all has gone well you now have one large assembly language program equivalent to the Basic program you originally entered. You must assemble this program and since it is likely to be large, you should do so directly to cassette using ASM.#C. This produces yet another cassette file.

Before telling you how to execute your program, I must draw your attention to a problem with the ASM.#C command in the Atari cartridge. It fails down badly when files are long.

Since the assembler is quite slow in this circumstance a long leader is formed on the tape if the cartridge is left to its own devices (the leader is the tone you hear prior to a tape file being loaded or saved).

Press Pause on the tape drive, and Ctrl-1 on the computer which freezes the listing.

After a minute or two the cursor disappears, and you disengage the Pause on the tape drive, and press Ctrl-1 so that the listing begins to appear on the screen. You can now leave the computer to get on with the assembly. Any errors mean that you must go back to the first step.

After the assembly process you are left with a cassette containing the machine code bytes for your program. Typically this extends for 2k of machine language and so I recommend 14336 as the start address of the Assembly language.

Once you have chosen this address you are stuck with it and you must poke the bytes for the machine language to this location in memory since it will not run properly if it is placed anywhere else in memory – it is what is known as position-dependent code or non-relocatable code.

The program you are faced with now is how to get the bytes from the cassette into memory. Below is a short Atari Basic program which will do the trick (Program IV).

To use this routine insert the cassette with the machine language and press Play on the tape drive. Run the program, and press Return when you hear the beep. Let the program run until it comes up with Error 136. This means, somewhat perversely, that the program was successfully loaded.

Do not press System Reset since this will wipe the machine language program from memory.

To invoke the machine language type X=USR(14336) in the case of the example, Program II. You should now hear random sound and see random patterns on a Graphics 3 screen. When you are tired of this, press any key, and you will be returned to Basic. You can return to the machine language any time – provided you don’t reset the machine – by typing X=USR(14336).

That’s how to use the compiler. Next month I will discuss the features of the Compiler language and begin to explain how you can write your own programs in Compiler Basic.
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DIGITAL INTEGRATION

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ST SOFTWARE

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INFOCOM

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<td>Enchanter</td>
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April 1986 ATARI USER 25
AS the memory of Atari 8 bit computers (successively models 400, 800, 1200, 600XL, 800XL and 130XE) gets larger—it seems that the manual supplied with them gets smaller.

The old 16k Atari 400 computer came with two thick manuals describing the use of the machine. The latest 128k Atari 130XE has only a small instruction booklet which does little beyond revealing the permitted Basic key words.

This is a pity, because some powerful capabilities are hidden within these machines which are not referred to by any of the manuals nor by the beginners' books supplied by other authors.

The experienced Atari user will doubtless be aware that there are three well-documented text modes (in Basic, Modes 0, 1 and 2) and a further six graphics modes (Basic Modes 3, 4, 5, 6, 7 and 8). There are also three GTIA graphics modes (Basic Modes 9, 10 and 11) which can be found in the later models.

The trouble with the text modes which print characters on the screen is that the background colour remains the same for each printed character, even though it is possible to alter the colour of the characters themselves.

For example, you can print the letter A on the screen in four different colours in text Modes 1 and 2, but the background remains the same for each. Any attempt to change the background colour equally alters the background of all the different coloured characters.

Suppose you want to make a chess board. This requires black and white pieces to be placed on, say, blue and red background squares. Clearly text Modes 1 and 2 are not suitable for this purpose.

However, a poorly documented solution exists to this problem. The Antic graphics chip is responsible for all the graphics and text modes known in Basic, but also permits a few interesting extra modes.

These were only accessible in the early Atari computers by writing a custom-designed display list—a short machine code routine which called the necessary extra Antic modes. Some of these extra options are now directly available to the Basic programmer who has a 600XL, 800XL or 130XE computer.

Text Modes 12 and 13 in Basic on the latter computers correspond to Antic Modes 4 and 5 respectively from the older Atari machines. They permit text to be printed on the screen in any combination of four colours per character, with up to five colours available on one screen.

Before going any further it is necessary to examine how the Antic display characters on the screen. The main difference between the graphics and text modes is that the former display only a single byte of data by POKEing it onto the screen, whereas the latter takes the character code, looks up the corresponding eight consecutive bytes from the character set and POKEs all eight of the data bytes one underneath another on the screen.

A character therefore comprises eight bytes placed vertically on the screen. Each consists of eight bits, each of which may be set, 1, which means that a colour is shown in that pixel, or not set, 0, meaning that the background colour is assumed.

The letter A is the 33rd character in the Atari character set. Figure 1 shows exactly how the eight data bytes for the letter A are held in memory.

The head of the character set is indexed by memory location 224. Thus the first character in the set has its data bytes stored in memory locations 224, 224+8, 224+16, 224+24, 224+32, 224+40, 224+48, 224+56.

Since A is the 3rd character and each character has eight data bytes, we must look for the data for letter A from positions 224 to 224+56. The results which are printed out should agree with those displayed in Figure 1.

Now try Programs II and III, watching the screen carefully. Program II puts the letter A on the
screen in text Mode 0. Program III develops and prints the same letter A in graphics Mode 8 by placing graphics data bytes taken from the character set for the letter A sequentially, one underneath each previous byte.

5 REM SCR holds the memory location of the top-left corner of the screen
10 GRAPHICS 8:POKE 792,1
20 SCR:PEEK(889)+256*PEEK(89)
30 POKE SCR,13

Program II

10 GRAPHICS 8
20 SCR-PEEK(889)+256*PEEK(89)
30 FOR J=0 TO 7
40 POKE SCR+64*I,PEEK(224+256*I)
50 FOR J=1 TO 200:NEXT J:REM DELAY
60 NEXT I

Program III

We have seen that the letter A can be poked to the screen with the code 33. On colour text screens (Modes 1 and 2), the sixth and seventh bits of code are combined to show the colour of the character.

Since four combinations are available by changing two bits, four colours can be permitted on the screen. Thus, repeatedly adding the value 64 to the original character code will change the colour up to four times. Try Program IV and see.

10 GRAPHICS 1
20 SCR-PEEK(889)+256*PEEK(89)
30 FOR J=0 TO 3
40 POKE SCR+32+64*I
50 NEXT I

Program IV

Now return to Program II and change line 10 to read 10 GRAPHICS 12. Run the program. What has happened to the character?

In Modes 12 and 13, the character data bytes are used differently to their role in Mode 0. Although a full character of eight bytes is still displayed.

Each different pair of bits in a data byte tells a separate colour register to colour the pixel described by the two bits. Again, there are four permutations of two bits - 00, 01, 10 and 11 - so four colours can be permitted in one character byte.

Let's look at letter A again in the light of this information.

<table>
<thead>
<tr>
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</table>

Figure II: Mode 12 character data bytes

Note that the character is now only four pixels wide, whereas it was eight pixels wide in text Modes 0, 1 and 2.

If you have colouring pencils handy, colour in Figure II with the default Atari colours thus:

- 00 = black
- 01 = orange
- 10 = green
- 11 = dark blue

Compare the coloured picture with the screen character. They should be similar, although colour bleeding on the screen tends to blur the colours.

Now try changing line 30 in Program II to 30 POKE SCR,33+128.

One of the colours of the character on the screen has altered. As was the case in text Modes 1 and 2, changing one of the top bits of the character code has affected a colour register, although in text Modes 12 and 13, only the top bit can be altered.

Table I illustrates the effect of the character code and the values of the data bytes on the colour registers used. Use SETCOLOR N to alter the colours, where N is the value of the colour register shown in the table.

<table>
<thead>
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<th>Bit Pair</th>
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Table I

The colour registers can be changed in the ordinary way from BASIC with, for example, SETCOLOR 0,12,6, SETCOLOR 1,14,8 according to whim.

The character set provided by Atari in ROM is designed for use with text Modes 0, 1 and 2, and is rather useless in text Modes 12 and 13.

However, if the original character set is copied into RAM, individual characters can be altered to give interesting pictures. A machine code utility for copying the set into RAM is given in the Chess Board program at the end of this article.

There is one important disadvantage with this method of displaying multi-coloured graphic characters on the screen. For each character byte which has been modified there is one less of the original character set to be displayed. It is easy to remove part of the original alphabet stored in the character set so that only garbage will be printed out in the text window.

It is possible to divide a single chess piece into four different characters which are then POKEd on to the screen in this order:

A B
C D

The character data for a chess piece is shown in Figure III. The rook is divided into four characters, each of which has eight associated data bytes. I have drawn the places in such a way that each byte is part of a twin pair of identical bytes. This saves space in data statements in the Chess Board program, but higher resolution could be achieved by making each byte of the pair different.

The program places a chess board on the screen in five colours. When you have finished with it, alter the GRAPHICS 12 in line 590 to
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GRAPHICS 13. Text Mode 13 is much the same as Mode 12, but the board is stretched downwards to double its size.

Using four characters to represent one chess piece exacts a heavy toll from the original character set. There are six types of black pieces, six of white pieces and one type of vacant square, requiring 52 characters of the original 128 to be modified. Try typing into the text window and you will find that most of the lower case characters are missing.

The excellent Chess cartridge from Parker probably uses Mode 12 or Mode 13 for its magnificent, multi-colour graphics. However in accordance with the high penalty paid in the character set for this approach, Parker Chess displays no ordinary text on the screen at all – all moves by the player are entered with a joystick and cursor.

Finally, a warning – save the Chess Program board to cassette or disc before running it for the first time.
Give your computer an opportunity to think for itself with this game playing program by DAVID REEVES which simulates the process of human learning.
THIS game-playing program is basically an exercise in artificial intelligence. Unlike most game-playing programs however, this one is different in that the computer actually learns as it goes along.

The program partly simulates human learning as the computer remembers positions which led it to lose, and then, given the opportunity, plays these back against its opponent.

The game is a simplified version of an Arabic game called Manala. I chose this game for the exercise because it is fairly challenging while not being too complex and it may also be new to many people.

This simple version is played by two players using eight counters on a 2 x 2 square board. The game begins with two counters on each square, and the players face each other across the board.

Taking turns, each player picks up the counters from one square on his/her side of the board and moves them anticlockwise round the board putting one counter on each square in turn until they are exhausted.

Thus if one player picks up three counters from the bottom left square he must put one counter on the bottom right, one on the top right, and the last one on the top left, leaving no counters on the original square. The winner is the first player to have all eight counters on his/her side of the board.

The program allows you to play against the computer. On your turn move the joystick left or right to choose the square you want to move from, and then press the fire button.

At the start the computer is totally naive, knowing only the rules of the game. Each time it loses, the computer remembers the position which led it into a losing sequence of moves. In future it will avoid getting into this position itself, but will put you into it if it can.

Humans also learn like this — but unlike a human the computer learns nothing from winning, nor can it formulate general rules of strategy to guide its play.

Against this however, the computer does have the advantage that it never forgets positions which it knows must lead to a loss, or those which must lead to a win. It learns rapidly from its mistakes.

After five losses it is quite a fair player, and after 10 it can be difficult to beat. Try playing it the first one to 10 wins, and see who learns quickest.

The program works on the principle of giving a code of 1 to positions which lead to losses, and 2 to those that lead to wins. Initially all positions have a code of 0.

Whenever it loses, the computer recalls the last position it created which had an unknown outcome, that is coded 0. That position is then given a code of 1 so that the computer knows not to create it again.

Next, all possible positions from which that position can be created are computed. If it is found that all moves made from one of these positions lead to losses the position receives a code of 2, so that given the opportunity the computer will create the position, knowing that it leads to a certain win.

In this way, as the number of its losses increases the computer identifies moves leading to losing sequences earlier and earlier, and learns longer and longer winning sequences. It played against long enough it becomes a perfect player.
THOSE of us who started with DOS 3 and have subsequently changed to the new DOS 2.5 will at some time wish to have a printout of files contained on a disc.

While this was possible with DOS 3 the option seems to be omitted on the newer operating system. You can however get a printout of disc files with Atari Writer but like DOS 3 this presents you with a not-too-neat three inch strip, a bit off if you have an 80 column printer.

This disc index printout utility resolves these problems and allows you to neatly catalogue your disc directories on standard A4 paper. In addition it allows the directory to be named, disc numbered, and side identified. The program also summarises the number of files, the used sectors, and the free sectors.

The program was written on my 130XE but works fine on an 800XL. It was designed for the Atari 1027 printer but works with an Epson FX-80 and should do quite happily on any other 80 column printer.

As the layout of the directory is dependent on the number of blank spaces in the PRINT statements I've included some REM statements to help get it right.

They refer to the line immediately following—for example the statement in line 179 refers to the layout of line 180. None of the REMs are necessary and you can omit those lines if you want to save yourself some typing.
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MY 1050 was supplied with DOS 3.0. How does it compare with DOS 2.5?

What is the minimum I need to use my Atari to get Prestel? The Miracle Modem is expensive at £195 compared with the offer currently made by Bank of Scotland at £55 for a separate system.

Simon Firth, Maidstone.

- Use DOS 2.5 if you get the chance. It is much more efficient in terms of memory, disc storage space and time taken to operate a given function.

DOS 3 is very user-friendly, but this is where it falls down, since once you know how to use the prompts and default system you may not return to it very often.

See the review in the July 1985 issue of Atari User for more details.

If you just want to use Prestel then you are right - a dedicated unit would be far cheaper than a computer interface and modem.

However the Miracle Modem offers so much more - MicroLink, bulletin boards, inter-computer communication, and so on.

Which unit you should buy depends on what you want to use it for, and perhaps more importantly, what you want to use in the future.

Best buy printer

I HAVE found that there are very few people in my area with Atari printers since I bought my 800XL at Christmas. I had wondered if you could please print the address of the nearest Atari Users Club to my home address.

I would also like to know if it is possible to buy a cheaper printer than the Atari 1029 which costs £197.90, and buy an interface lead to make it compatible with my 800XL.

Jonathan Carle, Bath.

- There are printers cheaper than the 1029, the replacement for the 1025 which was never made available.

However you’d need an interface for them which would knock the cost back up again.

Atari’s own printers are about the cheapest to run with Atari computers.

You could, of course, get the 1027 letter quality printer or the 1020 printer/plotter, which is less than £100, but have a good look at that one first as it can’t use anything wider than 4in roll paper.

Atari’s own

I AM going to buy a 130XE and disc drive - I currently own an 800 and ancient 410 cassette recorder.

When I have bought this system I would like to purchase a printer. Please could you tell me one which will match up to the following specifications:

Be able to print on A4 size paper, have friction feed, have the ability to do screen dump and cost around £200 or less. I am not too concerned about noise or printing speed.

Andrew Young, Mitcham.

- Why not take a look at Atari’s own 1029 printer? It has the advantage that it is completely compatible with your system.

Search for an Indus

I HAVE bought the new Atari 130XE, a cassette drive and a television. I now want to get a disc drive and have decided to buy the Indus G.T.

The problem is that I can’t find any shop which sells the Indus in this country. I have thought of importing it from America. Is there a shop which repairs the Indus in this country? – Hardev Kambo, Middlesex.

- The Indus GT is a superb disc drive, but you will find great difficulty in obtaining it and maintaining it in the UK.

Before it went bankrupt, the Home Entertainment Atari Centre in Broad Street, Birmingham, imported a limited quantity, but the prices proved to be prohibitive (around £400), and service cover could not be provided.

I would say your best bet would be to purchase an Atari 1050 drive for which there is excellent service cover, and fit a US Doubler (£79.95), which will provide you with all of the density that the Indus can offer.

OK, so you don’t get the pretty lights on the front panel, but are they really worth about £200, and no service cover?

I have done this, and am very happy indeed with the results - especially the three-fold speed improvement.

André Willey

Wiring worries

I USED to have an Atari 600XL and the computer to television lead was just a wire with a plug on each end.

I have just bought an 800XL and the cable to the TV has a small black box a little way along it. Do you know what this is for?

Would an ordinary computer-TV cable work with my computer?

Also do you know if there is any difference between Atari Pole Position and the one imported by US Gold? – Peter Goulden, Lincoln.

- The black box in your cable is simply a ferrite core, a device which helps to reduce interference.

You can use the old cable with no problems, although you might find that the picture is slightly less clear.

The game play on Atari’s and US Gold’s Pole Position is the same. Datasoft in the States bought the rights to the game when Atari relinquished them last year.

Thus US Gold now produces a version under licence from Datasoft, while the Atari one is basically a remast from the old deal.

The game is the same in both cases except for the Datasoft or Atari banners.

Expansion plans

I HAVE an Atari 400 with 16k memory and am desperate to buy a 48k memory expansion unit, partly so that I can use my assembler written in Basic in hi-res graphics mode and also so I can play the latest memory-gobbling games.

Atari no longer make the units and none of the dealers I have rung can get hold of one.

Can you help? Someone in the country must have one to sell me.

How about a private advertisers section in Atari User, then this sort of problem would be easy to solve.

Also can you tell me of a flight simulator on cassette or ROM that I can use? – S. Holder, London SW16.

- We don’t know of any flight simulator that will run in 16k – if anyone has found one, let us know.

On the memory front, the last price on 48k memory boards for Atari 400s was £60. Even if anyone had any left, it would still be cheaper to buy a new 800XL from Dixons – for which you would have a 64k machine with a real keyboard, a new recorder, five games and a new joystick.

You can then recoup some of your expense by selling your old 400/recorder/joystick to a friend, or via a local newspaper.
Maze Munch

I ENJOYED Maze Munch, your best game-listing to date. However the score does not increment on-screen (it's POKE'd) when run on the 600XL, whereas it works perfectly on an 800XL.

Is this connected with a bug in Atari ROM at PEEK (43234) which is responsible for unnecessary Error 9 reports and worse still, causes keyboard lock-ups with total loss of program control?

The value of this address on the 600XL is 96. It should be 234. Are there any 600XLs with the bug-free Rev C Basic available, as I have had problems with a few other listings and commercial tapes?

Finally, here is a short routine for readers to experiment with, or add to a program:

```asm
18 six 78 76
20 six 19 six 61 net
28 six 19 six 61 six 58
38 six 19 six 59 six 10 six 10 six 10 six 10 six 10 six 9
48 six 19 six 9
```

M.A. Phillips, Bristol.

- Your program is much more likely to be caused by lack of memory than by the error 9 bug. To the best of our knowledge, however, none of the UK 800XLs or 600XLs have Rev C Basic in them.

This is only available on the 130XE, or in cart form from main Atari dealers. If anyone has found differently, please let us know.

Cartridge port

I HAVE an Atari 400 and am thinking about buying the 130XE, but I am not sure if it has a cartridge port or not.

Second problem: I have a light pen made by Dams and wonder which joystick port it would connect to.

Ross Oldfield, Dunstable.

- Yes, the 130XE does have a cartridge port (at the back), and everything else that the 800XL has, plus 128k, of course. (See our review in issue 2.)

- It only has two joystick ports, but then how many four-player games do you know?

- The light pen, assuming it works with the Atari, can be plugged into port 1, or sometimes, on older 400s, port 4 — I don’t know why.

- You can PEEK locations 564 and 565 to get the x and y positions. These range from 0 to 228, but may need a little modification to correct the zero and maximum points for the edge of your TV set.

- Use STICK(0) or STICK(3) to check for the pen button being pressed.

André Willey

Loading problems

I AM tired of Basic tapes. The problem is some just do not load at all.

For instance, I bought a pack of 500 Boots cassettes, I typed in a program and saved it, but it wouldn’t load.

At the beginning of loading the cassette noise through the speakers usually makes a whistle. But on the Boots cassettes it does not make this sound.

Could you tell me which cassettes work and which do not? — Chris Beard, Nottingham.

- If your recorder has so far only been used to load games, you may find that your recorder is faulty and will not save, although it will load correctly.

- Try saving to other tapes, such as TDK C-60, to see if this is the case.

- If you still don’t get anything, take your recorder back for repair. If it does work, then your question is answered.

Price of memory

I AM pleased to see the efforts being made to increase Atari popularity, but feel that purchasers of the 600XL have been badly let down.

The 800XL has become available for approximately £100 and yet the memory expansion for the 600XL is still priced at approximately £90.

Have Atari any plans to make the expansion cheaper for the people who supported the launch of the XL range?

- I think your magazine is superb and hope the standard set with the first three issues is maintained.

- I would like, though, to make a couple of small points. Please include memory requirements when reviewing software and don’t spoil the letters page by including “my score is higher than your score” letters. — S. Harrington, Runcorn.

K-Spread comments

HAVING just read the review of our program K-Spread for the Atari ST in the March issue of Atari User, we would like to make a few points known to your readers regarding some of the comments made. Some of this information was given to André Willey, however it obviously missed being mentioned in the review.

1: Copies of our ST applications software are now protected, however this does allow users to make a back-up copy for use. It can also be copied to a hard disc without problems.

2: Two bugs were mentioned regarding the Save routine. The first does not exist, the second was only present on a few early discs and has since been rectified.

3: The version on sale checks for formula when alterations are made, if no formulas are present the changes are accepted straight away. If there are formulae the user is presented with an option regarding changes.

4: We have an intensive development program under way and are working on a large number of added features. We have a positive upgrade policy whereby users of current versions will be able to upgrade to new versions at minimal cost.

5: Business graphics will be available when the data compatible program K-Graph is released towards the end of this quarter.

I hope you will be able to make this information available to your readers. We will of course keep you updated regarding new and improved products to our ST software range. — Jon Day, Sales Manager, Kuma Software.

- André Willey replies: I did get a new copy of the program — but the March issue containing the review was already at the printers.

As to Jon’s points:

1: Fair enough. If Kuma can protect software and still allow use of a hard disc without
needing to use the master disc again, great. Good luck to them. It seems to work too.

2: The Give/Take bug does exist. If you GIVE a file with long text items in it, the TAKE does not retrieve the same information. This has been corrected on later revisions. The same applies to the "Can't drag cell on to desktop" bug. Both of these are present on a number of shop stock copies, although exchanges have now been arranged by Kuma.

3: Good. What else can I say?

4: Also good. The new version contains a couple of nice new features, including headers/footers, minus sign or brackets, an option to turn off the coloured backing to text fields, and a few others. Well done to Kuma for listening to their customers - not all companies do!

5: Strange, that's just what I said.

My conclusions still stand, anyway, and we're grateful to Jon for giving us an update on the situation.

Memory module

IN the February issue of Atari User J.B. Giscott asked for information on the 64k memory module. Silica Shop (01-301 1111) will supply him with one.

I think the best game available for Atari micos at present is Chimera by Firebird. It is a 3-D room game in a similar style to Alien 8 - only much, much better.

I'm sure any Atari owner would agree that the loading picture is better than anything ever seen before and the pause mode will shame even Colourspace.

Is it possible to use pictures generated on the Atari Touch Tablet in your own programs - for example an adventure game with graphics drawn on the tablet?

Lastly I must say I was shocked to hear you say that a very annoyed person's gerbils should be sautéed lightly and served in a white sauce.

Anyone knows that the best way to cook a gerbil is to grill it for 10-20 minutes, put a slice of cheese on it and put it in between two slices of bread? - L. Wheelhouse, Sheffield.

PS: What is it about Rob Harding? He gets his picture in every issue.

Good service

I AM not normally prone to putting pen to paper especially to compliment a company.

However, my recent dealings with Compumart Ltd have prompted me to do so. As I am a regular user of an Atari User it seemed the best place to voice my compliments.

My initial dealings with Compumart was by way of an order for a 1027 Atari printer on special offer. On contacting the firm I received some very helpful advice and answers to my questions.

The order was promptly dispatched and arrived within 48 hours. However within a few weeks it was apparent that the printer was defective. On contacting Compumart they offered their apologies and an immediate replacement printer.

In addition they gave me the option of swapping the 1027 model with a 1029 dot matrix machine.

On reflection this should have been my initial choice. In doing this they will have to refund me money from the initial order.

It's so pleasant to find a company that really does have the customer at heart and the professionalism to match.

As a new Atari user, I am very confident that with Atari itself, shops like Compumart and the quality of Atari User things could not look better. - M.S. Allen, Havant, Hants.

Not so far Right!

I'm sure it must be libellous to describe my politics as "a little to the right of Genghis Khan" as Brillig, presumably Alex Bell hiding behind a pseudonym, did in the March Atari User. Conservative MPs have sued the BBC for saying l Laos! Fortunately, I'm just a wishy-washy Liberal voter so I'll be satisfied if you print this letter to correct the matter.

Brillig is equally wrong when he claims that any of Level 9's own adventures are based on existing books. They aren't - I do my damndest to avoid similarities when designing game worlds.

However when writing the introductions to games I have occasionally listed my favourite SF books on similar themes. For the benefit of readers, that's all.

To complete the list, Brillig describes the firing of particle-beam engines from an orbiting station to destroy a target on the ground as being implausible.

Would that it were. Reagan's Starwars program proposes to use just this type of technology and, while there are difficulties in hitting thousands of fast moving warheads, a "surgical" first strike against a stationary target on the ground seems simple given enough energy in the beam.

The fact that SDF could be used offensively is one reason why it would be so dangerous. I've not seen the exact idea used before in SF, but Larry Niven proposed something similar in "The Warriors" ("Tales of Known Space" from Orbit). - Peter Austin, Level 9 Computing.

As Alex would no doubt be at pains to point out after such a dressing down, he does not write Brillig's adventure column.

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That ‘k’ rating

I SUGGEST that you might ask your software advertisers to indicate the "k" rating of the games they advertise - 16k, 32k or whatever as I have found it an expensive exercise having to write to firms, enclosing an SAE to find out if the game is suitable for my 600XL.

Also could you please advise me if it is possible to obtain a RAM pack to upgrade to 48k. I have written to several firms but had no luck so far. Maybe some of your other readers could help me - B. Cottrell, Irvine, Ayrshire.

Silica shop should have the RAM pack, but at present-day costs you might be able to find an 800XL for less.

1020 and Atari Writer

WITH reference to the letter from E.C. Jones in the February issue of Atari User, I also had problems using the 1020 with Atari Writer. After much experimenting I found the following procedures solved them:

- Select option 1 when asked for the type of printer. Then Put Ctrl-O 27 at the beginning of each instruction, in place of the ESC ESC in the 1020 instruction manual.
- Then type Ctrl-O followed by the ATASCII number corresponding to the instruction.
- For example, to change to the red pen, instead of typing ESC ESC Ctrl-G * C3 * A, you would put Ctrl-O 27 Ctrl-O 7*C3*4.
- Finally, put text and graphics instructions on separate lines. - Steven Burke, Bexley Heath.

Problems solved

I HAVE answers to two questions raised in February's Atari User Mailbag - and one question.

Patrick McDonald's problem on cassette loading technique could well be the location of his recorder. If it is within two feet of his TV, or monitor, the very strong magnetic field generated by this equipment will often corrupt data stored on magnetic tape.

I had the same problem and relocating the recorder away from the TV solved it.

He may or may not be lucky in salvaging the existing information on his tapes. Better buy a disc drive.

Mr. A.G. Formoy on Bridge programs for the Atari is easily answered. I have two. Both are American and use the Goran convention which should present no difficulty to an experienced player.

They both include Blackwood for slam bidding and one of them keeps score including vulnerability.

Both my wife and I keep in practice by regularly playing Bridge with our Atari. It doesn't drink either, or pay when it loses.

One program is by Artwork the other by CMC. I got them in the US but I'm sure they are available here from Software Express or Silica Shop.

If anyone wants more information they can call me on Tunbridge Wells 20694.

My question is when are we going to see a RAM disc add-on for the 800XL to match the 130XE and when are software writers going to take advantage of this facility to add more features and effects to their programs?

Also I am looking for an 80 column word processor - I'm tired of my 40 column Atari Writer!


Not worth changing...

AS a prospective Atari buyer and a current Commodore 64 owner, I was very interested to read in the February Atari User of the difficulties some of your readers have experienced with their Atari computers and hardware, particularly about the reader who considered changing to Commodore.

This is because since buying my Commodore 64 in August 1984 I have had to change it three times due to faults with the computer or missing accessories.

The CBM64 I finally settled for developed a fault with its SID chip and had to be sent for repair, taking seven weeks.

On the day I received it back, and having also bought a disc drive, I connected them up only to find the computer would not work with the disc drive.

I had to wait 15 weeks for the computer to be repaired.

I hope your readers will see that it is not just Atari who have problems, and that, if Atari's future looks exciting then the prospects of other computer manufacturers look positively retrogressive. - Sanjan Maharaj, London N3.
These back issues are still available

May 1985 issue: Profile of Jack Tramiel, preview of the new machines, Attack Squash, Adventuring, Alphabet Train, Atari utility, Software reviews, Sounds, the 5602, Microscope, Atari Insights - Bit Wise, Beginners and Graphics.

June issue: Analysis of the 130XE, Subroutine, Adventuring, Random numbers, Software reviews, Frog Jump, Microscope, Sounds, Atari Insights - Bit Wise, Beginners and Graphics, special 12 page feature on Communications.


September issue: 8-page special on the 520ST, Mode & screen dump routine, Maze Munch, Data Maker, Display List Tutorial, 68000 addressing modes, list processing with Logo, Software reviews, Atari Insights - Bit Wise, Beginners and Graphics.

October issue: Computer Canvas graphics program, Updates for RAW 6502 assembler, 130XE Ramdisk utility, Hex/Asci memory dump utility, Pongoon, Software reviews, 68000 operating environment, Waspnet, Atari Insights - Bit Wise, Beginners and Graphics.

November issue: Converse program, Bioware operator utility, ST graphics examples, ST software list, Gay Fashion game, Display List tutorial, Adventuring, Microscope, Software reviews, Atari Insights - Bit Wise, Beginners and Graphics.

December issue: Checksum program, Special keyboard characters, Basic XL review, GemWrite and GemDraw, Countdown game, Disco, Display List tutorial, Software reviews, Left-handed joystick, Adventuring, Beginners and Graphics.

January 1986 issue: Machine code games, Pt. 1, Atari in education, Sony ST monitor review, Munkey game, Checksum update, Listing utility, Dotsquare game, 1020 screen dump routine, programming in C on the ST, Adventuring, Software review.

February issue: Machine code games, Pt. 2, Dragon curves in Logo, Flashing colour utility, Microprinter manipulator, Bridgy program, Memory management techniques, Interrupt driven clock, Bounce game, ST problem page, Adventuring, Software review.

March issue: Machine code games, Pt. 3, Knight's tour program, Compiler Pt. 1, Superunit review, Checksums for early games, Book reviews, Adventuring, Software reviews, PLUS Atari ST User: K Spread resistor, Jeff Minter and Colour, Music Pt. 1, Making the most of the ST.

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SEPTEMBER: Maze Munch: Help Horace the Blob munch the maze monsters' morsels. Data Maker:

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MARCH: Horse Play: Knight's tour program. Basic Compiler: Program to accompany the new series. Alien Attack: Final part of assembly listing. Plus: Frees of the month - Winston In The Caves - can you keep your head and help Winston find his?

APRIL: Synthesiser: Actuates the hidden depths of the Atari sound chip. Disc Index: Keep track of disc titles and free space with this index printing program. Graphics: Make the most of Nodes 12 and 13.

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