Atari User

Vol. 4 No. 4 August 1988 £1.25

The Cheat!
How to give all your games infinite lives

Take your Atari on a tour of the universe

NEW!
Double-capacity disc drive revealed

2 exciting car racing games to type in!
In this delightful game you control BLOB, the Biologically-Operated Being, navigating him through 500 action-packed screens to rebuild the unstable planet’s core.

Bubble Bus’ Starquake is one of the biggest-selling games for home micros, due to its incredibly-addictive gameplay and cleverly-animated graphics. It has received such accolades as Game of the Month in Computer and Video Games, and was awarded a Crash Smash.

- What reviewer Bob Chappell said about the Atari version:
  "Starquake is top-notch fare... quality dripping from every byte!"

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<td>Tape</td>
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Gallup Chart
Our up-to-date report on new software releases for your Atari.

News
All the latest from the ever-changing world of the Atari 8 bit.

The Cheat!
Ever wanted infinite lives in a game? Our program does it for you.

Sidereal Time
Calculate your correct astral birth time for use in your horoscope.

Autoload
How you can improve the performance of the Atari User Toolkit.

Easy Programming
Further help with Basic: We scrutinise the LOCATE command.

Joysticks
Choose your weapon! But only after reading our multi-stick test.

Planetarium
We evaluate a program to give you a complete home observatory.

Games Reviews
On test: Broadside, Mech Brigade, Tanium and Road Race.

Map
The dangerous levels of Conan the Barbarian revealed in detail.

Hardware
An in-depth look at the long awaited Atari XF-551 DS/DD disc drive.

Rouloc
A galaxy full of help from your favourite resident Atari adventurer.

Car Crazy
Burn some rubber as you play our fast and furious racing game.

Maniac Movers
Life in the fast-lane with this all-action testing ambulance chase.

Hints and Tips
Get much more fun out of Conan the Barbarian with readers’ help.

Software Solutions
Your programming problems solved by our technical wizard.

Mailbag
An opportunity to get your news, views, moans and name in print.

Get it right! II
All major listings in this issue are accompanied by checksm to help you overcome typing mistakes. For full details of how they work, see the article on Page 36 of the July issue.
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<td>3</td>
<td>GRAND PRIX SIMULATOR Code Masters</td>
<td>Removed from its number one spot by Zybeex, this month sees its return to the pole position.</td>
<td>2.99</td>
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<td>2</td>
<td>GREAT AMERICAN ROAD RACE Silverbird</td>
<td>10 drivers await you in this race crossing the USA. You can read our review in this issue.</td>
<td>1.99</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>ZYBEX Zeppelin</td>
<td>An excellent shoot-'em-up, worth more that its budget price. Good graphics.</td>
<td>2.99</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>MATTA BLATTA Silverbird</td>
<td>The Telecom Birds are doing well this month with two of their Silverbird budget range in the Top Ten.</td>
<td>1.99</td>
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<tr>
<td>5</td>
<td>5</td>
<td>SPEED ACE Zeppelin</td>
<td>Zeppelin's first release for the Atari. Good use of the split screen in this motorbike simulation.</td>
<td>2.99</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>TANJUM Players</td>
<td>Another split screen game, but this time a shoot-'em-up. Nice music. Reviewed in this issue.</td>
<td>1.99</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>DECATHLON Firebird</td>
<td>Returns to the charts, this is good value and enjoyable, with multiple events to choose from.</td>
<td>1.99</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>COPS 'N' ROBBERS Atlantis</td>
<td>Doubtful content both as a game and as a concept. Playable but not for long. Poor graphics and sound.</td>
<td>1.99</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>SPOOKY CASTLE Atlantis</td>
<td>This one starts difficult to play and rapidly becomes impossible as Gormless Gary avoids the bats.</td>
<td>1.99</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>REVENGE 2 Mastertronic</td>
<td>Geff Minter's long-awaited sequel to Revenge of the Mutant Camels. As strange as ever.</td>
<td>1.99</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>PRO GOLF Atlantis</td>
<td>Another new budget title from Atlantis. An enjoyable stroll around the links. Fancy a round.</td>
<td>1.99</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>RIVER RESCUE Alternative</td>
<td>This re-release of an old title has proved very popular. Coming down the charts, but still fun.</td>
<td>1.99</td>
</tr>
<tr>
<td>13</td>
<td>7</td>
<td>STEVE DAVIS SNOOKER Blue Ribbon</td>
<td>Re-released to coincide with the last snooker championships; good for its genre and hasn't dated.</td>
<td>1.99</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>ROCKFORD Mastertronic</td>
<td>Returns to the chart this month – your mining little friend is well worth adding to your collection.</td>
<td>2.99</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>AIR WOLF Encore</td>
<td>Translated from the TV programme. You fly a helicopter with a mission to complete.</td>
<td>1.99</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>ATARI ACES US Gold</td>
<td>This compilation finds its way back into the charts. Good value and a chance to see some old friends.</td>
<td>9.95</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>SOCCER Alternative</td>
<td>One of many types of football games around. At the price there can be little said against it.</td>
<td>1.99</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>FEUD Mastertronic</td>
<td>Addictive and interesting – battling wizards in colourful surroundings. Action packed.</td>
<td>1.99</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>HENRY'S HOUSE Mastertronic</td>
<td>If you haven't already got this platform game add it to your collection; stunning graphics.</td>
<td>1.99</td>
</tr>
<tr>
<td>20</td>
<td>15</td>
<td>BMX SIMULATOR Code Masters</td>
<td>Code Masters is renowned for its simulations, with nice graphics and good sound.</td>
<td>1.99</td>
</tr>
</tbody>
</table>
Gleadow's vision of the future

Atari market leader in home computing

BOLD initiatives that will take Atari UK into the 1980s as undisputed leader in home computing have been revealed by general manager Bob Gleadow.

He sees his company breathing new life into the 8-bit market and leaving its competitors trailing behind.

Gleadow unveiled his vision for the future during a visit to Atari User offices in Aldington, Cheshire.

"The XE console will carry the Atari flame in the 6-bit marketplace. It will be closely followed by the VCS 2600", he said.

"Already the US games market has burst into life and the UK will not be far behind in this long-awaited revival. "Nothing could be more pleasing for those of us who work for Atari - everyone here still has their heart in entertainment, which is where it all started."

Gleadow feels a prime reason for games consoles making a big comeback is that "no parents want to buy their kids a tool they can't share with them - and entertainment is a fundamental aspect of western civilisation."

The Atari boss is currently considering a major project that would shake the world of software retailing.

His plan is to set up a dedicated Atari Games Centre in 30 to 40 of Britain's biggest cities and towns, where games players could go and try out the new releases for themselves.

"The centres would mainly be based on existing Atari retail outlets but would be unique in that the customer would have a real choice of what to buy", said Gleadow.

To supply the increased demand for entertainment software that would stem from such a project, Atari is encouraging all software houses to port ST games to the XE system.

In the meantime more and more major outlets are being persuaded to carry XE games. Among them are Smiths, Comet and maybe Dixons, according to Gleadow.

While he was in Aldington, Gleadow quashed rumours that Atari is planning to hold its own computer show.

"We were extremely pleased with the obvious success of the spring Atari User Show and are committed to making Database Exhibitions' November event an equally impressive statement of Atari's presence in the UK market", he said.

ATARI IS RACING AHEAD IN USA

ALL the signs from America are that Atari is on the verge of a new and prosperous era fuelled by a games systems revival.

At the summer Consumer Electronic Show in Chicago the impressive Atari stand was built around the 2600, 7800 and XE machines.

Lower priced consoles and software, and an open-arms policy towards third party developers - who have responded with growing enthusiasm - have placed Atari firmly in the US computing spotlight.

It has happened within four years of the company having been virtually written off as computing history following its disastrous slump in fortunes when the bottom dropped out of the video games market.

But now everything has changed. A report in Marketing Week said: "Combe-backs are part of the American way and games software's return to glory is right up there with Lazarus. "A resurgence in video game sales has pushed Atari into the golden circle of Fortune 500 companies."

The UK computer industry newspaper CTW is forecasting: "It ought to be an Atari Christmas - it has managed to release 50 new products recently and won more show awards than any other company."

Atari UK spokesman Peter Walker told Atari User: "The reports speak for themselves - we're very confident about the future."

T shirt boost for sales

THE summer sales promotion that leading Atari 8-bit games distributor Microdealer has just launched was being hailed as a success before it even started. One of its features is a unique range of T-shirts - each bearing a colourful graphic design depicting a specific game or software house.

They carry an rrp of £6.99 and are available from all retailers supplied by Microdealer (0908 74000).

"I can honestly say these are really exciting T-shirts - the kids will love them", said Microdealer sales manager Les Sinclair. "Even before the promotion began we had to order massive extra quantities to meet the demand from enthusiastic retailers."

The promotion also involves free gifts and a draw with computers as the main prizes.

All games and peripherals supplied by Microdealer will carry a token for each £5 of value and these can be collected on a special card.

Depending on how many stickers you collect - 10 is the minimum needed to claim a prize - you can win a mouse mat, T-shirt, Cheetah 125 joystick and titles from the Microdealer Top 30.
Link your Atari to the outside world with...

MicroLink

Electronic mail - The cheapest and fastest form of communication possible. It costs the same to send a message to one mailbox as to 500!

Telex - Link up with 96,000 telex subscribers in the UK and 1.5 million worldwide. You can even send and receive telexes after office hours or while travelling.

Telemessages - Type your message before 8pm and delivery is guaranteed by first post the next day (except Sunday), anywhere in the UK and USA.

Telebooking - Reserve train and theatre tickets, check flight details worldwide, or order from a vast range of products - from flowers to floppy discs.

Telesoftware - Download directly into your Atari any program from the ever-growing library now available on MicroLink - both games and utilities.

Company searches - Obtain facts about any British limited company in seconds, and fully analysed financial information on over 100,000 major companies.

Translation - Access the biggest and most up-to-date multi-lingual dictionary in the world, with over 400,000 words.

News - Use the powerful search commands to pinpoint vital business information from the world's leading news services, newspapers and periodicals.

Radiopaging - If you also have a pocket radiopager you'll be alerted each time an urgent message arrives in your mailbox. So you're always in touch.

Gateways - Get through to New York in just five seconds - or key into the EEC computer in Luxembourg, which links you to 600 databases throughout Europe.

When you join MicroLink you've got the world of communications at your fingertips - 24 hours a day. You'll have immediate access to ALL the facilities offered by Telecom Gold ... and a great deal more besides.

Two recommended packages

If you have an 850 Interface:
- Pace Nightingale manual modem + cable (£116.15) PLUS Mini Office II (£79.95).
  Total price: £196.10.

If you don't have an interface:
- Miracle WS2900 V21, V23 modem + Datatari interface + cable + Datatari software.
  Total price: £149.95.

With either combination you can also log on to other databases and bulletin boards all round the world.

More than 90% of subscribers can connect to the MicroLink computer at local call rates.

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

Please send me full details about MicroLink and information sheets about the following hardware and software options (please tick):

[ ] Pace package  [ ] Miracle package

Name:

Address:

Postcode:

Send to: MicroLink, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.
Birthday competition winners

MAY marked the third birthday of Atari User, an event which we celebrated with Atari and Tynesoft in a birthday competition with over 30 prizes.

The response was astounding, but the first correct entry out of the sack was from L. Clarke from Yardley Wood. He will soon be receiving an Atari XE Games System – 65XE console, light gun, joystick which comes with three games.

Runners-up prizes – copies of Tynesoft’s superb Winter Olympiad 88 – were won by: S. Newman, Watford; M. Rodgers, Edinburgh; D. Middlecoat, Waddon; S. Gregory, Hollingworth; D. Parker, Mirfield; A. Dillow, Preston; M. Johnson, Bristol; D. Goldstraw, Huyton; N. Redford, Oldham; P. Gooding, Lowestoft; A. Chadwick; Wellington; S. Armstrong; Westcliff-on-Sea; G. Dickenson, Rosendale; S. Meloy, St. Austell and K. Thoney.

Third prize copies of Mirax Force go to: A. Linton, York; B. Brindley, Heath; D. Barnfield, Tipton; P. Dunstan, Knowle; K. Pantall, Swadlincote; C. Gilchrist, Kings Norton; E. Moulden, Eglington; S. Green, Hornchurch; J. Barnett, Underwood; P. Fox, Broadstairs; M. Harris, Shoppey; D. Hambly, Surbiton; B. Jeffrey, Leigh-on-Sea; P. Fisher, Maidenhead and S. Forayth, Widnes.

A further 15 games – copies of Phantom – are on their way to: B. Arnold, Elstree; G. Simpson, Hardwick; R. Hall, Crossgates; J. Firth, Maldenstone; C. Smith, Welling; J. Birley, Carlton; P. Desaul, Kidlington; S. Wood, Llanddowes; M. King, Orpington; J. Willis, Harest Heath; C. Sneddon, Fife; M. Jones, Fareham; T. Wyatt, Plymouth; M. Harrison, London and M. Hallas, Tingley.

Focus on the VCS 2600

ATARI User will be ready for the massive boost to the entertainment scene that will be created by the re-vitalised VCS 2600.

The September issue will contain a comprehensive guide to the games system which took the computer industry by storm when it was originally introduced – and which has now sold over 15 million units worldwide. And there will be a regular section in future issues devoted purely to new games coming out for the VCS 2600.

But first of all, Atari User reviewers will be running the rule over the best of the existing games that have helped sell more than 150 million rom cartridges to date. With Atari founding father Nolan Bushnell now writing for the machine, and leading UK supplier Palan Electronics promising no less than 18 new titles, the VCS 2600 looks set for a stunning return to the forefront of computer gaming.

And it will all be reflected in the pages of Atari User.

Swedes scuttle pirates

BRITISH software circles have welcomed a crackdown on games piracy in two Scandinavian countries as “a step in the right direction”.

But in Europe, particularly in the Mediterranean countries, piracy of entertainment software remains rampant.

Several cases have recently been before the courts in Sweden and Denmark where an estimated 65 per cent of all games bought are pirated.

The prosecutions have been inspired by SUS, the Union of Software Distributors and Retailers active in Scandinavian countries. It has been investigating cases of piracy and putting pressure on governments to enforce the copyright laws.

Swedish computer magazine editor Christian Martsenssen says: “Piracy is being driven underground – people are starting to be nailed”.

He estimates that Scandinavian sales of legitimate games – mostly imported from the US and UK – could increase threefold if the pirates are forced to curtail their activities.

The UK anti-piracy organisation, the Federation Against Software Theft (FAST), said the news from Scandinavia was most “heartening”.

Bob Hay, FAST’S co-ordinator of anti-piracy enforcement, told Atari User: “We widely welcome the Scandinavian initiative and are in touch with SUS, offering whatever help we can.

“However, entertainment software piracy remains primarily a southern European problem – with Spain, Italy, Portugal and Greece the main concern.

“The situation is particularly worrying in Greece – the only EEC member country that doesn’t even recognise copyright laws as a form of protection for computer software”.

Anne Creasey, export sales manager for Mandarin Software, a major UK supplier of games to continental markets, said: “The Scandinavians have taken a step in the right direction, but the problem is so widespread in Europe it almost defies description.

“I’ve had Italian retailers tell me they won’t even stock entertainment software any more because piracy is so rife in that country”. 
HOW many times have you been playing your favourite shoot-em-up and ran out of lives as you neared the last screen? Or have you ever wished that you could resurrect that dead mega-hero who was killed by the 40-headed killer squirrel?

From this frustration spawned a utility which has allowed me to complete many games that long caused me a lot of trouble. To keep the program length short only 33 game modifications have been included.

However, the option to enter your own cheats has been written into the code, and once entered, the program will allow you to revive the original program and your cheats to disc - up to a maximum of 999.

Not all can be displayed at once, so a menu system is used to present 14 at a time. After typing in the program check it by using GRT III. When you are happy that it's correct you can run it.

You are now presented with your first menu and three options:

Y Enter your own cheats
Z Next menu
S Save the utility to disc

They are very easy to use and are followed by plenty of in-screen prompts to remind you what you're doing. If you select Y, the information must be input in the following order:

- **Sector number**: Input the sector which the information will be saved to.
- **Check byte**: This remains the same whatever the state of your characters statistics are. If you find that it isn't a

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**MICHAEL CLARK offers cheaters an easy option**

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Utility

constant byte, set it to -1.

- Check byte should equal: This is the value that the check byte should be before any modifications are made to it during the game. If, however, you have set the check byte to -1, set this to -1 so that the check will be ignored.

- Byte base: This is the first byte in the sector to be changed.

- Next you have to enter the number of bytes to be looked at in the sector. They can either be changed or skipped over, and this is done by the data which follows it. If a byte is set to -1 then the item is skipped over, but any byte other than -1 will change the byte in the sector.

To clarify this rather complicated process let's take a look at line 2000 of the program:

```
2000 DATA 2,1,65,9,5,255,-1,-1,-1,255
```

which can be explained as follows:

- Sector to edit: 2
- Check byte number: 1
- Check byte: 65 - the Ascii for A
- Byte base: 9
- Number of bytes: 5

- Data:
  - 255 - change byte 9 to 255 (hex FF)
  - -1 - skip the 10th byte
  - -1 - skip the 12th byte
  - 255 - change byte 13 to 255 (hex FF)

If at this point you find yourself totally confused, don't worry, you can still use the program with the existing cheats. In the near future we will include more for you to enter.

The process of finding the correct sector to alter us a little involved and can take some getting used to but here are a few general hints and tips.

Using a search editor for your character's name on the disc. You will usually find the value you want to edit very close to it - often in the same sector or at the most one or two either side.

Games programmers use several different methods of storing your characteristics on disc. They can be in decimal, hex or long strings of bytes, and finding them is just a matter of trial and error. Once you have found them just run Cheat and away you go.

**WARNING:** Never make any modifications to a master disc. Always create a back-up and practice modifying it. If you damage an original disc a software house won't replace it for you.

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**Turn to Page 10**
AFTER reading the letter from John Upton in the October 1987 issue of Atari User asking for information about astrology programs for the 8-bit Atari, and knowing from bitter experience how rare they are, I decided to write this program to calculate a necessary figure called the sidereal time.

We all have a birth time, but this is given as solar time, and is based on the Earth's rotation around the Sun.

However, the Sun is moving as well, so the stars and the zodiac appear to move a small distance westward each night.

The duration of the Earth's rotation with respect to the stars is about 3 minutes 56 seconds shorter every day. To attempt to standardise everything, astrologers use sidereal time, which is based on the movements of the planets relative to Earth.

When calculating a horoscope, tables known as Ephemeris are used. These are compiled by the Astronomer Royal and are based on sidereal time. So, if you want to produce a horoscope for yourself you have to change your birth time to sidereal time - not an easy task.

Many calculations are used to find the sidereal time and reference to various tables is required. However, this program only requires to know four things to work it out for you:

- Date of birth.
- Time of birth.
- Longitude of birth place in degrees.
- Direction of birth place - east or west.

The first thing you have to decide is whether your birth date falls inside British summer time (BST) or double British summer time (DBST) during the years 1941 to 1947. Lines 100 to 320 sort this out.

This is achieved by converting your birth date to the number of days in that year - for example, February 7, 1968 will become 36 days (31 for January + 7 for February).

The program then uses a READ command in line 190 to find the two numbers for the year of birth and checks to see if the figure falls between them. For example, for 1968 the two numbers are 49 and 366 (February 18 to December 31). Our figure for the 7th - 38 - doesn't fall between them so BST doesn't apply.

This figure is then subtracted from the birth time - the routine between lines 330 to 390 does all this for you.

Next you have to find an Ephemeris - the sidereal time for midnight on January 1 - in the year of your birth. This is always six hours and several minutes.

### The final calculations

The extra minutes are found by lines 400 to 480. By referring back to our Ephemeris we would now have to add figures for the month (lines 490 to 550) and the day (lines 560 to 610).

Now we have to either add or subtract an allowance of four minutes for each degree of longitude East or West - lines 620 to 700 accomplish this.

Finally, you have to convert the minutes to hours. If this is over 24 hours you have to subtract 24 to give the sidereal time.

The program will calculate the BST for the years 1930 to 1977 only. Additional data may be added if required by converting the first date of BST and the last date of BST to the total days of the relevant year. For 1929 the dates were April 21 (111 days) and October 6 (310 days).

If these figures were entered at the beginning of the data statement in line 280 the dates covered would extend from 1929 to 1977.

However, remember to add one to your figures if it is a leap year and if your dates are after February 29.

Any alterations to the data statements will require a suitable alteration to line 90 - which stops the program accepting a date it cannot deal with - and line 190, where y is the year at the start of the data.

I have deliberately not limited the read statements in lines 190, 400, 490 and 560 to keep them within the amount of data, so that the program can be extended to other people's requirements with the minimum of alteration.

### Open for expansion

In lines 460 to 480 the program contains the data for sidereal times from 1900 to the year 2000. So there is no need to alter or extend this if you alter the BST data.

The program leaves itself open for expansion, but it does do its job well and is accurate to plus or minus 30 seconds.

It is beyond the scope of this article to explain how to draw up a horoscope using the sidereal time, but your local library will have books on the subject containing all the help you will need.
**PROGRAM VARIABLES**

<table>
<thead>
<tr>
<th>DOBS</th>
<th>LONS</th>
<th>TIMES</th>
<th>HR</th>
<th>MIN</th>
<th>LP</th>
<th>BST</th>
<th>DBST</th>
<th>LONS</th>
<th>D</th>
<th>M</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of birth</td>
<td>Longitude of birth place – East or West</td>
<td>Time of birth</td>
<td>Hour of sidereal time</td>
<td>Minutes of sidereal time</td>
<td>Leap year</td>
<td>British Summer time (BST)</td>
<td>Double BST</td>
<td>Longitude in degrees</td>
<td>Day of birth</td>
<td>Month of birth</td>
<td>Year of birth</td>
</tr>
</tbody>
</table>

**PROGRAM BREAKDOWN**

1 - 36
40 - 90

Set up the screen and variables
Get your date of birth and convert it into days, months and years for use in the sidereal time formula
Calculate whether your date of birth is BST or DBST
Data used in calculating BST
Get your time of birth and calculate the number of minutes for that year
Data for years
Data for months
Data for days
Get the longitude and direction of your birth
Calculate and print your sidereal time in hours and minutes

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Autoload your Toolkit...

MICK RANDLE presents a utility to enhance the capabilities of the Atari User utility

THERE was a utility program called Load'n'Run in the June 1988 issue of Atari User. It provided a quick and easy way to Autorun a Basic program from a Dos 2.5 disc via a machine code AUTORUN.SYS file.

Dos only allows one Autorun file per disc, and this can sometimes cause problems. Although it is possible to combine two or more such files, it's very much a hit or miss affair and isn't recommended.

So where does that leave the owner of the Atari User Toolkit which is in itself an Autorun file? Wouldn't it be nice to be able to load Dos 2.5, install a ramdisk, load Toolkit and run a Basic menu program, all on power-up?

Well it can be done. A program as user friendly as Toolkit wouldn't leave out such a useful feature. The necessary code is built into the program and all that is required is a key number in the right place to invoke the Autorun routine. This is where our short program comes in.

Type it in and use Get It Right II to check your work. All lines from 2000 onward were published as part of the Load'n'Run program last month. If you typed it in you can save yourself some work by listing those particular lines to disc by listing those particular lines to disc by typing LIST "D:Q",20000,32000.

Then type NEW and enter "D:Q" to transfer them back into memory and begin typing in this program. You can then save a copy of the complete program on disc before running it.

You will be prompted to insert a Toolkit workedisc into drive one and press Return when ready.

Don't try to alter the Toolkit master disc - only use a Toolkit utility disc. Some error checking is built into the program but it is best not to tempt fate.

The program will then open an IOCBI channel to update the Toolkit file, use the POINT statement to position the file pointer to the correct position and write the key number to make Toolkit Autorun a program.

Every time you boot the disc in future this customised version of Toolkit will print a Ready soon message while it is loading and running the first Basic program it finds on the disc. The only stipulation is that the Basic program's filename must contain the .BAS extension.

The Load'n'Run program from the June issue offers a greater scope for creative introduction screens, where as Toolkit offers a bare bones facility. Both approaches have their merits, so you have not wasted your time if you entered Load'n'Run.

Finally, a note of caution. Feel free to adapt the program for your own use, but remember that messing about with disc files using NOTE and POINT can be potentially disastrous. It's very easy to scramble a file, or even an entire disc, thus making it impossible for Dos to read it.

If you wish to experiment, do so on backup copies only. If you don't, and lose valuable programs, don't blame me or Atari User!
Locate that faulty heart...

LEN GOLDING continues his look at Atari Basic with another peek at the LOCATE command

MOST of the keyboard characters you need for drawing dungeon plans, terrain maps and other works of art are locked away in the lower case character set and getting at them is a bit difficult.

It's easy enough to flip between upper and lower case sets while you're in one of the new text modes. Use POKE 756,224 to select the lower case set and POKE 756,226 to return to upper case. But there's a snag. Try this:

```
10 GRAPHICS 1
20 POKE 756,224
```

What happens? The screen fills up with orange hearts. This could be the end of a beautiful friendship...

Actually, your computer is not to blame - it's simply following instructions to clear the screen by printing a space at every position. Unfortunately, when the lower-case set is selected, the space character turns into a heart.

There are two ways round this. The first is to make the hearts invisible by turning them to the same colour as the background - SETCOLOR 2,0,0 will do the trick. The hearts are still there, but now you can't see them and any other orange characters will disappear too. However all the yellow, blue and violet characters - including hearts - remain available.

The second method is to modify the character set, replacing the heart with a blank space. Program 1 will perform the necessary cardiac surgery for you. It uses machine code, so just treat it as a black box routine which can easily be incorporated into your own Basic programs.

Line 60 is there simply for illustration - it lets you type numbers from 0 to 255 and prints the corresponding character on screen. It also keeps the communication channel open by preventing the program from ending. In a real program of course, line 60 should be deleted.

After running Program 1 your character set will be completely heartless, but every other lower case character is available in any of the four colours. You can flip between upper and lower case character sets at any time - use POKE 756,224 to select upper case characters, or repeat the USR call at line 50 to install the new lower case set. This can produce some intriguing effects on screen.

Now back to LOCATE, which you will certainly need for any Basic arcade games.

As you might have guessed, when the computer is in Graphics modes 1, 2, 17 or 18, the LOCATE command returns the letter/colour code, not just an ASCII number. See Table II last month.

For example:

```
LOCATE 5,8,8
```

will store in Q the letter/colour code for the character which is currently residing at screen co-ordinates 5,8. If it's a yellow I symbol - a torpedo, maybe? Q will take the value of one.

If you're using lower case letters and the character at 5,8 is a blue diamond, then Q will contain 192.

You should have no great difficulty converting our previous joystick control routines for use with Graphic Modes 1 or 2. However, there are...

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From Page 15

```
5 REM Program 2: 8-directional movement over a background
10 GRAPHICS 1: FOR ROW=0 TO 19: FOR COLUMN=0 TO 19: COLOR 46: PLOT COLUMN,ROW: NEXT: NEXT
20 XMAX=19: YMAX=19: YMIN=0: XMIN=0: X=Y=9: T=0
30 S=STICK(0): IF S=15 THEN 30
40 X=X+(S=5 OR S=6 OR S=7) AND (X<YMAX)
50 Y=Y+(S=5 OR S=6 OR S=7) AND (Y<YMAX)
60 COLOR 7: PLOT X,Y
70 LOCATE X,Y,2: COLOR 10: PLOT X,Y
80 NEXT
```

Program II: 8-directional movement over a background

other ways of programming joystick-controlled movement.

Program II shows one of the shortest possible routines using a system known as Boolean logic. Lines 40 and 50 perform all the joystick reading, boundary checking and position updating functions, in a fraction of the space required by conventional Basic.

We'll explain Boolean techniques in detail at a later date. For now, just treat the routine as a useful building block, without worrying about how it works. The screen boundaries - XMAX, YMIN, YMAX, YMIN - are set at line 20, and will need changing if you want to use a different graphics mode.

The moving character's initial position depends upon the values of X and Y, again at line 20. This routine is a little slower than our previous ones, but the reduction in program length and complexity is worth a small sacrifice in speed.

To round things off, Program III shows all the new techniques in action. It provides the framework for a game based on the specifications we suggested previously. You use the joystick to fly an asteroid around the screen, dropping invisible bombs on various objects.

Although it's very simple and hasn't much play value as it stands, the program illustrates many of the features found in real arcade games. It uses sound, colour and movement with successful hits removing the target from the screen. The number of missiles is limited and the program has a built-in scoring system. If nothing else, it will serve as a useful example when you come to write your own games.

Next month we'll show you how to produce a different playfield every time using random numbers - and how to make your targets strike back.

```
5 REM Program 3: Simple search and destroy game
10 GRAPHICS 1: PLOT 752,1: BOMBS=28: HITS=0
20 FOR ROW=0 TO 19: FOR COLUMN=0 TO 19:
30 COLOR 14: PLOT ROW,COLUMN: NEXT: NEXT
40 NEXT ROW
50 COLOR 65: REM Orange 'A'
60 PLOT 3,2: PLOT 3,3: PLOT 3,4: PLOT 3,18,16: PLOT 18,18
70 COLOR 85: REM Orange 'S'
80 PLOT 8,9: PLOT 9,9: PLOT 8,10,9,10,9,10
90 COLOR 70: REM Orange 'U'
100 PLOT 1,1: PLOT 18,2: PLOT 16,4: PLOT 9,2,10,18,15,14: PLOT 4,10,10
110 T=10
120 XMAX=19: YMIN=0: YMAX=19: MIN=-9: X=-9: T=0
130 T=STRIG(0): IF T=0 THEN GOSUB 160:1
140 BOMBS=0: THEN 'GAME OVER'; END
150 S=STICK(0): IF S=15 THEN TBO
160 X=X+(S=5 OR S=6 OR S=7) AND (X<YMAX)
170 Y=Y+(S=5 OR S=6 OR S=7) AND (Y<YMAX)
180 X=X+(S=9 OR S=10 OR S=11) AND (X<XMIN)
190 Y=Y+(S=9 OR S=10 OR S=11) AND (Y<YMIN)
200 X=x: Y=y
210 LOCATE X,Y,2: COLOR 10: PLOT X,Y
220 NEXT
```

Program III: Simple search and destroy game
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IAN SHARPE tests out the latest joysticks

THERE is a bewildering array of joysticks on the market, and often you don't get a chance to test your choice before parting with your money. To help you decide we've been putting a collection of killing machines through their paces.

It would be impossible to test every joystick available, so we picked a representative sample. I don't know if we were particularly lucky with our selection, or whether standards have improved a lot recently, but none of the sticks could be described as really bad.

The first thing to emerge was that joysticks are a very personal thing. We all agreed that some were good, but there were others that one person liked but another didn't. So to get a broad opinion, we tested four joysticks together, and the results were averaged.

Table 1 gives our order of preference, regardless of price. The order is based on personal choice after extensive playtesting. This is a highly subjective assessment, so in an attempt to be a bit more scientific we devised some programs to put a figure on aspects of performance. The first measured how many times we could press the fire button or wiggle the stick in 10 seconds. The second measured how precisely we could control a moving cursor to trace the path of a wavy line.

Test results

Surprisingly the test results didn't bear much relation to personal preference. We think this is due to the fact that the sticks which performed better had greater potential than is required in most games. Also, when playing, a lot depends on comfort and feel, though how you quantify that we don't know.

Another possible reason is that when performing a test the tendency is to concentrate on the stick, whereas in a game you concentrate on the screen and your joystick control becomes less self-conscious.

Some sticks come in two versions, with and without autofire. All are operated by either leaf switch or microswitch. There is another type of switch found in joysticks, the sort that looks like a metal bubble. These were quite common at one time, but they are not very robust and none of the sticks had this type fitted.

The leaf variety is a piece of spring steel pushed against a contact, while micro switches are a proper self-contained switch unit. In general micro switches are more expensive, last longer, and give better feel.

Long term durability is hard to test. Common sense says that a steel-shafted microswitch joystick should last longer than an all-plastic leaf switch one, but in our experience unless you give a stick rough treatment this only shows up after a very long period of use, by which time advances in design might make you want to upgrade anyway.

Of course your final choice would be modified by how much money you want to spend, whether you prefer a hand-held or tabletop model, and your liking for the ball-on-a-stick type or those with a moulded grip.

Ram Delta

Angular styling and gear-lever type stalk distinguish Ram's offering. A rubber bush around the shaft provides just the right amount of resistance and springiness. Precision is very good, and the overall feel is very smooth.
Your weapon

mark of a good design that you don't have to pay much attention to the stick when you first use it. Of all the models on test, this one felt the most robust, though we can't say if the impression would be borne out after a lot of use.

Cheetah Mach 1+

It's hard to define quite why this one feels right. Fundamentally the design is the same as many other sticks, but unlike many what happens on the screen matches what you are doing with your hand. We were never left puzzling why the sprite went one way when we meant it to go another. An excellent weapon.

Cruiser

Apart from not being coloured black and red, Cruiser's claim to fame is an adjustable collar allowing three stiffness settings. Like the Competition Pro, we found it had a nice firm precise feel and managed some good scores with it. It needs to be fixed to a surface for best results and doesn't make any concessions to hand holding.

Euromax Elite

The unusual shape fitted some hands well while others found it not to their taste. In the Elite feels quite good and we had one knocking about in the office for the past year. It is used regularly and has stood up to some heavy punishment.

Cheetah Special

Something of a contradiction, this one. Cheetah bills it as a breakthrough in joystick technology. As well as the normal direction and fire controls, the stalk can rotate slightly. Inside is an extra pair of switches which respond to the rotation. For this to work you need a two-joystick adapter to take the second plug.

You also need a game that is specially written to take advantage of the feature (we don't know of any) or at least has definable keys. Unless this idea catches on in a big way we can't see software houses writing games so

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that they’re not playable without this type of stick.
The contradiction is that for a joystick being billed as a break-through there isn’t a microswitch in sight. In all other respects it feels like Cheetah’s 125+, so you’ve got to decide whether the twist feature outweights the otherwise average performance.

Cheetah 125+

A basic leaf switch joystick with working autofire suitable for hand or tabletop. The action is not bad, but put alongside some of the microswitch models it seems a bit limp. If we hadn’t tried it alongside others sticks, the 125+ would have made more of an impression. As far as scores went, we were no worse off with this one, and given that it’s cheaper than all the rest is probably the best value for money.

Phasor One

On the face of it the pistol style is a good idea, and holding it in your hand before tackling a game it feels good. However, after 10 minutes in action we found that the fire button is not well placed for repeated use and we all got sore hands. Eventually your hand might strengthen sufficiently to compensate, but this still leaves another problem: We found that the narrowness of the grip made it easy for the stick to twist slightly in the hand and it was difficult to judge exactly which direction we were pulling the stick. This often led to the on-screen movement being not what we expected.

Terminator

Shaped like a hand grenade, the fire button is a metal strip bearing on a button set in the casing. The stalk is a relatively thin metal rod. After the initial hilarity over its appearance had died down, one person really liked it while the other three gave it the thumbs down. Overall it doesn’t feel as good as more conventional sticks, and it is not easy to play well with. Taking into account the price, this is the only one of the bunch we’d definitely avoid.

### CONCLUSION

Terminator and Phasor One shouldn’t be dismissed out of hand because they might suit some people, but do make sure you spend 10 minutes with them before stabbing your piggy bank in the back. The Cheetah 125+ is well worth considering if money is tight. It has a very light action and can’t quite match the feel of microswitch models, but it’s cheap, has a working autofire, and is certainly competent.

Whether it’s worth paying extra for the Special which has much the same feel is open to question, but for the price you could have one of the microswitch models. Euromax Elite and Professional, and Cruiser are good reliable pieces of kit, and you won’t be disappointed with them. We thought the Competition Pro had a slight edge, but there isn’t much in it and you might think differently. The Ram Delta was that bit better again.

For us, though, Cheetah Mach 1+ and Konix Speedking were top of the heap. The choice is down to your preferred type, and how important autofire is to you.

Such is the difference in personal opinion over joysticks, we think it is vital that you try your choice before parting with any money.
This Toolkit is a MUST!

Programming becomes so much easier when you’ve got the right tools for the job. With this Atari User package you can add TEN new commands to Atari Basic to dramatically improve your performance. PLUS your Atari will generate meaningful error messages instead of cryptic numbers.

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And boldly go where no man...

Take a trip around the milky way with NEIL FAWCETT as he evaluates an astronomy program for your 8 bit Atari

THE Atari Planetarium is an educational package designed to bring the wonders of the cosmos into your own front room - or at least your computer room.

For £29.99 you get one 5.25in disc and a comprehensive 115 page instruction manual. After booting up the disc - remember to hold down Start while switching on and remove all cartridges from older machines - you will be thrust into the main viewing screen.

Study it for a few minutes, and when you fail to understand what it all means this might be a good time to read the manual.

The first section details what the program can do - which is display the locations of more than 1,200 stars, 88 constellations, more than 300 deep sky objects and Halley's Comet during its 1985-86 appearance.

A special Help function will identify any displayed object for you on a status line which scrolls along the bottom of the screen.

The ability to accelerate time allows you to view cosmic events in minutes rather than hundreds of years. You can also view the position of star fields 10,000 years in the past or future. And if you have a printer you can make a permanent record of any screen display you create.

The section on loading the main program is very well written and makes it impossible for you to go wrong. When loaded, the program defaults to Washington D.C. on January 1, 1985. But since it may not be New Year's Day and you don't

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From Page 23

happen to live in Washington you'll want to change the default settings.

Because the program has to be very precise when calculating astronomical objects you must enter the latitude and longitude of your present location — found via the Planetarium's built-in map of the earth. Just move the cursor to where you think you live and press Return.

Then enter the correct time and date of the day you wish to view. Again this simple task is well explained in the manual.

Now the program has all the relevant user information it will calculate the positions of the sun, moon, planets and stars.

Four screen modes are used - Sky, Map, Set and Chart — accessed by highlighting the one you want in the data window at the right of the screen.

Once you have become accustomed to the commands and viewing modes you can move on to a guided tour of the universe. It starts off with a history of how ancient civilisations based religions on the stars and goes on to explain Earth's orbit around the Sun, the Moon, and other astronomical subjects.

The program can simulate just about any cosmic event you would want to watch. If you wish to see how the stars looked when Cicero viewed an almost total eclipse on June 21, 400 BC just key in the date and location and up it comes.

There is even a section dealing with the art of navigating using the Sun and stars, which was developed by ancient mariners.

Print outs are easy and Planetarium works with the Atari XMM801 printer or any Epson-compatible.

It was here I found the only error in the manual. It states that you have to press Control-P for an Epson and Shift-P for the XMM801. Don't, it's the opposite way round.

Dumps usually take around five minutes to complete and come out around A4 size.

The back of the manual houses numerous tables, future astronomical events, mathematical equations and places all over the world to experiment with. Did you know that there are 9,460,731,798,000 km in one light year? Neither did I.

The Atari Planetarium is easy to use and user-friendly. An excellent manual, plenty of on-screen prompts and a multitude of examples make traversing the universe very simple.

Even though £29.99 seems a hefty price tag it isn't. Programs written for the ST at the same technical level retail for nearly £80. So, if you buy one for your Atari B bit you'll save £50.

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Fight old battles again

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Beat to quarters!
Run out the guns
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These are the commands issued by many a sea captain in the 18th century as his ship came under attack from an enemy vessel.

Now SSI gives you the opportunity to take command of some of the most famous of these ships and recreate historical sea battles of old.

Designed for two-player or solo mode, your vessels must be rigged, manned and armed just like the real thing. And they handle in the wind exactly the same as you would expect from one of the great wooden warships of years ago.

Due to its size and complexity, Broadsides is disc only. Loading is straightforward. Remove all cartridges from older Atari micros, or hold down the Option key on newer models. Then switch on, remembering to place your disc in drive one.

After the loading sequence – which is accompanied by a superb high-resolution picture of a warship – the options screen is displayed.

You can choose whether you want to use a joystick or the keyboard, the skill level of the gameplay or whether you want to play an arcade or tactical simulation.

The first offers a faster and more exciting game with fewer decisions to make. Those preferring a more thoughtful version should opt for tactical. This allows you much more control over the proceedings – but it can get complicated.

There is also the choice of a naval battle or a reconstruction of a boarding foray. I found this a very useful option when I found myself tiring of watching ships float around the screen.

A number of famous ships have been faithfully recreated and saved on to your date disc, but if you tire of them you can always create your own. I recommend you read the player's manual fully before attempting to do so – it can get little involved.

All naval combat is displayed on a colour, high-resolution graphics screen which depicts speeded up sequences of the action.

A clever feature of this display is that when your ships get closer together, the on-screen size increases proportionately, giving a very realistic feel to the proceedings.

When you opt to board another vessel another animated graphics sequence is used. In this you can make your men charge your enemies or you can get your sharp shooters to cut them down with a hail of gunfire.

Sound is put to good use throughout the game and a sea shanty is played at the end of a session.

Whenever an encounter is won the national anthem of the country concerned is played – slightly out of tune.

Luckily SSI has done its usual best within the documentation and included a number of easy look up tables. At a quick glance you can get a rough idea as to which commands and keys do what. Very useful.

The player's manual is a mine of information and is produced with the usual classy style we have all grown to expect from the master of strategy games on the Atari micros.

Overall Broadsides is one of the best simulations from SSI and is a pleasure to play.

Helen Arden

Sound..........................5
Graphics........................5
Documentation..................8
Complexity......................6
Value for money................6
Overall..........................6

August 1988 Atari User 26
Battleground Europe

SSI has come up with yet another warfare simulation. This time you have an opportunity of controlling some of the most powerful modern military hardware ever built.

The scenario for the combat is a hypothetical war between the Nato and the Soviet Union.

As with all SSI games, you are greeted with a menu screen from which you must select a number of variables that affect the coming battle.

Available only on disc, the game can be loaded by removing all cartridges from your Atari micro, or by holding down the Option key and switching on with your game disc in drive one.

Once loaded you choose your options and away you go. I found it great fun to let the computer randomly generate its own map, as this adds a dimension of the unknown.

Your commands to the squadrons of vehicles are entered via a status window at the bottom of the screen. The action is split into several phases. However, you will have to read the manual carefully before you can understand their operation fully.

The full colour map display used is composed of a 60 by 40 grid, of which 20 by 10 squares may be viewed at one time. By pressing keys 1 to 8 you can move your cursor around the map. If the cursor is moved off the edge of the display the map will scroll to reveal the hidden portions.

When you play an assault type battle – selected from the options menu – the map is reduced in size to a 60 by 20 grid.

You are provided with a quick reference chart to help you identify the terrain and units on the map. I found it useful to place sticky backed plastic around it to stop it getting dog-eared after constant use.

In the middle of the booklet is a section detailing interesting facts about a number of armoured vehicles from both sides.

Not only can you control all the ground vehicles but helicopters and infantry can also be deployed.

Basically you have every form of weapon of destruction at your fingertips.

Several historical scenarios are included on your main disc and it is very interesting to play.

Overall an excellent simulation from the experts in wargames on the Atari.

Dave Manning

Call for double vision

It has been six years since you took on the alien armada single-handedly in an attempt to save the universe. You managed to destroy their asteroid bases and turned the mother ships into expanding clouds of vapour.

You stole certain valuable pieces of hardware for your trusty old ship and retired to the planet Solor – which is inhabited by small furry animals – to spend your last few years playing sport simulations and arcade games.

But you have become restless and yearn for the thrill of battle against incredible odds – you must be stupid. But guess what? – the Intergalactic Federation needs your help in saving the universe – again.

The enemy – unspecified by the cassette inlay – has captured the second most strategically important planet this side of the Sanovolagni Rift.

You have to fly your super-sleek Quarian class stealth fighter over the surface of the planet and destroy as many as the enemy ships as you can.

Not a very original storyline perhaps, but the actual game has had a little more thought put into it.

The action takes place on two screens which show plan and side-on views of your ship simultaneously. By watching both screens and controlling the ship that appears in each, you negotiate a tricky route through all the levels.

All movement is executed via the joystick plugged into port one. Controlling both ships takes some getting used to because up and down move one while left and right move the other.

Two excellent pieces of music have been written for the game and the sound effects are of a high standard.

The game is very playable and great fun. The perspective caused a few confusion at times and there were several occasions when I wasn't sure which collision wiped me out.

John Butters
Burning rubber

OVER the last few months several classic games have been re-released as budget titles. Now from Firebird comes American Road Race, formally an Activision full-price car game which I believe was originally called The Great American Cross Country Road Race.

You drive a very fast sports car across North America in one of four races - which you select when the game loads.

On offer are Los Angeles to New York, Seattle to Miami, San Francisco to Washington or the US tour. In the latter you race through every city marked on the map.

Once the route has been selected the map screen will appear and you have to check road and weather conditions and set your time of departure.

Watch out for police speed traps, night driving, bad weather, collisions with other drivers and a multitude of other obstacles placed in your path. My major problem was revving the engine and blowing it up.

The joystick controls take a little getting used to. By pressing the fire button and moving the joystick several variations on movement and changing gear come into play.

You must also make sure you refuel your car at regular intervals. Gas pumps appear every 100 miles, and all you have to do is stop next to one and wait.

If you run out of fuel don't worry too much. A gas pump will appear sooner than the normal 100 miles.

The gameplay is all right, but I wouldn't class it as one of the most addictive games I have ever played. The car's movement reminded me of the game I bought several years ago called Baja Buggies - which was adequate but not brilliant.

Sound effects are not stimulating, but again I can't really criticise them because a car engine can only really sound like a car engine. The police car's siren was a monotonous drone that got on my nerves very quickly.

The feature I liked the most appeared with the credits. A car zooms on from the left of the screen creating a massive dust cloud which clears to reveal another set of credits.

As a budget game, Road Race offers excellent value for money if you are new to Atari computers and don't already own a number of car racing games.

Pam Williams

<table>
<thead>
<tr>
<th>Sound</th>
<th>Graphics</th>
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CONAN THE BARBARIAN

By Bryan Stevens

See also Hints and Tips on Page 45 for further information and solution
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Driven to madness...

ANDRÉ WILLEY takes a look at the long awaited XF-551 disc drive

FOR some time now it has been almost impossible to beg, borrow or steal - let alone buy - a disc drive of any sort to plug into an 8 bit Atari micro. This has left many new XE system owners wondering whether they made the right decision in buying Atari.

Fortunately this is about to change with the arrival of the new XF-551 floppy disc drive from Atari. The very fact that it is available at all bodes well for the survival of a thriving 8 bit market, but it's even more exciting when you take a closer look at the specifications.

Outwardly the XF-551 is a sleek grey unit, similar in size to an old 1050 drive, but matching perfectly the colouring and styling of the XE system. As always there is yet another external power supply to clutter up your desk, but that's a problem users normally learn to live with.

Inside the casing is a very much more powerful engine than the old faithful 1050s we have come to know and love. Not only is the new drive capable of operating in true double density - the 180k mode previously available only with a US Doubler chip installed - but there is also a completely new format available: Double sided, double density. This new mode automatically gives 360k on each side of a floppy, a grand total of 720k on each 5.25in disc.

Of course there's always a catch - and in this case it's that good old Dos 2.5 wasn't designed to be able to access more than 130k of data, so you'll have to switch to a new Dos to get the most from the drive. Despite this, XF-551s have been shipping in the States for some time now, packed with Dos 2.5 and a very comprehensive Dos 2.5/1050 instruction manual.

This gives a step-by-step guide to using Dos 2.5 and is packed with sample programs - which is rather ironic as we have been waiting two years for such a manual and as soon as it becomes available it is obsolete.

Atari UK has decided to hold shipment of the drives until its brand new Dos-XE is complete, and it is this which has been holding up delivery for so long. I was lucky enough to obtain a sneak preview copy of Dos-XE, and while it performs its tasks admirably, I do have a few reservations about its ease of use.

In order to pack everything in, Dos-XE uses a bank-switching technique to store large parts of its code underneath the operating system rom - which unfortunately means that it won't work with old 400 or 800 micros.

The advantage is that, once it's loaded, you won't need to re-insert the Dos master disc because everything you'll need is already waiting in memory. When you load up Dos-XE without Basic you are greeted with three menu options: File access, Machine language access or System function.

If you have come from Basic - or some other language cartridge - you will also see an Exit to Basic or Exit to Cartridge option on this screen. Pressing Escape at any time will return you to this top level menu, which is quite handy.

Each of the three sub-menus may be accessed by pressing the highlighted first letter and hitting Return, although why the much more elegant single-key entry mode was not employed completely baffles me. Each menu covers a specific area of a disc user's requirements, basically to avoid cluttering up a single screen with too much information.

All three menus allow you to get a list of the files on a disc, plus the option of setting or changing the current working directory. This step is necessary because Dos-XE is capable of using sub-directories - or folders as they are known on the ST - to help you use your 360k of disc space more efficiently. These are single entries on a files listing, but may contain many more files or even other sub-directories. For example, the way of
saying that the program BOXES.BAS is stored inside the sub-directory called MYPROGS on drive one would be to use the path:

D1>MYPROGS>BOXES.BAS

In fact, Dos-XE is quite flexible in its use of directories, and you could use D1>MYPROGS or D1>MYPROGS or even just MYPROGS.

If you had already selected the current working directory as D1>MYPROGS then all you need to type to access the file would be its name, BOXES.BAS.

The three menus are laid out as shown in Figures I, II and III and provide every feature that was available on Dos 2.5 – plus quite a few extras. Probably the most notable is the facility to initialise the disc in any one of four formats: 810 mode, 1050 mode, XF-551 mode or single sided/double density (SSDD), giving 90k, 130k, 360k and 180k respectively on each disc.

Dos 2.0 or 2.5 discs may be used if you first select the Allow Dos 2.x Access option for a given drive. Then you may use A:filename to refer to this disc. I'd have preferred it to be automatic as with SpartaDos, but it's certainly better than nothing. It is only possible to use one disc at a time in Dos 2 mode – preventing you from copying between two Dos 2.5 discs, for example.

While it's impractical to go into all the extra menu items, the most interesting are the availability of date stamping on files, the Display and Change memory options on the Machine language menu and the facility to run batch files.

Batch files allow you to execute a number of menu commands which you have previously stored in a file and they are a powerful way to automate often repeated tasks. There is a batch facility available from the menu system too, which enables you to enter the various commands and parameters on one line without waiting for all the prompts to appear.

For example, to access the files menu and send a directory of drive two to the printer you could type:

FILES.MENU FILES.LISTING D2: A: P:

or even abbreviate the command to:

F: F D2: P:

Unfortunately this technique is hampered by the time-wasting necessity of watching all the interim menus re-drawing themselves painfully slowly before the command can execute. Perhaps the final version will allow batch commands to go straight to the relevant item without displaying the menus.

On the whole a quite passable Dos, but not without its faults. Weighted against the advantages of better menus, sub-directories and the extra density modes are the facts that the menu system is too slow and laborious. Also too much emphasis is made of the Start, Select and Option keys – leaving cluttered, confusing and messy screens. Why not use a simple and far more meaningful Yes or No system rather than Push Start to Continue, Push Select to stop now which serves only to confuse both new and existing users?

Overall the XF-551 drive itself performs very well indeed – significantly faster than a 1050 in many cases – and is generally pretty quiet in operation.
Suppose it would have been nice to have a power light as well as a busy light, but otherwise I've no complaints other than a slightly excessive price tag.

As far as DOS-XE goes, however, my own preference is still for 'ICD's excellent and far superior SpartaDos, already quite capable of working in all four densities. Its support of DOS 2.x discs is automatic - just put one into the drive and SpartaDos will recognise and handle it accordingly.

Also I much prefer using a command processor to DOS-XE's rather peculiar batch-processing menu system - but of course SpartaDos does have a very powerful menu tool so the choice is always there if you happen to prefer menus.

- Let's hope that the final release of DOS-XE might clear up some of these minor problems and leave us with a new standard for file storage to go with an excellent new drive. Until then, my advice to those considering moving up from cassette is to go out and buy an XF-551 at once - but you might find that you prefer to use it with SpartaDos.

### Density

<table>
<thead>
<tr>
<th>Density</th>
<th>Total Bytes</th>
<th>XF-551 time</th>
<th>1050 time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single density</td>
<td>32,768</td>
<td>28.5</td>
<td>30.9</td>
</tr>
<tr>
<td>Enhanced density</td>
<td>32,768</td>
<td>28.5</td>
<td>31.2</td>
</tr>
<tr>
<td>Double sided</td>
<td>65,536</td>
<td>46.6</td>
<td>n/a</td>
</tr>
</tbody>
</table>

256 sectors of data transfer (read or write)

### Disc density

<table>
<thead>
<tr>
<th>Density</th>
<th>DOS 2.5 XF-551</th>
<th>SpartaDos XF-551</th>
<th>DOS-XE XF-551</th>
<th>DOS-XE 1050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>27.2</td>
<td>25.7</td>
<td>27.1</td>
<td>24.5</td>
</tr>
<tr>
<td>Enhanced density</td>
<td>27.4</td>
<td>25.8</td>
<td>27.3</td>
<td>25.5</td>
</tr>
<tr>
<td>Double density</td>
<td>n/a</td>
<td>26.3</td>
<td>27.0</td>
<td>25.1</td>
</tr>
<tr>
<td>Double sided</td>
<td>n/a</td>
<td>49.8</td>
<td>50.3</td>
<td>n/a</td>
</tr>
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</table>

Format timings (seconds)

### Density of boot disc

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<tr>
<th>Density</th>
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<th>SpartaDos XF-551</th>
<th>DOS-XE XF-551</th>
<th>DOS-XE 1050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single/enhanced</td>
<td>16.6</td>
<td>17.9</td>
<td>25.3</td>
<td>27.5</td>
</tr>
<tr>
<td>Double/double sided</td>
<td>n/a</td>
<td>16.3</td>
<td>22.3</td>
<td>23.0</td>
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</table>

Boot-up times (seconds)

### Drive type/Density

<table>
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<tr>
<th>Drive type/Density</th>
<th>DOS 2.5</th>
<th>SpartaDos</th>
<th>DOS-XE</th>
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</thead>
<tbody>
<tr>
<td>1050 Single density</td>
<td>22.5</td>
<td>22.5</td>
<td>74.9 *</td>
</tr>
<tr>
<td>XF-561 Single density</td>
<td>19.9</td>
<td>20.4</td>
<td>73.0 *</td>
</tr>
<tr>
<td>XF-551 Double density</td>
<td>n/a</td>
<td>17.3</td>
<td>48.4 *</td>
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<tr>
<td>XF-551 Double sided</td>
<td>n/a</td>
<td>17.3</td>
<td>42.6 *</td>
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Drive timings: Open file, write 20,000 bytes, close file

### Drive type/Density

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<tr>
<th>Drive type/Density</th>
<th>DOS 2.5</th>
<th>SpartaDos</th>
<th>DOS-XE</th>
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<td>21.0</td>
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<tr>
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<td>16.2</td>
</tr>
<tr>
<td>XF-551 Double sided</td>
<td>n/a</td>
<td>15.2</td>
<td>10.4</td>
</tr>
</tbody>
</table>

Drive timings: Open file, read 20,000 bytes, close file

Notes: The beta test version of DOS-XE which I tested doesn't seem to hang-switch correctly, and because of this it resides entirely in normal RAM. This gives it a free memory of only 19,084 bytes from Basic (as opposed to 32,274 bytes with DOS 2.5 and 32,501 bytes with SpartaDos). No doubt this will be corrected for the final release.

Also there was no indication of how to switch off the DOS-XE disc verify mode, so any operations which include a sector write from DOS-XE (marked with an asterisk) will show up as being far slower than normal. This again should be cured on the final release, but take a look at the direct sector access times for a better indication of the true drive speed.
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- See Page 8

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Problem the size of a planet...

TIME once again to free last month's captured Orcs — they do whinge on so if they don't get fed seven times a day on the dot — put aside the trusty broadsword and battle-scarred shield, turn up the wick on the old brass lamp and get down to relaxing with some of your recent correspondence.

Jon Ward is having problems with Hitch-Hiker's Guide to the Galaxy. He rates it as his favourite adventure in his personal top ten although as he hasn't got very far, I wonder if he will still hold to that view when he's finished. I guess he will, since HHGG gets better and better and in my opinion also, is one of the best adventures ever.

Having spent ages working out how to get past the the bulldozer without being hit on the head by a brick, Jon reached the pub. Then after drinking three pints of beer he arrived at the point where the Vogon ships come to destroy the planet. Ford dropped a device at his feet but having pressed the green button — the correct action — Jon is now stranded in the dark room.

He can't see, hear, or feel anything and wants to know what on Earth — or, because Earth has been destroyed, what in space — to do next.

Well Jon, a lot of adventurers have been caught by this one. What you

**HINTS AND TIPS**

**Ultima IV**

- To get a ship into Lock Lake sail into a whirlpool.
- The Rune of Compassion lies at the end of a passage in Britannia.
- The Rune of Spirituality is in the hidden Treasure Chamber in Britannia Castle, under a chest. To locate the chamber, peer at a gem. When you have found the site of the chamber, walk straight into the wall which will then give way.
- The Gate Spell requires ash, pearl and mandrake.
- The secret entrance to Hythloth is at the back of Britannia Castle.
- You will need the balloon to get the white stone on top of the Serpent's Spine ridge.
- The eighth member of the party is a shepherdess called Katrina living in Magincia. When standing outside the town, do not cross the bridge but go south to find her.
- Guild of Thieves
  - Go to the hot house to get rid of the snake.
  - Use the skeleton's finger to open the sarcophagus.
  - To get the gem from the wax, hold the mirror in the beam and reflect it on to the wax. Then catch the gem as it falls.
  - To use the cauldron, put the eye, skin, heart, berries and cube in it and open the sachet.
  - To get down the thin shaft, dig in the sand to find the boots. Then wear them and make sure you've got a lamp.
  - How do you get the honey from the beehive? It's impossible.
  - To deal with the spider, open the jam jar in the stable to attract some flies.
  - Close the jar and later throw jam at the spider.

List of Mantras

Honesty — AMH  
Compassion — MU  
Sacrifice — CAH  
Justice — BEH  
Humility — LUM  
Valor — RA  
Spirituality — OM  
Honor — SUMM

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should do when you first reach the dark room is read the description very carefully. Type WAIT a few times, and you will notice a subtle difference in the text—suddenly one of your senses is not mentioned.

So in this particular instance try typing SMELL THE DARK after the text has changed. The same principle applies whenever you again find yourself in this dark room as you surely will—just watch for changes in text.

Christopher Beard of Newthorpe, Notts, wonders if Infocom has finished with the 8 bit Atari as no new adventures from that company have appeared for a while. Well, I'm afraid it does begin to look a bit that way, Christopher—none of the latest Infocom adventures have been converted for the Atari 8 bit format, as far as I know. If they have, Infocom is keeping awfully quiet about it.

But all is not gloom and doom—three rousing cheers for Rainbird, which has picked up the mantle and has not forgotten we Atari adventurers. Rainbird has followed up the excellent Guild of Thieves with the even funnier Jinxter, one of the best you'll see on your machine. It's out on disc now. Make sure you don't miss it or you'll kick yourself.

My thanks to C.H. Seymour of Liverpool and B.H. Standing of Port Talbot who have supplied much help with Ultima. Well done, faithful adventurers.

I shall put your guidance to good use, starting with this issue. In addition, I hope the tips on Guild of Thieves let many of you who have requested them make further progress with this superb adventure.

Until next month, have fun.
ONE of the most popular games on
the Atari was Pole Position, a car
game which uses a head on view. In it
you take the role of a formula one
racing driver as he winds his way
around several tracks.

Many years later a game called
Super Sprint came out - on the ST -
which uses an overhead perspective
for the main game play. Unfortunately, it was never released for the
8 bit - the closest we ever got was
Grand Prix Simulator.

Now we give you the chance to
experience the exhilarating thrill of
driving a car round a track at high
speed. The game can be played by
two players against each other or by
one player racing against the clock.

Make sure that you check your
typing using Get It Right! and save a
copy before running it. A mistake in
the data statements may result in a
system crash, and you could lose
hours of typing.

Once you've entered correctly you can run it.
After it has initialised - which takes
around a minute - you are presented with
several game options. These
range from one or two player games,
length of the race (4 to 24 laps) and
difficulty of play (1 to 5) - use the
Option and Select keys to choose
them.

If you are in the two player mode car
one is pink and the other white. One
player mode uses a joystick plugged
into port one.

By altering the level of difficulty you
increase the number of obstacles you
have to avoid. To make life more diffi-
cult the centre of the track is marsh-

A status line at the bottom of
the screen displays the race statistics - lap
number, time of last lap and the
average lap time so far. At the far right
hand side is the time taken - all times
are shown in

On the left of the screen is a lap
marker and you must travel in a clock-
wise direction to complete a lap - anti-
clockwise trips will be ignored.

If you want to abandon the game at
any point, press Option to return to
the main menu.

Experience the thrill of racing
with STEPHEN WILLIAMSON's
exciting simulation
Maniac Mover

After Car Crazy, here's another bout of motoring madness from STEPHEN BROUMLEY

IT'S a hard life being an ambulance driver, especially when you have to drive down the new eight-lane motorways dodging the speeding maniacs who inhabit every stretch.

To make things even worse, you have just realised that it's today you must undertake your APT examination - Ambulance Proficiency Test. If you fail it means certain doom, and an awful existence without a job.

But don't worry, all you have to do is drive your new hi-tech, turbo-charged ambulance down the motorway for as long as the examiner wants you to - or until you crash. Simple isn't it?

Don't forget to use Get it Right! to check the program after you have typed it in. Save a copy before running it, as an error in the Data statements will crash the computer.

When you're happy all is correct, plug a joystick into port one and run the program. When it has finished initialising, the eight lanes of motorway are drawn and you are prompted to press fire to start.

Pulling the joystick left and right will decelerate and accelerate your car respectively, while up and down move your car in the chosen direction.

Being an up-to-date vehicle, your ambulance possesses a turbo charger unit which you can use to get out of trouble quickly. Simply press your fire button to enable the turbo and jump over intervening cars. However, the turbo drive only lasts for a few seconds.

After this you must wait while it recharges before you can use it again. If your car is any other colour than white you are either using the turbo or it's recharging.

You have three lives and gain an extra one every 10,000 points. When this occurs you will hear five beeps. So, have fun and watch out for those motorway maniacs.

```
18 REM ******************
20 REM * 'MANIAC MOVER:' *
30 REM * BY S. BROUMLEY *
40 REM * (C) ATARI USER *
50 REM ******************
60 Graphics P=POKE 756,8;COLOR 2,0;
70 ? "PLEASE WAIT INITIALLISING...."
80 CK=B;FOR P=32768 TO 31591:READ D:P
90 IF CK=226412 THEN SOUND 0,8,0,8:SOUND
A0 POKE 755,B+32768
B0 ? "ERROR CHECK DATA":END
C0 DATA 104,169,8,141,214,6,141,210,2
D0 DATA 135,130,32,7,133,173,48,2,153,285,
E0 DATA 175,49,2,153
F0 DATA 126,169,240,169,2,145,283,169,
G0 DATA 130,160,7,145,285,200,280,200,192,28,
H0 DATA 285,169,150,145,285
I0 DATA 120,169,162,141,8,2,169,133,141,1
J0 DATA 179,192,147,14,212,173,11,212,201,1
K0 DATA 28,28,249,169,8
L0 DATA 130,141,203,6,141,288,6,169,5,141,
M0 DATA 199,6,169,58,196,8,76,139,132,32,
N0 DATA 150,133,169,255
O0 DATA 140,131,280,149,8,155,285,170,168,1
P0 DATA 45,283,200,208,251,250
Q0 DATA 204,232,224,5,208,243,32,176,
R0 DATA 131,168,32,169,255,153,8,123,152,24,10
S0 DATA 5,24,169,192,224,280,
T0 DATA 262,169,255,168,223,153,8,123,
U0 DATA 169,120,141,220,6,165,100,141,219,6,1
V0 DATA 69,6,141,212,6,141
W0 DATA 215,6,141,213,6,32,134,130,16,
X0 DATA 9,128,141,7,212,169,3,141,29,288,169,6,
Y0 DATA 214,242,169
Z0 DATA 17,141,111,2,169,8,141,38,238,
\0 DATA 141,208,6,96,32,91,128,141,38,288,32,
\\0 DATA 48,153,169,8
\\0 DATA 133,77,173,196,6,24,149,215,6,
\\\0 DATA 191,196,6,144,3,288,197,6,173,197,6,2,
\\\0 DATA 1,22,208,3
\\\\0 DATA 52,188,213,73,252,2,201,255,
\\\\\0 DATA 240,20,169,255,141,252,2,32,158,133,17,
\\\\\0 DATA 3,272,2,201,235,240,
\\\\\\0 DATA 249,269,269,255,141,252,2,32,143,
\\\\\\0 DATA 135,173,201,6,208,8,169,14,141,194,2,1
```

Turn to Page 44
Conan the Barbarian

OUR superb map this month shows the intricate levels to this wonderful graphical adventure from Datasoft. The game features excellent graphics and sound effects. But above all it has that all-important factor needed to make a game — tremendous playability.

Because a map isn't of much use on its own we are also offering some help on how to kill Volta and his evil minions.

- **Level One:** Very simple to complete this one. Just kill the hawk creature that attacks you and make your way to the top.
- **Level Two:** A bit of pixel-perfect leaping is needed on this level. Jump from the castle battlement to the tree, then to the ground. Collect the key from the niche in the wall and jump over the river.
- **Level Three:** Go down the ladder and, avoiding the scorpions, use the transporters to get to the jewel. Take care, for the scorpions can be transported as well. When you have the jewel go back through the transporters — avoiding the scorpions again — and place it in the holder.
- **Level Four:** Here's your chance to collect more swords and gems. Every now and then they will appear in random positions around the screen. Take the gems — one at a time — to the gem holders. When you have done this twice you are allowed to take the key.
- **Level Five:** The six gems at the bottom of the screen will change into dragons when they disappear. If you stand in front of the first transporter door you can shoot the dragons just as they enter the second one.
- **Level Six:** On this level the sphere in the middle of the screen produces little charges of static which can kill you. If you stand at the edge of the platform marked X they won't touch you.
- **Level Seven:** Climb down the ladder and stand with your back to the wall at position Y. Volta will send a lightning bolt after you. When it reaches the top of the ladder, throw a sword and it will hit the bolt on its way back, turning it into a jewel. You must then place it into the holder — which is easier said than done.

The bouncy thing at Z gets you back to position Y. When you have collected three jewels your avian ally will pick up Volta and drop him in the volcano. It will then return for you and drop you at the exit. — Bryan Stevens, Andover, Hants.
Has upgrading your computer given you hardware you no longer need? Or have changing interests left you with unwanted software? Then THIS is the place to advertise your surplus items. Atari User readers are always on the lookout for a bargain and this is the first place they look!

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Let's start off this month with a couple of questions from Carlos Jorge Sousa, who unfortunately didn't provide his address.

I've been told that my 130XE hasn't got a voice synthesiser, but now I'm not so sure. My doubt occurred while playing the budget game 'ET Phone Home', and after I had collected all the pieces of the phone I heard him say "ET Phone Home" twice, and the game would proceed. Is there really a voice synthesiser incorporated in my Atari machine, and if so could you please tell me how I use it?

Secondly, is it possible to create more than two colours on a Graphics 8 screen by using machine code? I ask because I saw a photo in a recent issue of Atari User of the title screen to Gauntlet, and there appear to be about 16 colours on it.

I thought the only mode which allows 16 colours was Graphics 9, but I'm sure that the Gauntlet screen can't be using it because the picture seems too highly detailed.

Modes 7 and 15 - which give more detail - can only display four colours. Could you explain how these screens are created?

The simple answer to the first part of your letter is that your information is quite correct. The Atari 8 bit micros don't have a built-in speech synthesiser.

There was a period when Atari developed several new machines which contained extra chips to perform various tasks.

The 1200XL, which was never released in the UK, did have a speech synthesiser built into it. But the 130XE doesn't have one. However, it does contain a very powerful music and sound chip called POKEY, and this can be used to great effect in producing voice-like sounds.

What happens is the voice - or any other sound required - is first played into a microphone attached to the Atari's joystick port. Then some machine code software scans the incoming signal and records it as a series of digital numbers representing tiny snapshots of the sound wave - in much the same way as a compact disc is created.

The quality of the final recording depends on the number of samples you make - the greater the number, the closer to the original sound you get. A compact disc, for example, makes tens of thousands of samples every second and can thus reproduce the original sound very accurately.

The Atari can't work quite that fast, and even if it could you would use up the whole of your memory to store a single second of recorded sound.

So a compromise has to be reached and a sample rate of perhaps a couple of thousand per second will have been used. Once a sound has been digitised in this way it can be replayed by the POKEY chip which uses the sampled data to create a digital version of the sound.

Obviously this requires some very complicated software, but you can buy an interface and the necessary programs from 2 Bit Systems. It's called Replay, and you can use it to record, playback and even adjust real sounds inside your Atari.

Now on to the second part of your letter and multi-coloured graphic displays. This one is a little trickier as the programmers of the game have cheated and used some machine code trickery to get more colours from a Graphics 16 screen than you can normally obtain.

The first thing they did was to use a character screen, like Graphics 12 but without the blue text window at the bottom, and convert the picture into a little blocks the size of a single character - a total of 40 blocks by 24 for this type of screen.

Each block was then converted into colour character information and stored just like an ordinary character set would be. When displayed side by side, they make up the picture once more - rather like putting a jigsaw puzzle back together.

This method has the advantage of allowing four main colours plus the background one as opposed to the usual three plus background given by Graphics 15. They then use another machine code routine to create the amazing scrolling effects which you will no doubt have seen in other games.

So the answer to your question is really that you CAN'T get that many colours on a normal graphics screen - but it's amazing what a bit of hi-tech cheating can do.

**String array problems**

Finally, this month, a problem from Mr. K. Richards of Lower Sydenham in London:

I am in the process of writing a program which requires many names to be entered into memory. I am using a FOR...NEXT loop to enter...
The problem arises when I try to print them out again. Whenever I try to do this, either in order or as they were entered, I can only get the last name I entered. Your assistance would be much appreciated.

Your problem is quite a common one, and stems from the fact that Atari Basic does not support arrays of strings in the same way as it does for numbers. You have got most of the code correct for making your own pseudo array, but you are storing each name in the same 15 locations within a long string, and so each entry overwrites the previous one. What you must do is move further up into the string for each new entry.

I assume you are calling the subroutine with something along the lines of:

```basic
10 FOR NAME=0 TO 100
20 GO SUB 10000
30 NEXT NAME
```

which gives each entry a unique number between 0 and 100. This number should be used to tell your routine how far into the string it must go before storing the entered text. The first name will be stored in elements 1 to 15, the next in 16 to 30, the next in 31 to 45 and so on.

You will note that each start position is in fact one greater than fifteen times the element number — thus element array starts at position 1, element one starts at position 16 — (15*1) + 1 — with element two starting at 31 — (15*2) + 1 — and so forth.

Since ML varies from 1 to 16, you should change line 10030 to the following:

```basic
10030 PRINT CHR$(ML); PO
```

This will now place each entry into the correct point in the long string and you can print them out again by altering the relevant routine in the same way. Simple really — well, almost!

That's it for another month. As always, we are interested to hear from our readers — old and new — who are experiencing problems with their Atari.

If you need help write in to:

Software Solutions
Atari User
Europa House
Aldington Park
Aldington
Maclesfield SK10 4NP.
I WOULD like to make a complaint about your magazine. Why is it that you are never up to date with your software reviews?

In the June 1988 issue you only reviewed three games when there were at least 10 on cassette alone available.

You could have reviewed Indoor Sports (Databyte), Spy vs Spy III (Databyte), Speed Run (Red Rat), Space Wars (Red Rat), Jackal (Konami), Rampage (Tynesoft), Scorpion (Tynesoft), Hero (Activision), Freeway (Activision) and Cybernoid (Hewson). Why not review more games for the readers and stop being lazy? – Allan Porter, Spalding, Lincolnshire.

Well Allan, let’s take a close look at the games you mentioned. The two Databyte games are available in the USA but aren’t over here yet.

Speed Run hasn’t been completed by Red Rat and it’ll be a few months before it arrives on the scene. Hewson game that you mentioned is for the ST only and won’t be coming out for 8-bit Atari micros. Rampage has been written for the 8-bit Atari micros but at the moment Activision can’t make its mind up about releasing it on the UK market. Freeway isn’t actually a game. It’s a programming structure designed for the ST and Amstrad CPC computers.

Konami hasn’t made its mind up about bringing Jackal out yet.

Now we move on to the interesting game you mentioned – Scorpion. Tynesoft shelved the idea of bringing this game out over a year ago and never publicly said it was going to appear.

David Croft, head of software development at Tynesoft, is very curious how you got to hear about it. As are we at Atari User.

In the May 1988 issue of Atari User we took a look at Space Wars from Red Rat – why don’t you try taking a peek at page 28?

Hero has a flaw

I WAS very pleased with myself at having cracked the computer room in Universal Hero. But when I used the disc and plug the computer displayed “Now Logging in...” I thought, wow, I’ve done it. Then underneath it said, “Error 1439 No disc present” and my plug disappeared.

I was really upset as I was enjoying the game until that point. Please tell me what to do because I am utterly stuck. – Kara Ball, Keynsham, Bristol.

Sorry to disappoint you Kara but this particular game has a bug and you can’t finish it. We’ve had rather a lot of complaints about it.

ON THE CREST OF A WAVE

I WAS delighted to find the BioRhythms program in the May 1988 issue of Atari User, as I have been looking for such a routine for some time.

After having to type it in twice, due to my clumsiness, I got it working. It was at this point I decided I would like some printouts of my biohythms cycles. As I own a 1020 printer/plotter I had to write the routine myself.

So, for other owners of a 1020 here are the modifications you need to make to the original program that will allow you to produce your own BioRhythm dumps. – Stephen Shepherd, Chippington, Northumberland.

FIRST GET YOUR GAME...
Mailbag

From Page 49

Listing that appeared is complete. When the programmer was developing the game he had an extra routine located at line 2605. However, when he finished it he realized he didn’t need it so he just removed it — leaving the REM statement the same.

Lost in the dungeon

After reading the review of Alternate Reality: The Dungeon in Atari User I decided to go out and buy it. Being new to this sort of adventure, I followed the main rules and attempted to make a map.

In the March 1988 issue of Atari User you printed various hints and tips which judging me back on to the right tracks. Then in the April issue you spoke of some maps of the Dungeon you had received.

And so to my plea: Can you please print the maps and help me complete this compelling adventure? — Neil Becker, North Basingstoke, Hampshire.

Without promising too much, we’ll get our mapping expert to take a look at the ones we received. If he can do anything with them we’ll print sections of the rather large Dungeon to help you.

Double the praise

I have just bought Double Pack 2 from Redrat Software — reviewed in the April 1988 issue of Atari User.

I am amazed at the value for money it gives, and I think your review of it was a little too conservative.

Dreadnought is the best game I have for my Atari — even better than some Atari ST games I have seen. I would like to thank Red

Roulette solution

Here is my solution to your superb Programmer’s Challenge about the roulette wheel. It follows all of the guidelines stipulated by Mike Cook in the March 1988 issue of Atari User. — A.W. Golding, Barnet, Herts.

Mr. Golding wins the £10 prize for the best solution sent in. In a future issue of Atari User we’ll be giving you another Programmers Challenge to solve.

If all else fails...

CAN you please help me with a problem that I am having with the Tom of the Best utilities disc I recently bought? When I load and run five of the programs I constantly get errors. The programs are: DSKERROR.BAS, AUTODI R1.BAS, DSKRENUM.BAS, 80COLMAS.BAS and STRIPPER.BAS. Have I got a damaged disc or am I loading them wrongly? — P. Turland, Moulton, Northants.

Kidding around

Congratulations on an excellent magazine. I particularly like the software reviews section and the utility programs — please keep it up.

Now a question for you to answer me: Are there any educational programs available for very young children? I would like to introduce my 18 month old son to the computer as soon as possible — he already likes the click caused by bashing my keyboard. — Andy Walker, Ellesmere Port, Wirral.

Win a Tenner!

Each month we will award £10 prizes for the most interesting letters sent to us. So now there’s more reason than ever to contribute to our lively Mailbag pages.

Get your pens out, start writing and you could be one of the winners.

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