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# ATARI USER

Vol. 3 No. 1

May 1987

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**FULL** and part-time writers are urgently needed by Database Publications, publishers of Atari User and its companion, Atari ST User. If YOU know the Atari or Atari ST inside out, can express your ideas on paper - and want to become part of the exciting future that lies ahead for Atari machines, then write now to: The Managing Editor, 88 Chester Road, Razel Grove, Stockport SK7 9NY. Please include your phone number.

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## Business package hits the chart

A BUSINESS software package has achieved a world first by storming its way into the all-important Gallup Top 40 chart on the eve of its launch for the Atari 8-bit range.

Mini Office II, the award winning title from Database Software (081 428 8008), entered the best-selling list at number 25.

The chart is considered the most significant of all on the UK software scene because it includes all machine formats. And what is even more surprising about Mini Office II's most recent success is that it had to compete against games costing as little as £1.99.

Not that this is the first distinction to be achieved by the package. For team it, launched in October, 1984, the original Mini Office was the finalist in two categories of the British Microcomputing Awards — the Owners of the Industry.

The first version for the BBC Micro also displaced games to reach the Top Ten for that machine.

Mini Office version one went on to win national acclaim for being ahead of its time in that it was the first professionally written low-cost business package. At just £5.95 on cassette for the BBC Micro, the price tag was considered revolutionary as its nearest competitor cost several hundred pounds.

Its much enhanced successor, Mini Office II, took 28 man-years programming and contains six modules — word processor, database, spreadsheet, graphics, label printer and communications.

Mini Office II is priced at £19.95 on disc for the Atari 8-bit range.

# Atari is wooing software houses

ATARI's new good neighbourly policy towards support companies is already paying dividends. Software house representatives are now visiting Atari UK headquarters at the rate of two or three a day.

And the result, says manager of software marketing Roland Whitehouse, is great cooperation.

"We are showing that we want to keep up with new releases", he said.

He is making assurances that there will be plenty of software for the 8-bit and especially for the 6502 games machine.

"What is really encouraging is that there is an increasing number of firms committing themselves to producing cartridges for the new games machine", said Whitehouse.

The software house response confirms the company's belief that a major revival in the video console sector will happen this year.

A company spokesman told Atari User: "It's below the average age of prospective buyers is getting younger.

"This means there are a lot of youngsters out there who aren't really ready for a proper micro but are keen to

get their hands on a games machine.

"And it doesn't hurt Atari's prospects that we already have a games software range that is second to none."

Atari originally estimated it would sell 180,000 8-bit computers and games consoles in 1987.

But this figure had to be revised when advance orders for 30,000 units were placed within the first few weeks of the year.

Now the company is talking about selling at least 200,000 — and possibly a quarter of a million — games machines in 1987.

## Losing its magic . . .

MAGIC is old hat says text adventure specialist Robico.

The company is looking for new writers on the Atari 8-bit but, says software manager Ray O'Leary: "We are not too keen on magic adventures any more — unless they are really original".

He explained that the firm felt a very good freelance programmer doing conversions to the Atari, so that only originals were needed.

"What we are looking for is finished or part finished programs which we will market. We would evaluate them and even if the programming is not brilliant we can work on them."

He said most Robico (0440) 207064 adventures had more than 200 locations, which was why graphics had never featured highly, though they were not out of the question.

O'Leary said that they were hoping to get more disc-based adventures for the Atari.



## A Mole in the micro

The latest Adrian Mole series on Thames Television forms the basis of a new Virgin Games release for the Atari 8-bit machines.

It is the sequel to The Secret Diary of Adrian Mole

which was produced by Level 9 and Myside Publishing.

The Grogging Pair of Adrian Mole comes from the same joint source, but is being marketed by Virgin. Cassette price £9.95.



Derek Maxwell and 100 fellow diggers attack the green field site of the new headquarters

## Digging away for Atari User's new home

THE world's first mass vote-cutting ceremony heralded the start of building a new £1 million home for Atari User and its sister Database Publications magazines.

All 150 Database employees took part in the traditional act of groundbreaking to celebrate their role in the company's rise to prominence in computer magazine publishing.

The new site in the Chesham countryside near Stockport echoed the sound of scores of spades and shovels hitting the ground simultaneously at a signal from Database head Derek Maxwell.

"We originally toyed with the idea of inviting a leading figure in the computer industry to perform the ceremony", he said, "but decided in the end to keep it within the company."

"All our employees have contributed to Database becoming the UK's leading publisher of computer magazines - so they all deserved to play a part on the big day".



The new headquarters of Atari User, due for completion at the end of 1987

## BT titles collect

### 31 awards

ATARI's Telecom's software titles have occupied an amazing total of 31 awards here and abroad in the past 12 months.

The accolades were awarded by reader polls and computer journalists' votes in

magazines published in Britain, France, Germany and the United States.

More than two-thirds of Telecom's sales of programs on the *Paradise*, *Pinball* and *Beyond* labels are now overseas.

## After The Pawn, The Thieves

WHEN *The Pawn* from Rainbow won acclaim across the board it was almost inevitable that there should be some sort of follow-up.

But the designers, Magmatic Sirens, resisted the temptation to do a "start where you left off" game.

Guido of *Thieves*, out on the Atari 8 bit, shares the same setting as *The Pawn*, the mystical land of Karnovia.

But there the similarity ends. All the characters and locations are new, as is the style. Designed to appeal to a wider range of adventures, it has a more direct gameplay but with more problems to solve.

Increased interaction, too, is another feature. Humans,

animals and plants can be addressed in complex sentences through the parser.

The adventure opens with your application to join the guild, an elite band of professional reprobates, whose tests are set to prove an applicant's worth and status.

You are given a task which will test both your wits and ingenuity. You have to ransack an island and capture its treasures while encountering a variety of useful and dangerous things.

It includes several complex puzzles and 30 scene-setting illustrations which, claim Rainbow (01-240 8838), add a new dimension to computer graphics.

## Soccer promotion

ONE of the first results of Priam's takeover of the Addictive Games label is the release on the Atari 8 bit of the best-selling soccer computer game ever, *Football Manager*, at £2.99.

This means, says Priam, "the game, in its new double cassette packaging, will be competing in a new division against the budget software teams."

"We believe this newcomer is likely to cause quite a few upsets as it moves through the pack and to the top of the league".

Phone (01-804 8100) is plan-

ning to re-launch Addictive's Silicon Joy label to carry more budget-priced games.

## Flying high

Hot air ballooning was never as essential as in *Up Up and Away* from Supabyte for the Atari 8 bit micros.

The obstacles in your flight path include aircraft, kites, birds, lightning, and punks throwing missiles.

Fuel problems, landing and taking off again, and throwing sandbags at the punks add to the fun. Price (£2.99).

# THE GALLUP CHART

# TOP 20

## ATARI SOFTWARE

THIS MONTH	LAST MONTH	TITLE (Software House)	PRICE
1	▲	BOX SIMULATOR (Code Masters)	1.99
2	•	COLONY (Softdog)	1.99
3	▲	GREEN BERYT (Magmatic)	9.95
4	▼	GUN LAW (Mastertronic)	1.99
5	•	SILENT SERVICE (Micrograin/US Gold)	9.95
6	▲	DISPATCH RIDER (Mastertronic)	1.99
7	▼	LA SWAT (Mastertronic)	2.99
8	▼	SPIKY HAROLD (Firebird)	2.99
9	▲	HOUSE OF USHER (Micro)	2.99
10	▲	KNOCKOUT (American)	2.99
11	▼	CRYSTAL RAIDER (Mastertronic)	2.99
12	•	MOLECULE MAN (Mastertronic)	2.99
13	▼	RED MAX (Code Masters)	1.99
14	•	FOUR GREAT GAMES (Micro Value)	3.99
15	▼	NINJA (Mastertronic)	1.99
16	•	SUPERMAN (First Star/Priam)	2.99
17	▼	LEADERBOARD (Access/US Gold)	9.95
18	•	WARHAWK (Firebird)	1.99
19	▼	NINJA MASTER (Firebird)	1.99
20	•	MONKEY MAGIC (Micro Design)	2.99

Compiled by Gallup/Microscope

Budget software is very much the order of the day, with Green Beret the top-selling full-price game, followed by the excellent simulation Silent Service. By the time issues we will know how Atari User's Star Game, Spinners, is selling.

## Bid to bring back BBC's Micro Live

TV's only regular computer programme, *Micro Live*, has been axed. But Database Publications, prompted by hosts of letters from readers, is determined it should be brought back.

The last *Micro Live* in the present series appeared at the end of March.

Head of Continuing Education (Television) at the BBC David Hoggreaves said: "This season of *Micro Live* was its third. We have decided not to plan a fourth for next winter.

"We want to pause, take stock and think about how we ought to be making the best contribution to our understanding of information technology in the future".

Ceres Martin, head of Database Publications, said: "*Micro Live* has played a leading role in introducing the delights of computing to an ever-growing audience.

"To kill the series now, when so many exciting developments are taking place in the whole world of microcomputing, is a retrograde step".

Programme director David Allan said he appreciated Database's concern.

"It is a very important area which needs to have continuing exposure on television.

"There is a job to be done in keeping the subject in the general public's eye because it is important for the community and consumer to be aware why".

So, Atari User readers, it's time to play your part. If you want to help save *Micro Live*, write to: The Controller, BBC 2, TV Centre, Wood Lane, London W12.



*Micro Live* presenters Ian McNaught-Davies, Lesley Judd and Peter Harris

## Youth club runs an Atari micro workshop

A LONDON youth club that uses Atari micros to take computing to the community is appealing for support so it can continue its work.

Honor Oak Youth Club in Lewisham needs £5,000 for projects it hopes to carry out this year.

After being approached by the Lewisham youth service last year, it provided a workshop with computing facilities for 20 local youth groups.

Machines used in the project included two STs, three 1000Es and eight 8000Es, some owned by the club and the others borrowed from various sources. Man-power services funded two part-time computer instructors based at Honor Oak.

Over a four-week period more than 1,200 local youngsters were given

hands-on experience of micros.

Twice-daily sessions covered graphics, adventure program writing, music composition, robot-building, animation and pinball game construction.

This summer Honor Oak wants to run a similar computer workshop, but this time on four different public sites including a shopping centre and a museum to enable adults to join in as well.

There are also plans this year to take Atari micros along to the local children's hospital so that long term patients there can enjoy them.

"We also need to keep the

momentum going at Honor Oak", senior youth worker Mike Farham told Atari User.

"The Atari micros are an invaluable tool in developing decision making, problem solving and other group activities.

"If we don't get the financial help we need this year, not only will our community projects suffer but we shall possibly have to retract computer activities at the club itself.

"On the other hand, if we can find £5,000 from somewhere we can not only repeat last summer's success but can probably improve on it as well".

## Drive in America

ATARI has appointed former Texas Instruments and IBM executive Jerry Brown as vice-president and general manager for North American operations.

The appointment is part of a new bid to increase Atari's share of the US market, said Jack Trammell.

"Personal computers are a

key component in our concrete growth strategy", he said.

"The 5085T and 1040ST are already among the best selling personal computers in Europe - we now plan to focus our efforts on the US, and Jerry Brown will play a major role in leading that effort".

## More hits

THE seventh volume of English Software's Smash Hits for the Atari 8-bit machines has been released. It includes *Demogods*, *Colossus Chess 3.0*, *Blue Max* and *Alley Cat*.

English (061-625 1358) has released it on twin cassette for £9.95 and on disc for £14.95.





HAVE you ever looked on in awe as your ST-owning colleagues gained access to all sorts of pop-up utility programs? Well now you can have something similar on your trusty 8-bit Atari — a four function pop-up calculator taking only 21 bytes of user memory.

This program creates a pop-up calculator which hides itself under the Basic rom on an XL or XE machine. The routine which calls it is only 21 bytes long, hence the calculator doesn't even remove any of your program work space.

However, because of the way in which the calculator uses the bank switched memory system of the XL/XE machines it will not work on an old 400 or 800.

Let's take a look at how it works. The program can be split into six parts. Lines 10 to 279 provide the first screen menu and check the data. The program will first ask if you want to make a tape or a disc, then go through the data to make sure that it's correct.

If there are any discrepancies a warning message will be displayed with the relevant line number. Correct the error and run the program again until it is free of errors.

Lines 508 to 776 generate a cassette form of the program. Lines 2000-2180 are fixed to the cassette, followed by the machine code data file. These lines may be omitted by disc users, along with the data statements 2000-2174.

Lines 1000 to 1170 enable the program to check its own data — it points to any data errors and flags them. The use of Get # Right? and this checker should track down any data errors.

As this is a machine code program, any errors may lock your computer up with no escape except to reboot the machine. This is also a good reason to save the program before you run it.

Lines 2080 to 2168 constitute the data loading program for cassette users. They are listed to the cassette, followed by the data for the calculator and a short machine code loader.

This loader is gobbled into page 6 and puts the calculator data under the Basic rom. The program then deletes itself from memory. These lines may be omitted by disc users.

Lines 4000 to 4248 create the disc version. First an AUTORUN.SYS file is created. This is a three part file consisting of a program to turn the Basic rom off, the calculator in standard load format and a program to turn the Basic rom back on.

After this is created a program

# Maths magic on your Atari



called CALC is written to the disc. Calling CALC from the Dos menu (menu option 1) will allow you to run the calculator directly. These program lines may be omitted by cassette users, along with the data statements lines 3500-3569.

Lines 5000 to 5054 display three pages of user information. Page 1 gives general background information, page 2 describes assembler use of the calculator and page 3 shows a program to run the calculator from Basic.

Loading the calculator is a little different depending on whether you are working with cassette or disc. Disc users should simply load the machine with the disc containing the AUTORUN.SYS file in the drive, which will install the calculator.

It is possible to append another machine code program to the back of this one — for example an AUTORUN.SYS that runs a Basic program. All you need do is rename the original AUTORUN.SYS as TEMP, then create the calculator AUTORUN.SYS and append your renamed file to the end of it.

Cassette users should ENTER and then run the tape created by the program we have listed. This will load the file and NEW itself, leaving the calculator ready for use.

From Basic, a small machine code program needs to be run to call the calculator. Program 11 demonstrates one such technique.

Lines 10000 to 10020 hold the

necessary code, and this data can easily be placed into a string for convenience. The code can equally well be poked into page 6 (1500 onwards) and be run with **Q=0000 1500**.

This is more useful when working in direct mode, while strings are harder for use within a program as they leave page 6 free. From a machine code program just skip the initial PLA, (0A), and JSR to the start of the code.

The calculator doesn't offer anything fancy, just the basic number keys and the + - \* / function keys.

To clear an input error press E, to clear the calculator completely press A and to quit back to Basic press Q.

If a result is too large 'OVER RANGE' will show in the display. It will do continuous calculation (such as  $2 * 3 + 58 + 3 = 55$ ), but it won't show powers ( $1.2 E 14$ ). Results are not stored anywhere and so will have to be written down.

Operation is protected from the BREAK key but SYSTEM RESET will dump you back into Basic at the READY prompt. Division by ZERO is not trapped and thus can give some odd results.

Perhaps you might like to consider modifying the routine to patch into the screen editor device handler to allow you to simply type 'CALC' at the prompt instead of the USR call. Let us know how you get on!





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18 4271	28 1383	38 5071
48 2583	58 4891	68 4280
78 4832	88 3383	98 3370
108 871	118 9947	128 5674
138 6174	148 4891	158 4481
168 4897	178 5813	188 4888
198 871	208 4894	218 4871
228 2582	238 1373	248 4855
258 7856	268 9936	278 4874
288 7855	298 3337	308 4258
318 2076	328 5837	338 1644
348 7751	358 3384	368 2558
378 7751	388 3384	398 2558
408 7054	418 4281	428 1988
438 4882	448 5113	458 1488
468 1545	478 2688	488 478
498 1834	508 5854	518 1784
528 2882	538 9132	548 1488
558 1844	568 1009	578 9131
588 1844	598 876	608 1009
618 7771	628 2671	638 3871
648 2148	658 4283	668 7184
678 1115	688 2000	698 4788
708 2887	718 7263	728 1181
738 4434	748 2027	758 1181
768 1831	778 7488	788 1429
798 2181	808 2685	818 1181
828 1184	838 2818	848 2818
858 1448	868 2658	878 3881
888 1448	898 2658	908 3881
918 2811	928 2688	938 3188
948 1341	958 1688	968 4489
978 1849	988 2882	998 1737
1008 481	1018 4982	1028 7438
1038 7117	1048 7189	1058 4948
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1188 8489	1198 2025	1208 8878
1218 8436	1228 8822	1238 7628
1248 4079	1258 2725	1268 2764
1278 2081	1288 7938	1298 7628
1308 7058	1318 4844	1328 7674
1338 4888	1348 7664	1358 8781
1368 5185	1378 2658	1388 5288
1398 2076	1408 5884	1418 7438
1428 1545	1438 2027	1448 1688
1458 1078	1468 5726	1478 4283
1488 4488	1498 7664	1508 1870

**LINE CODE LINE CODE LINE CODE**

4348 3887	4358 2658	4368 1194
4378 2274	4388 4287	4398 1448
4408 3382	4418 2027	4428 1181
4438 7028	4448 1856	4458 1414
4468 2071	4478 5778	4488 1181
4498 7644	4508 2182	4518 1189
4528 7648	4538 7778	4548 7147
4558 7688	4568 8875	4578 4875
4588 8752	4598 5774	4608 5588
4618 8782	4628 7636	4638 8118
4648 7507	4658 6528	4668 8118
4678 7546	4688 7388	4698 5184
4708 6488	4718 7888	4728 4282
4738 5284	4748 5888	4758 4775
4768 8884	4778 5756	4788 4788
4798 8488	4808 7848	4818 4289
4828 4454	4838 5444	4848 9114
4858 1048	4868 5987	4878 548
4888 1078	4898 6528	4908 4184
4918 5279	4928 8528	4938 7154
4948 7107	4958 5882	4968 4184
4978 4467	4988 10764	4998 1181
5008 10718	5018 10284	5028 1087
5038 12192	5048 10242	5058 11117
5068 12147	5078 10242	5088 10848
5098 12108	5108 12464	5118 11888
5128 11588	5138 10768	5148 11718
5158 11997	5168 11929	5178 10182
5188 11288	5198 12019	5208 10182
5218 18811	5228 88526	5238 11117
5248 11119	5258 11119	5268 11111
5278 11114	5288 12881	5298 11111
5318 11481	5328 12548	5338 11949
5348 10884	5358 10848	5368 10118
5378 17113	5388 10751	5398 12464
5418 11488	5428 10848	5438 10114
5458 11431	5468 12529	5478 11188
5488 11888	5498 10884	5508 9911
5518 11588	5528 10882	5538 10114
5548 7981	5558 10841	5568 10114
5578 10119	5588 10881	5598 8417
5608 9911	5618 10881	5628 10112
5638 10111	5648 10111	5658 10112
5668 10111	5678 10111	5688 10111
5698 10111	5708 10111	5718 10111
5728 10111	5738 10111	5748 10111
5758 10111	5768 10111	5778 10111
5788 10111	5798 10111	5808 7111
5818 10111	5828 4917	5838 10111
5848 11881	5858 10118	5868 10111

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5998 10111 6008 10111 6018 10111 6028 10111

6038 10111 6048 10111 6058 10111 6068 10111

6078 10111 6088 10111 6098 10111 6108 10111

6118 10111 6128 10111 6138 10111 6148 10111

6158 10111 6168 10111 6178 10111 6188 10111

6198 10111 6208 10111 6218 10111 6228 10111

6238 10111 6248 10111 6258 10111 6268 10111

6278 10111 6288 10111 6298 10111 6308 10111

6318 10111 6328 10111 6338 10111 6348 10111

6358 10111 6368 10111 6378 10111 6388 10111

6398 10111 6408 10111 6418 10111 6428 10111

6438 10111 6448 10111 6458 10111 6468 10111

6478 10111 6488 10111 6498 10111 6508 10111

6518 10111 6528 10111 6538 10111 6548 10111

6558 10111 6568 10111 6578 10111 6588 10111

6598 10111 6608 10111 6618 10111 6628 10111

6638 10111 6648 10111 6658 10111 6668 10111

6678 10111 6688 10111 6698 10111 6708 10111

6718 10111 6728 10111 6738 10111 6748 10111

6758 10111 6768 10111 6778 10111 6788 10111

6798 10111 6808 10111 6818 10111 6828 10111

6838 10111 6848 10111 6858 10111 6868 10111

6878 10111 6888 10111 6898 10111 6908 10111

6918 10111 6928 10111 6938 10111 6948 10111

6958 10111 6968 10111 6978 10111 6988 10111

6998 10111 7008 10111 7018 10111 7028 10111

7038 10111 7048 10111 7058 10111 7068 10111

7078 10111 7088 10111 7098 10111 7108 10111

7118 10111 7128 10111 7138 10111 7148 10111

7158 10111 7168 10111 7178 10111 7188 10111

7198 10111 7208 10111 7218 10111 7228 10111

7238 10111 7248 10111 7258 10111 7268 10111

7278 10111 7288 10111 7298 10111 7308 10111



**LINE CODE LINE CODE LINE CODE**

18 1781	28 1114	38 5476
48 4888	58 4991	68 7798
78 1997	88 1488	98 4288
108 4471	118 1008	128 1012



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## Lively lobsters

**Program:** Space Lobsters  
**Price:** £7.99 (suggested) £9.99  
**OSes:**  
**Supplier:** Red Hat, 11 Fenner  
 St, Manchester, M1 2DU.  
 Tel: 061-624 4697

I've seen most of the science-fiction films Hollywood has churned out over the last few years. I've also spent many a happy evening absorbed in the seemingly endless re-runs of Star Trek, and the weird world of the Twilight Zone.

But never have I come across Space Lobsters in any of these fantasies.

In this game Captain Crumble has to fight off these special creatures and other guardians of the Celestus spaceship to discover hidden computer codes to facilitate his

escape, should he become overwhelmed.

With limited ammunition, and via the use of teleport beams, Captain Crumble (surprisingly quite a tough cookie, really) traverses through the various corridor levels of the ship, exploring more than 150 screens in his quest to find the 10 elusive computer codes.

Watching his progress are the roaming Robo Droids, angry descendants of the Ruba Droids, and faced for their problems with vowel pronunciation (and spellings) – but that's another story.

Captain Crumble has to blast his way from level to level, occasionally landing points for supplies on his way.

Clever use of split-screen



graphics has produced a mixture of hi-res and character-based graphics, with good animation of Captain Crumble being the main feature of the game.

Excellent title music and good sound effects serve to confirm the view that there is still a market for reasonably-priced software, although the charts seem to indicate that true budget Atari software is now the order of the day.

But if you are looking for a good, animated 'blast 'em, run away, turn around and shoot 'em again' style game, with a mild degree of tactics to boot, then Space Lobsters might just be your cup of soup.

#### Victor Leslie

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

## Against the clock

**Program:** Spindizzy  
**Price:** £9.99 (suggested) £14.99  
**OSes:**  
**Supplier:** Electronic Dreams,  
 21 Canford Crescent,  
 Southampton, Hampshire  
 SO1 2EQ.  
 Tel: 0703 229692

SPINDZYZY is a Marble Madness clone which involves guiding an inverted pyramid around the different screens, mopping them out and collecting any jewels along the way.

You play against a clock, which doesn't even pause when you plummet to your death – you lose a precious few seconds as well as a life.

If you collect one of the many jewels strewn about the screens, you gain 10 seconds, and you also get a bonus of seven seconds each time you enter a new screen.

Occasionally you may encounter a couple of nasty creatures who push you out of the room and zap your

time; avoid these at all costs.

You can call up a map at any time to show you your relative position in the game, any unmapped rooms, mapped rooms with a jewel in, and completed rooms. There are more than 350 to visit.

A nice feature is that if you lose sight of yourself on the screen you can turn your viewpoint round so that you can see all angles of the room, or you can point yourself north.

To make life on some screens a whole lot easier, there are lifts which can take you up to a higher ledge, which would be otherwise inaccessible without searching many other screens for a ramp.

A word of warning about the lifts: To get some of them to work you have to find and collect the object which is depicted on the lift's surface.

When you need a bit more speed to jump over a gap in



STAR  
GAMES

the pathway or climb a big hill, there is always the speed boost, which is activated by holding down the fire button. This sends the pyramid flying along, but it's easy to overshoot it and overshoot your target or crash.

Thankfully you can press the emergency stop key (the spacebar) to stop you dead on any surface with grip, which includes ice, water and trampolines.

Talking of trampolines, you can use these to bounce over to an area impossible to reach by any other means.

The 3D graphics are prob-

ably the best I've ever seen and the sound effects quite realistic, but you don't hear them very often. This is a shame as they enhance the game greatly. Another minor grumble is that there is no music whatsoever.

Despite these minor nig-gles this is an excellent game which will keep you coming back for more for many weeks to come.

Stephen Banks

Sound	8
Graphics	10
Playability	7
Value for money	10
Overall	9

## Beginners chess

Program: Master Chess  
Price: £1.99  
Supplier: Masterdisk, 8-10  
Paul Street, London EC2A  
4AP  
Tel: 07-277 6880

As far as I'm concerned, no home computer should be without a chess program, but cost may be a deterrent to some would-be Kings. Attempting to fill a gap at the low-cost end of the market is this no-frills chess playing program from Masterdisk.

Available for the Atari 800 and 130 series, Master Chess offers you the game, plain and simple. Given the price, you won't be surprised to hear that it has few of the extras you'll find in more expensive offerings.

The grey and green chessboard fills the left two-thirds

of the screen while the remainder is used for entering your move and for the computer's messages.

You input your moves using standard algebraic notation via the keyboard, so typing E2 E4 moves your king's pawns forward two squares. The black and white pieces are clear and easily identifiable.

At the start of a game you are asked whether you want to play black or white, then you set the skill level by entering the number of seconds allowed for the computer's thinking time.

There are several options available from a separate screen, reached by pressing Return when it is your turn to move. From here you can reset the skill level, set up or rearrange the board (useful for taking back mistakes or bad moves), have an advice



relay of a game, and load, save or play a new game.

The last six moves for both sides are listed at the options screen, along with a pictorial representation of all pieces that have been captured.

The program does not appear to have an openings book and can make some very strange moves on the lower response settings. If you just want a cheap program to play against and one which is fairly easy to beat, this could be just the

ticket. For any serious chess player or as a better long term investment, I would advise you to save your pennies for a far more sophisticated program, such as Colossus which, although more expensive, offers far better value for money.

Bob Chappell

Sound	3
Graphics	3
Playability	3
Value for Money	5
Overall	3

## Rambo in green

Program: Green Beret  
Price: £2.95 (casualty)  
Supplier: Imagine Software,  
8 Central Street, Manchester  
M2 5AS  
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"HEEYYYY! Don't push me!" Yes, you guessed it—another Rambo-type shooter-up. Predictably, your mission is to rescue hostages captured by the enemy forces.

It's no game either as the enemy are set to stop you with all the armed forces they can muster.

Green Beret is based on an arcade game so there are inevitably some compromises in this 8 bit version. But Imagine has done a pretty fine job in this, its first release for the Atari in quite a long time.

During the game you progress through the screen which scrolls smoothly from right to left. Enemy soldiers

run towards you from different directions, listed as your captives.

Some will take potshots at you with rifles, while others try to kill you with a lunge-like flying kick. You can dispatch them with your knife, operated by the fire button. However the response to the button is slow, calling for good timing.

If you come across white soldiers and kill them you will be provided with a backpack holding four rounds. This can be fired in either direction by pressing the spacebar at the crucial moment, taking out all the men in that direction.

Some parts of the arcade game, such as the mortar crews and ground mines, seem to have disappeared, however if they had been included it might have made the game a little too difficult, as Green Beret is quite



challenging as it stands. One funny element is provided at the end of the second stage, in the arcade game you are attacked by Doberman and Mastiff guard dogs.

The programmer has retained this feature, but the attacking dogs look like emaciated Yorkshire terriers.

The background graphics are detailed and colourful and are as excellent. However I was a little disappointed with the graphics of the figures. These were a little too big and lacked detail.

There is no music, though

the game starts with a wall of sound followed by a drum rhythm which accompanies you throughout, adding to the atmosphere. Sound effects are limited and could have been better.

All in all, a good game which should sell well, especially just the first of many new conversions from Imagine.

Mark Powell

Sound	5
Graphics	4
Playability	4
Value for Money	7
Overall	5

## Not daring enough

Program: *Wilds Games Wins II*  
Price: £29.95  
Supplier: Tyresoft, Ashton  
Industrial Estate, Bayston  
Road, Tynor, Tynor and  
Wear NE21 4JF  
Telephone: 021-414 4011

*Wilds Games Wins II* is very much a Commando clone — run to the top of the screen and shoot anything that moves.

You start in the middle of a forest, leading a bit short, squat and silly — rather like Lewis Collins in the film of the same title.

The town forest is perhaps a bit of an overstatement, as it comprises of a sparse collection of lumpy lollipop trees. Indeed, the graphics generally have a child-like look to them and the colours used are rather dreary too.

All around enemy soldiers are shooting away at random. You must break through their ranks, trav-

elling up the screen towards the end of the zone a few screens further on.

Apart from the trees and soldiers, the scenery shows bombed-out buildings and various discarded oil drums. No cover or protection is afforded by any of these objects — bullets pass straight through them all. Indeed, you can even walk through some of the walls, which certainly doesn't add to the game's realism.

Dodging the flying bullets, you can return fire, either with your gun or your pack of 12 grenades. When the enemy is shot, you are treated to what looks like a brief rendition of "Mammy" as the unfortunate soul writhes in his death throes before expiring.

Further along you encounter helicopters and armoured cars. There are also ponds to be avoided — you'll drown if you tumble



into one. Eventually you reach the end of the zone, a guard post and barrier crossing.

Movement is slightly on the slow side, and the speed of your bullets frustratingly so. Throughout the game the computer sleeps out a banal 480, stealing the Atari's second capability about as much as the visuals do its graphic abilities — not a lot.

Although the game is playable, to my mind there are better versions around. It is not uncommon that a

good game concept is spoiled by not being carried through thoroughly enough.

I recently reviewed *Gun Law* which is almost identical to *Wilds Games Wins II*. Although by no means perfect, it was altogether more pleasing and was around a quarter of the price.

Nick Reynolds

Sound	2
Graphics	2
Playability	2
Value for money	2
Overall	2

## Out in the cold

Program: *Winter Olympics*  
Price: £29.95 (includes 2x30 Atari)  
Supplier: Tyresoft, Ashton  
Industrial Estate, Bayston  
Road, Tynor, Tynor and  
Wear NE21 4JF  
Telephone: 021-414 4011

*WINTER Olympics* from Tyresoft is another event compilation following on the heels of *Summer Games*, *Winter Games*, *Demolition* and so on. There are five events — speed skating, ski slalom, ski jump, downhill and the Cresta Run bobbleigh.

Speed skating is a straight-line race against the clock. There is a computer controlled opponent in the top half of a split screen and, although this may help you pace the race, it would have added more to the game to have allowed a two-player option.

Movement is achieved by frenetic wiggling of the joystick.

In the slalom event the skinner, consisting of a rather sparsely-wooded forest, scrolls smoothly upwards.

You steer your skier through gates marked by two poles, but hitting a gate incurs a time penalty and colliding with a tree means the end of the heat.

Next comes the ski jump. Accelerating down the slope, you press the fire button to jump, the aim being to leap as far as possible.

As in the speed skating event, how much you want to risk scraping your joystick determines your terminal velocity.

The downhill race is virtually identical to the slalom. There are no gates to steer through, but some slight



deviations in the course marked by trees.

The last event of *Winter Olympics* is the Cresta Run in which there are two views of the race.

One is a plan view of the whole course, by which you can see how far you have progressed. The second and smaller outlook is from behind the bobbleigh, looking down the ice tunnel.

This is poorly done — the graphics are blocky and over simplistic, and the movement jerky. Speed is gained by sloping as close

as possible to the rim of the wall around the bands.

*Winter Olympics* sounds evocative of excitement, daring and great fun. Unfortunately Tyresoft fails to deliver, as the individual games lack attention to detail and atmosphere.

Nick Reynolds

Sound	4
Graphics	2
Playability	2
Value for money	4
Overall	3

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# NEWSLETTER

## Chess goes on Email

**SCHOOLBOY** Michael Harrison has emerged triumphant at the end of the first major chess tournament conducted via electronic mail.

Michael, aged 16, from City of London School beat Aron Sumarzewski, 17, of Ellet School, Richmond, in the final of the British Chess Federation under-18 quick play individual championship.

The last three rounds of the tournament, which attracted 560 entrants, were staged on the MicroLink system and shown move by move on national television.

MicroLink provided individual electronic mailboxes for each competitor and linked them to Ceefax on BBC Television. Every move in each game was shown as it happened.

Moves were transmitted between opponents as MicroLink express mail messages, at the same time registering at Ceefax and with the match editor.

It was a major test of MicroLink's speed and efficiency - the eight competitors in the quarter finals came from places as far apart as Edinburgh, Cardiff, Belfast and London.

Lincolnshire primary school headmaster John Tomlin, who organised the tournament, said afterwards: "It was a great success. Technically, the MicroLink system was absolutely spot on."

"MicroLink and Ceefax provided a fitting stage for our junior players to demonstrate why they are second only to the Russian youngsters in the world of chess these days".

## Typesetting on the line

**ONLINE** typesetting is coming into its own as an alternative to traditional methods, and MicroLink is playing its part in this booming growth area of commercial printing.

Many small businesses which require professional-quality printed material but can't afford the cost in time and money of manual typesetting are turning to firms like Wordstream for help. This Bournemouth-based

company, owned by husband and wife team David and Jackie Furlinger, provides a service via electronic mail with a choice of 150 different typefaces.

Wordstream is online 24 hours a day, seven days a week, offering next day results at only a tenth of the cost of traditional typesetting.

Eighteen months after its launch, Wordstream has chalked up its 1,000th customer, and now the

firm is going international via MicroLink.

Primary targets are Europe, where MicroLink has many subscribers, and the USA.

Specifically developed MicroLink technology will enable the contents of Wordstream's mailbox to be distributed automatically every 75 minutes of the day or night and transferred directly on to typesetting equipment for processing.

**MICROLINK** without David Osborne thought he had found himself playing a role in a drama when he logged on to his mailbox late one night.

As he was reading his mail another subscriber broke in with the terse message "Help".

"I hit whom of Tony Hancock getting the Monday emergency call in

his famous radio sketch", David said later. "But it proved to be a request for help from someone who wanted to send an urgent Telemessage and wasn't sure how to go about it."

"I was pleased to put him on the right track, but a little disappointed it wasn't as dramatic a situation as I imagined it was going to be."

## TRADE LINK

**DESPITE** the difficulties caused because some manufacturers refuse to trade with South Africa, micro users in that country have to soldier on regardless.

One of them, computer consultant Steve Crawford, has joined MicroLink in order to improve his links with hardware and software suppliers in Britain.

"When you have the situation where leading firms have cut their ties with South Africa for political reasons it is essential to explore other avenues of supply", he says.

"MicroLink telex and electronic mail services are the most economical and efficient methods of contact between people like myself and UK suppliers."

"Current circumstances would otherwise make it impossible to obtain new or replacement hardware and software which those in favour of the boycott should remember are just as essential to the opponents of apartheid".

## Messages get a bright new look

**FIVE** new designs have been created for the colourful Telemessage greetings card series which is available through MicroLink and covers a variety of special events including births, weddings and coming of age.

Among them is a reproduction of Renoir's famous bathing scene The Seine at Asnelles. It replaces the longest serving Telemessage card - a pastoral scene of butterflies and flowers that has been a favourite since 1981.

Telemessage now has

14 different card designs to meet a wide variety of needs like business announcements, birthdays, anniversaries, get-well-soon messages and condolences.

Only 13 are available to the public, however - the other card is exclusive to The Queen who uses it to send her personal greetings to people celebrating their 100th birthdays or diamond weddings.

It costs as little as £2.20 to send a Telemessage greeting card via MicroLink.

**YOUR chance to join MicroLink - turn to Page 4**

LAST month we covered the theory behind cassette autoboots, and explained how to write and save machine code programs which will load and run automatically. This month we look at a program which can convert your Basic programs to an autoboot cassette form.

Conversion is actually a three-stage process. First you load a utility program called Creator. Next you load your Basic program and call the Creator routine with a USB command. This makes an entirely new cassette file which has a short machine code routine inserted ahead of your Basic program.

Loading the resulting file is exactly the same as loading commercial autoboot software. Switch the computer on while holding down the Start key, then hit any key when the single beep sounds. Everything else is automatic, and as soon as loading is complete your Basic program will run.

The system works by inserting a new editor header and putting two commands (COPYCMD \$ and RUN) into Basic's text buffer. When Basic gets control it will assume that you have typed the text line in direct mode, so it executes the commands immediately.

Although this is a little more complex than using direct jumps to the Basic run itself, it ensures that the converted programs will run with all versions of Basic, and thus on any Atari 8 bit computer.

Back to practical matters. Program 1 makes the Creator file. When run this will make an autoboot machine code cassette—in fact, you might recognise lines 10 to 140 as being identical to last month's Program B. Because the program works with machine code, all DATA statements must be absolutely correct or it will crash.

Watch out for the three most common typing errors—using the letter O instead of zero, typing two commas with no number in between, and typing a comma at the end of a program line. Be sure to save a copy before you try running it.

When you're sure everything is correct, insert a new tape and type RUN. Press Record and Play and then Return after you hear the usual two beeps. Once completed, label the finished cassette as 'Creator', and make a note that it's an autoboot-format file. Once this is safely in your possession, Program 1 can be filed away as it won't be needed again.

Here are the step-by-step instructions for using Creator to convert an existing Basic program into the new cassette autoboot form.

■ Switch power off and insert the Creator cassette.

# Autoboot your cassette files

More on adding that pro touch to your programs from resident guru LEN GOLDING

■ Switch power on while holding down the Start key, and hit any key when the beep sounds. After the usual leader delay, you will hear the Creator file loading.

■ CLDND the Basic program which you want turned into an autoboot, but don't run it.

■ Insert a blank, fully reformed cassette and type:

**X=USB/8000**

■ Press Record and Play, and hit Return after the two beeps. Your Basic program will now be written to tape in autoboot format.

Remember that programs in this format cannot be loaded using any of Basic's commands—you must use the autoboot loading procedure. Once in memory, though, your program will behave just as though you had typed CLDND and RUN.

Now let's leave cassettes for a while and take a look at disc-based programs. There are two different systems available for making disc software load and run automatically—disc autoboot or AUTORUN.BIOS. Both will work only with machine code, but AUTORUN.BIOS can be used to load and run a Basic program, giving the effect of a Basic autoboot.

Let's take disc autoboots first. Since they look and behave almost exactly like the cassette autoboots which we covered last time, we'll skip through the details fairly quickly.

When power is switched on with a disc drive connected, there must be some autoboot information on the disc, otherwise the screen will fill with BOOT ERROR messages. On a normal Dos disc, this autoboot system loads and initialises the DOS SYS file, but the process can be used for other things. Program 2 shows the correct format. Lines 10 to 500 form a new BASIC routine for disc which has 1 part of the autoboot data itself.

The first six bytes in the autoboot

code (starting at line 640) are a header, containing a boot flag (normally zero), the number of sectors to load, the load address and finally the installation address. The OS reads this header, and stores the load address in BOOTRAD (876,878), and the installation address in DOSINI (12,13).

It then makes a note that it's using a disk-based program by storing a 1 in the BOOTF location (address 9). Once it has this information available it can load all the boot sectors into the correct addresses in memory.

The next thing the OS does is to perform a JMP to BOOTRAD+8, skipping over the six bytes of header data to execute the code labelled CODEST in our example. This section will only be executed once, immediately after the sectors have been loaded, and must end with CLE, RTS—or otherwise you will get the BOOT ERROR message.

The second stage is another JMP, this time to the installation address now given by DOSINI, which sends it to our INT code. This section must end with RTS, or the system will lock up. The boot process terminates by handing control to the language or other cartridge, via a JMP to the cartridge start address.

If no cartridge is installed, the final JMP goes to the address stored in DOSVEC (10,11), which normally points to the self-test or menu-pad routine. You can change DOSVEC during the initialisation routine so that the final JMP will go elsewhere, but only experienced machine code programmers are likely to use this facility as it completely bypasses Basic. The second JMP and final JMP are always repeated whenever System Reset is pressed.

Autoboot code is always stored on the disc starting at sector one, but none of the standard commands avail-

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able in the Assembler/Editor cartridge or Dos utility package will create such a format automatically, so we need a special machine code routine. If you have an Assembler you can use the saver routine given as Program II. If not, the Basic version - Program III - will do exactly the same job.

The disc you plan to write to must be formatted but should not contain DOS.SYS. In fact, since the completed disc will not be in normal Dos format, you should not have any files on it as you may lose some of them.

When you call the saver routine, either from the assembler or by running Program II, the code from START to FINISH will be written automatically to sector one. Turn power off then on again, and the file will load and run automatically, causing the screen border to change colour.

This is no big deal, but once you've got this simple file working correctly there's nothing to stop you inserting much more interesting routines at COLDEST or HOT. Always retain the code that reads MEMLO, since this ensures that your autoboot code can

coexist with Basic or any other language cartridge.

Now for the bad news - disc autoboots are a pain to use. They must start on sector 1, so you can have only one per disc. They don't appear on disc directories, you can't LOAD them, SAVE them or LIST them in any of the conventional ways, and they won't even RUN except at power-up time.

Worst of all, you can't use them in conjunction with Dos because only

one boot program can be loaded at a time, and DOS.SYS itself needs to boot into memory. So if your software needs to communicate with the disc drive after initial power-up, forget it - unless, of course, you're prepared to write your own disc management routines.

■ The alternative is to use ALTBOTM.SYS, which is a much friendlier system, and better suited to the needs of Basic programmers. We'll tell you all about that next month.

## Program I

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**PART** two of the **Advanced Character Editor (ACE)** provides a set of subroutines to be added to the main program which appeared last month. Please note that part two will not work on its own.

When typing in Program 1, make sure to use the line numbers exactly as printed, and include all the REM lines.

Before reassembling and running the combined program it is a good idea to test part two to tape using the LIST "C" command, or to disc with LIST "D ACE2".

With part two loaded into memory, enter part one from last month's *Amiga User* by using the command ENTER "C:" or, for disc users, ENTER "D ACE1". You will then have merged parts one and two which can then be saved to tape using LIST "C:" again or LIST "D-ADDHARD". The third and final section of ACE will be published next month.

Part two adds the extra commands **COLOUR**, **DATA**, **LOAD** and **SAVE**.  
**COLOUR - C**

Addresses 706 to 712 are the colour registers that affect the text graphics modes.

The joystick allows you to alter the current colour, left and right change the shade, while Up increases the brightness and Down decreases it.

To change colour registers press the fire button. The colour registers act differently in Graphics 0 compared with Graphics 1 and 2 as shown in Figure 1 below.

The menu display shows the value of the colour classes. To recreate this colour in your own programs, POKE the appropriate colour register with the value for example **POKE 706,0** will make the uppercase and number characters in Graphics 1 or 2 come out grey. To exit from Colour press the fire key.

#### **DATA - D**

The eight numbers displayed when you enter the Data option are the bit-mapped numbers used to define the current character shape in memory.

A character consists of 64 pixels

# DATA sets for your own programs

## Part 2 of STEPHEN WILLIAMSON'S series on creating your own custom-built character set

plotted within an 8 x 8 grid. For each row a single number can be used to represent the pattern of pixels. To do this, a pixel plotted within the row is given a value that depends on which column it is in. A pixel in the first column is given a value of 128, the second column 64, the third 32 and so on.

The values of all the pixels in the row are added up to give a single number from 0 (no pixels on a row) to 255 (8 pixels in a row). This can be seen from Table 1 which depicts how the letter A is bit-mapped.



#### **SAVE - S**

A **SAVE** menu appears on the right hand side of the main display. After an option has been chosen the device to which the data is saved must be specified. All disc filenames must be a

maximum of eight letters long with no extenders. The character option will add the extender .CHR to the saved file and the Screen option will add .SCR. The extender is added for the Basic Subroutine. Cassette users must press Record and Play then press Return when prompted.

#### **BASIC SUBROUTINE - B**

This option will save to tape, disc or list to printer the subroutines (up to a maximum of six) that were written during the **DATA** section of ACE. An example of the sort of file that is created is given as Program 10.

#### **CHARACTER - C**

This saves the whole redefined character set to cassette or disc.

#### **SCREEN - S**

The Screen option saves PAD screens. The PAD option is included in ACE part three which will appear in next month's *Amiga User*. Until part three is merged with parts one and two then this option is unavailable.

#### **LOAD - L**

Previously saved ACE character sets and PAD screen data can be loaded.

#### **CHARACTER - C**

This loads a character set. Any set loaded will overwrite the current character set display. Disc users must specify the file name (without extender) and cassette users must, after inserting the appropriate character set tape, press Play when prompted.

#### **SCREEN - S**

This option loads PAD screens and will be discussed next month when the PAD and animation modules are added to ACE.

### USING ACE CHARACTERS IN YOUR OWN PROGRAMS

The Basic subroutine that ACE saves is in listed form on lines 36906 to 36950 - so far obvious reasons you

	Register	Basic Equivalent
<b>GRAPHICS 0</b>		
Character Brightness	706	SETCOLOR 1
Background	710	SETCOLOR 2
Border	712	SETCOLOR 4
<b>GRAPHICS 1 AND 2</b>		
Uppercase and numbers	706	SETCOLOR 6
Lowercase characters	708	SETCOLOR 1
Inverse uppercase	710	SETCOLOR 3
Inverse lowercase	712	SETCOLOR 5
Background and Border	714	SETCOLOR 4

Figure 1

should avoid using these program lines yourself.

ACE saves the subroutines as a saved file. With your own program in turn, add the subroutines to the end of your program with the ENTER "D:" command for cassette users or ENTER "D:FILENAME" from disc.

Access the routine by using GDSUB 3000. In most cases this is best at the beginning of the program during initialization routines.

The ACE Character Set Routine program listing is an example routine written by ACE which redefines six characters. The program saves the new character set at the top of ram. To do this, RAMTOP is the pointer to the top of the saved free memory - is lowered. RAMTOP can be found by examining the value held at address 190 (normally 190 on 808 XL's and 261). This is value is expressed as pages of 256 bytes. This means that RAMTOP is normally address 42960 (160 multiplied by 264).

Line 30000 of the subroutine lowers RAMTOP by five pages and then calculates CHBASE, the address for the character set data to be loaded into. This is set to page 198 (address 50904) - see lines 30030 and 30040.

The GRAPHICS D command in line 30050 reallocates the screen memory area to avoid conflict with the character data. If you wish to use the routine in Graphics I or II then line 30050 must be changed. To calculate the starting address of the new screen area use the formula:

**SCREEN = PEEK(204) + PEEK(205)\*256**

A short machine code routine copies the standard character set from ram to ram and then the redefined character set is loaded into the appropriate area of the character data.

Address 764 points the operating system to the start of the character set data. Normally a value of 234 is held here to indicate the standard rom character set at address 67344 (234 times 288).

If you want to change the address of the character set, CHBASE should be set to a four page boundary below RAMTOP, that is, RAMTOP-4, RAMTOP-8, RAMTOP-12 and so on.

To place the character data 12 pages below RAMTOP, and leave the screen data area at its normal place in memory (at the top of ram) change line 30030 to read:

**30030 M=PEEK(184)-12**

and delete line 30030. The character set will then be loaded at page 148 (address 37888) and finish at address 38911 - a full character set takes up 13 of memory.

Don't forget to POKE the value 148

into address 766 to turn on the redefined character set.

Each time you use a GRAPHICS command in a program the value in location 766 will be read and you will have to POKE it back in again. This also applies to pressing System Reset.

#### ACE CHARACTER SET LOADER

The ACE Character Set Loader - Program # - is a subroutine for use with your own programs. If you are using cassettes then you should delete line 30000 and remove the ROM constant on line 30030.

The filename for the character set as listed is "D:SET1.CH". Line 20010 may be altered should you want to load an ACE character set with a different filename. All ACE filenames are saved using the extension .CH.

The subroutine can be listed to tape using LIST "C" or LIST "D:FILENAME" and later merged with your own program using the ENTER command.

This routine uses CHBASE to address 37888 (page 148) - or 12 pages below RAMTOP. To assign another area simply change the M/M address in line 20020 to another four page boundary below RAMTOP. For example, to make CHBASE page 144

(address 38880), change line 20020 to **M=M-PEEK(184)-18**.

**CHBASE = M\*256**

To access the routine in your own program use the command GDSUB 3000.

Cassette users will find it convenient to record the character data immediately following the main program. When the character set loader is run, make sure that the Play button is pressed and hit Return after the beep.

#### ACE MACHINE CODE LOADER

The ACE Machine Code Loader (Program # -) is an assembly language routine for loading ACE character sets from machine code. The listed source code can be typed in with the Asm Assembler Editor Cartridge, MAC 65 or any other similar assembler program.

To load a file other than "D:SET1.CH" then line 420 must be changed, but make sure to keep the CH8 extension.

To change the character set data area after the CHBASE label.

The listing is for Disc users only but can be adapted to cassette (see Andre Willey's articles on accessing CIO from Machine Code - Atari User from January 1987).

#### Program # ACE Editor - Part two

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100 01 00101 100 0000 10000000 00 0
101 011111
102 01 00110 100 0000 10000000 00 0
103 011111
104 01 00140 100 0000 10000000 40 0
105 011111
106 01 00140 100 0000 10000000 44 0
107 00 001 0
108 00 0014
109 0000 2560
110 0011100 2,3,1 2000
111 001000000000
112 00111100 2,3,1 20000000,2000
113 00000000,20000000
114 00111100 2,3,1 20000000,2000
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It's our biggest competition ever

# Treasure Hunt

YES, Atari User is two years old this month, and what an exciting life it has had. We've seen - and helped to create - a tremendous growth in the number of Atari users. There's been the localities-creating launch of the ST, with more powerful versions appearing every few months. Initially we devoted just a section of the magazine to this computer - now it's a separate magazine in its own right.

So there's lots to celebrate this birthday. And to help us push the boat out, it's Atari and some of Britain's leading software houses. Together we've come up with the biggest competition ever, with a massive number of prizes - 200 of them, worth a total of £3,250!

## What you have to do

Before reading this issue you will find various items of treasure. Your task is to count up how many gold bars, sovereigns and jewels there are and put the numbers down on the entry coupon.

Then tell us the name of your favourite game and, in not more than 25 words, why you like it so much.

With 200 prizes, you stand a good chance of winning something, so sharpen that pencil and go hunting for treasures, and treasure!

Gold bars \_\_\_\_\_  
Sovereigns \_\_\_\_\_  
Jewels \_\_\_\_\_

My favourite game is \_\_\_\_\_

I keep going back to it because (in not more than 25 words) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_ Age \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
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Postcode \_\_\_\_\_

Send to: Second Birthday Competition, Atari User,  
60 Chester Road, Hazel Grove, Stockport SK7 5NP.

## The prizes

TOP of the list is Atari, the company that started it all, offering a complete 1088E system, with data recorder and joystick, as well as two DCS 2800 video games consoles.

But most of the prizes come from the many software houses which continue to support the Atari computer with top-class games. And Rat, a fast-developing software house from Manchester, is offering 100 copies of the new game Space Lobsters, in offering 100 copies of the new game Space Lobsters, reviewed this issue.

Also from Manchester is English Software, giving away 20 copies of its compilation Smash Hits V. From US Gold is the top-class conversion of the arcade smash, Gauntlet, with 20 copies up for grabs. And Database Software is giving 10 copies of the just-released Mini Office II.

On the budget side there's 10 copies each of five games from Argus: Clash of Deeds, Savage Punt, Up Up and Away, Quest for Identity and Luper.

Mastertronic, without a doubt the biggest budget house, has offered six copies of each of its releases for the Atari: Action Rider, One Man and His Gold, Vegas Jackpot, Kickstart, Crystal Builder, Masterchess, Molecular Man, Gun Law, Dispatch Rider, Vegas Jackpot, Swat and Ninja. And winging all the way from Finland are 10 copies of Warhawk.

From the masters of the simulation, Microprose, come five copies of six of its releases: F-15 Strike Eagle, Silent Service, Solo Flight, Kennedy Approach, Crusade in Europe and Operation in the Desert.

For the adventure fanatic there's five copies of The Pewe, Jewels of Darkness and Silver Dreams from Activision.

And for the more sedate games player, GSI is donating 10 copies each of Colossal Chess 4.0 and Steve Davis Breaker.



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# Hunt!

★ 385 prizes

★ And they're  
worth £3,278



FEET S

This month's simple gadget makes it easy to produce freehand drawings on screen. Children will have hours of fun with it, and it has been known to occupy adults for the odd evening or two.

It's very easy to build and program, needs no knowledge of electronics and can be built in a few hours by any DIY enthusiast. In fact, it's an ideal first project for youngsters who are starting to study the ins and outs of computers at secondary school.

It looks rather like an upside-down joystick, but it works by generating analogue rather than digital signals. Why is that an advantage? Well, a standard digital joystick can produce only nine separate codes, which your software has to interpret as directional commands — up, down and so on.

Because movement is limited to only eight directions, it's very difficult to draw diagonal lines (except at 45 degrees), and almost impossible to produce curves.

Also, factors like speed and distance have to be programmed separately — speed by using some kind of timing loop and distance by moving one step at a time for as long as the stick is held in one position.

Analogue joysticks work on an entirely different principle. They generate numbers which correspond to the current vertical and horizontal position of the stick itself.

In the Atari's case these numbers can vary from 1 to 255, so it's possible to convert them into actual screen coordinates for any mode up to Graphics 7. This means that you can plot a coloured pixel at any position you choose, and it gives you fingertip control over speed, distance and direction.

The mechanics are quite complex — two potentiometers mounted at right angles as a double axis — but fortunately they can be bought ready made. The type we've chosen is the



Figure 1

# Analogue avenue to producing freehand drawings

## Part II of LEN GOLDING's series on using your Atari to control devices

kind often used for radio control, and it's surprisingly inexpensive.

The resistance of each pot changes as you move the stick around, and the Atari's internal analogue-to-digital converter turns the two outputs into numbers which reflect the stick's vertical and horizontal position.

As the resistance increases, so the numbers generated by the joystick also increase, starting at 1 — for resistances less than about 100 ohms (1K) — and rising to 255 when the resistance is around 50K.

Now the joystick we've chosen can vary from a few hundred ohms to

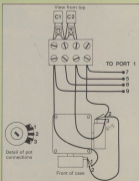
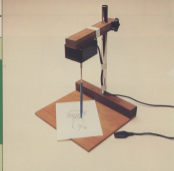


Figure 2



The graphics device

about 200k, and left to its own devices it will generate numbers from 1 to about 64, which means that you could map the results straight on to a Graphics 5 screen (80 x 40 pixels).

However, most of the time you will want better resolution than this. So how can we make the gadget return coordinates suitable for plotting directly to Graphics 7?

The answer is simple – just wire a capacitor between each pot output and the 5v line, as shown in Fig 1. Here's the theory: The analogue-to-digital converter works by measuring the time taken to charge an internal capacitor through the pot's resistance. If you increase the resistance, the capacitor will take longer to charge, so a higher number will be returned.

Similarly, if the capacitor is made larger, it will take longer to charge through any given resistance. The joystick assembly fixes the resistance range for us, so to generate a different set of numbers we must somehow alter the capacitance value.

You can't get at the Atari's internal capacitor to change it, but wiring an extra capacitance between each pot and the 5v line has the same effect. By choosing the value with care, it is possible to make our joystick generate numbers from 1 to anywhere between 60 and 200.

This range still isn't adequate for direct mapping to a Graphics 8 screen (320 pixels wide), so very high resolution graphics are out – you can't use it for engineering drawing, for example. However it will work very well with any of the "colour" modes, and we've tuned ours to Graphics 7.

The capacitance needed is around

.07 microfarads, and you can't buy this exact value in the shops. You could try .060 mfd, if you can find one with nice long leads, or a .047 mfd in parallel with a .025 mfd will give approximately the same result.

The gadget's output should now vary from 1 to about 160, and an out-

wire can easily trim this to suit a 160 x 80 or 160 x 96 screen.

Construction of the electronics is very straightforward. There's no printed circuit board, and everything is wired through a small terminal block as shown in Figure 2.

Twist the leads of the capacitors together lightly before fitting them to the block, so there's no risk that they will separate during use. Leads to the pots must be soldered, and it's best to use stranded wire rather than the solid-core type, even though this is a little trickier to handle.

Although you could mount the joystick in a simple hand-held box, the "overhead arm" system is much easier to control. Figures 3(a) and 3(b) show how to make it, using odds and ends you may be able to find around the house.

The dimensions are not critical, and can be varied to suit your materials. The pillar can be a short piece of wardrobe rail, an offset of 15mm or 20mm copper plumbing pipe or even a section of wooden broom handle or 3/4in dowel.

The handheel bolt isn't strictly

All dimensions are in millimetres

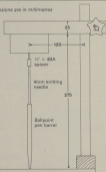


Figure 3(a)

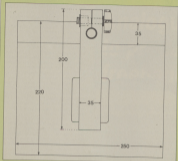


Figure 80

necessary — an ordinary nut and bolt, or even a wood screw will do — but it lets you adjust the overhead arm more easily.

The dimensions shown will give you a drawing surface about 170mm by 110mm, but moving the arm up or 110mm will obviously expand or contract this area. The larger it is, the better the resolution, but the stylus tends to wobble if it extends beyond about 250mm, which eliminates any advantage.

The stylus is in two parts. Start by attaching a 180mm length of 4mm knitting needle to the joystick spindle, using a plain 1mm x 400µ spacer as a coupler. Available or some other adhesive which can fill small gaps is best for this job.

The barrel of a cheap ballpoint pen then slides on to the needle, making a stylus which will telescope along its length, so that it can remain in contact with the baseboard at all times while the joystick arm swings around. A Peppermint 2000 ball will fit very snugly, but most pen barrels should work.

Mount the joystick assembly in a small box with a cutout for the spindle (Figure IV). It's easiest to mark dimensions on the plastic box first, so make a full-size paper template and glue it to

the box surface with Copypex.

Drill the four 3mm holes and use a fretsaw to cut out the square openings, then the paper can be pasted off without leaving a trace. The joystick body is attached with four number 4 self-tapping screws through the 3mm holes.

Strip the joystick cable to the arm and pillar with large cable ties or plastic insulating tape, leaving a small loop to allow for vertical adjustment.

Now it's time to think about soft-

ware, and Program 1 is the place to start. The stick's horizontal and vertical positions are returned at address 824 and 825 respectively.

Use Program 1 to check that the numbers vary from 1 to at least 100. If not, it may be necessary to change C3 and/or C4. Even expectations with normally the same value can vary by up to 10 per cent in their actual value, but odd as the vast majority should give acceptable results.

Program 2 is a simple basic routine which lets you draw an screen. Line 10 selects the mode and colour, and lines 20 to 30 calculate the coordinates to be plotted.

The raw numbers returned by the joystick are adjusted to suit the screen dimensions — 0 to 170 horizontally, 0 to 70 vertically — and ensure that the boundaries cannot be exceeded. Then it's simply a matter of plotting a grid of your chosen colour at these coordinates.

Actually it's not quite that easy, because the analogue joystick works so fast that it will beat the computer's operating system, and you'll get a series of dots rather than a continuous line if you move the stick at any reasonable speed.

The easy way round this is to use the DRAWING command line 70 to do it in the gaps. This tends to flatten out curves if they are drawn at high speed, but is perfectly adequate for a simple sketch pad.

Program 81 adds a touch of elegance, by using a vertical blank routine to do the job of checking and converting the stick's outputs. It returns the horizontal position at

#### Program 1

```
1 FOR JOYX=1 : TO 100:PRINT JOYX
2
3 PRINT JOY 2
4 PRINT JOY 2,JOY 2:PRINT " "
5 GOTO 10
```

Get it right!

100 1000 100 1000 100 1000

5	1000	10	1000	10	1000
10	1000	10	1000	10	1000

#### Program 2

```
1 FOR JOYX=1 : TO 100:PRINT JOY
2 JOY 2:PRINT
3 DRAW JOY 1:PRINT
4 PRINT JOY 1:PRINT JOY 1,JOY 1
5 PRINT JOY 1:PRINT JOY 1,JOY 1
6 IF JOY 1=100 GOTO 100
7 IF JOY 1=70 GOTO 100
8 PRINT JOY 1,JOY 1:PRINT
9 GOTO 1
```

Get it right!

100 1000 100 1000 100 1000

5	1000	10	1000	10	1000
10	1000	10	1000	10	1000
10	1000	10	1000	10	1000



Figure 10

address 1706, and the vertical position at 1701, so all Basic has to do is PUT or DRAWTO those coordinates.

Address 1709 contains the bottom margin value and defaults to 78, which is the top of the text window. If you would prefer a full-screen display, select Graphics 23 at line 50 and insert this extra line:

#### 78 POKE 1709,85

Remember that, as with all machine code programs, you must get the data statements absolutely correct, and be

sure to save a copy before you try running it.

Program 10 is a completely self-contained sketchpad routine with extra controls. It works rather like Program 8, but uses a PM graphics cross as a cursor. This can sweep over your picture without affecting it in any way, or can be made to leave a trace in one of three colours. If you've ever used a mouse, you will find the action familiar.

At the start of the program the cursor leaves no trace, but can be positioned exactly where you want to start drawing. This is the pen lifted mode. From then on the different functions are selected by pressing keyboard keys:

- A = Blue trace
- B = Orange trace
- C = Green/yellow trace
- Q = Erase (plot background colour)
- Space = Lift pen

This assumes that you are happy with the Atari's default colours, but you can easily change them using the SETCOLOR command, say between lines 130 and 140. The cursor colour (white) is held in address 704 - change it if you want it.

As with Program 8 the bottom margin value is 78, and is held at address 1709. For a full-screen display you should POKE it with 85, after

executing the USA command.

Although this is a delightful little toy to play with, it naturally cannot compare with expensive digitisers, or high quality graph pads.

Limitations arising from the gate's internal construction and the steering geometry mean that it cannot be used as a precision instrument. You can't, for example, trace maps accurately onto the screen - though it makes a fair show of copying large line drawings or children's templates.

But as a household drawing aid it will give many hours of enjoyment, especially to young children, and could be a useful introduction to learning keyboard skills.

Anyone care to write a really good PMW-type program for it?

#### MAIN PARTS REQUIRED FOR SKETCHPAD

	Magica Code
1 2-axis joystick	16350
2 047 nfd capacitors	16300
2 005 nfd capacitors	16310
1 4-way screw terminal block	16100
1 Plastic box	14200
1 1/2 x 3/4 plain spacer	16300
1 Handwheel ball and T nut	16230
4 1/2 No 4 self-tapping screws	16300
1 Joystick extension lead	

#### Program 8

```

1 REM PROGRAM 8 - 16 061194 0049111
2100 GOTO 701:PRINT:GOTO 50-200
30710
40 REMARKS: 2:COLOR 1
50 FOR I=0 TO 99:PRINT I:GOTO 110
600:GOTO 100:PRINT:GOTO 110
70 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
80 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
90 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
100 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
110 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
120 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
130 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
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960 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
970 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
980 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110
990 PRINT:FOR I=0 TO 99:PRINT I:GOTO 110

```



104 0000	104 0001	104 0002
5 10100	10 10101	15 10102
20 10103	25 10104	30 10105
35 10106	40 10107	45 10108
50 10109	55 10110	60 10111

#### Program 10

```

1 REM PROGRAM 10 - SKETCH PROGRAM WITH
20 CURSOR AND OTHER CONTROLS
30 FOR I=0 TO 99:PRINT:GOTO 110
40 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
50 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
60 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
70 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
80 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
90 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
100 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
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970 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
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100 PRINT:FOR I=0 TO 99:PRINT:GOTO 110
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104 0000	104 0001	104 0002
5 10100	10 10101	15 10102
20 10103	25 10104	30 10105
35 10106	40 10107	45 10108
50 10109	55 10110	60 10111
65 10112	70 10113	75 10114
80 10115	85 10116	90 10117
95 10118	100 10119	105 10120
110 10121	115 10122	120 10123
125 10124	130 10125	135 10126

# Gear up your Basic for faster graphics

A machine code routine  
by PARESH SOLANKI

**MANY** people have described the Atari's graphics as one of its best features. I won't argue, but how many of you have backed away because they looked too difficult to handle from Basic, or you simply weren't satisfied with the execution speeds you could achieve?

Well, no more excuses! Here is a machine language subroutine which you can use from Basic to achieve fast and exciting graphics without a lot of mess and fuss.

As a matter of fact, you make only one setup call to the subroutine and then forget it. Couldn't be simpler, could it? And you need to know nothing about machine language, either — just a couple of POKEs and you'll have your players dancing around the television screen.

One feature of the Atari with which you may not be familiar is its interrupt mechanism, and it is this which can be used to move your players about at machine language speed — all without the overhead of calling it each time from your Basic program.

In fact this interrupt mechanism can be made to do anything — change colour registers, update sound values and much more. But before we explore this useful feature, lets take a quick refresher course on interrupts.

As you know, the Atari loops itself pretty busy doing its housekeeping chores even while it is running your Basic program. Among other things, it must maintain the steady delivery of information to your television screen, allowing it constantly to update the display.

Multiple, concurrent activities are performed by allowing one particular activity to periodically interrupt another.

The traditional analogy is that of a busy business executive who, while engaged in a meeting with an associate, is interrupted by a telephone call.

The ringing phone signals the interrupt and the executive pauses his meeting and answers the phone. After disposing of the call, the executive then resumes his meeting at the point he left off — hopefully.

A similar, but more controlled, sequence of operations occurs each time a complete picture is shown by your television set. The TV's electron beam paints the picture by sweeping in horizontal rows across the picture tube beginning in the upper left hand corner and ending in the lower right.

The beam is turned off when it reaches the lower right corner and is returned to its upper left starting position. This return trip is essentially a vertical positioning movement, so this period when the beam is turned off is known as the vertical blank period.

The onset of the vertical blank cycle serves as an opportunity for the Atari's ANTIC chip to signal an interrupt — the vertical blank, or VBLANK, interrupt. The operating system uses this occasion to perform some of its internal housekeeping chores such as updating the colour registers, checking the keyboard and operating the real-time clock and timers.

Fortunately, the operating system

design team allowed us to include our own machine language subroutine for execution as one of these tasks.

The machine language vertical blank interrupt player movement subroutine described here is called VBLANKPM and it allows you to POKE the next X and Y coordinates at which your player is to be displayed.

There is no need to repeatedly call the subroutine from Basic via the LOGO function. The subroutine will be executed automatically during the next vertical blank period.

It is theoretically possible to move the players every time a new screen is painted on the television — and that's 50 times every second.

You may recall that an appropriate POKE to location \$D048 to \$D051 permits you to position the four players anywhere along the X-axis. It hasn't been quite so easy to position the players vertically along the Y-axis — until now.

The VBLANKPM subroutine moves players in both directions. Movements along the vertical axis involve crossing the data and then registering the player in the new position. VBLANKPM does this for you automatically. However, there are a few things that you must do first.

First you must get the VBLANKPM machine language into memory and notify the operating system that it is to be included as one of the housekeeping tasks to be performed as a part of the vertical blank interrupt.

Next it's up to you to draw your players and tell VBLANKPM how tall they are. After initialization, VBLANKPM continuously looks after the positioning of your players until you press the System Reset key.

Program 1 is an example of the initialization and use of the VBLANKPM subroutine. This program causes VBLANKPM to be loaded and initialized and players zero and one to



Housekeeping keeps your Atari busy.







# Driving slow - American style

I WOULD be obliged if you could explain to me an abnormality I have found while using my 1300C.

I have two computers - an 8000, and a 1300C. The A1 and my 1050 drive an American NTSC monitor which I use on a special TV via a drop down transformer without any problems. When I ran my 8700 test (American version) I got the figure 268 - the correct speed.

I purchased the 1300C two months ago and when I ran the same test I got a figure of 348 returned - but all my programs seem to run with no problems (except for a minor colour change) as all my programs and games were purchased in the States.

What I would like to know is should I alter my drive speed to obtain 268 or just continue using it at 348 RPM? - **L.R. East, Basing, Scotland.**

There is no fault with any of your equipment, you'll be glad to know. The answer to your speed problems lies not with the drive but with the two computers.

Most disc drive timing programs work by counting the number of revolutions of the disc in a given period. The vertical blank period happens at set regular intervals, so this is often used to keep track of time.

On a UK machine this ver-

tical blank interval happens 50 times a second, but on an American NTSC machine it occurs 60 times a second. This means that a clock written on an American machine will run slow on a British one.

The speed difference is 5% (not your value of 30% must be multiplied by 0.83333) to give an accurate reading - which works out to 268, which is quite accurate enough to run all your discs.

## Pascal compiler

I HAVE owned an Atari 800 computer for five years and I have recently purchased an Atari 1300C.

For five years I have been doing a BSc in Computer Studies at the Polytechnic of Wales. During this time my primary coding language has been Pascal and consequently I have done very little Basic programming. In fact, I mostly use my Atari 8000 for word processing my assignments for college.

Imagine my surprise (and pleasure) when reading a

copy of last month's Atari User magazine (Vol 2, Issue 17 - March 1987) to discover a favourable review of a standard Pascal compiler for the Atari 8 bit series. The review was made by John Andrews about Ryan Pascal.

However, the details about how to obtain this package were very sketchy, so only the price and an address in California were given. I am extremely interested in obtaining Ryan Pascal and would appreciate any further details. - **L.C. Day, Wiltshire, Cardiff.**

As far as we know there are no UK dealers planning to import the product, which means that you will have to order direct to America. You should order from: Ryan Software, 1900 Union Street, 182, San Francisco, CA 94123, USA.

## Choosing the right Dos

I HAVE not had my Atari 8000 for long and have just started buying Atari User.

In the April issue you printed the Profs game, and

I'd be grateful if you could tell me if it's alright to format my disc with Dos 3.0 and then type in the program and save it to this format. - **Elizabeth Hearty, Wiltshire, Salisbury.**

You can save the program to a disc formatted with Dos 3.0, but you are advised to use another type of Dos such as Dos 2.6. The only reason for not using Dos 3 is that it is not equally efficient or easy to use. You will find that Dos 2.6 is a more friendly system.

## Comms problems

CAN you please give me some help concerning communications software?

I use a 130 AF and a 80200 modem, with the Telecom interface. The software is the Multisystem package. When I log on to Profs, I find plenty of interesting information but the buffer only allows me a very short time before I have to break away and point what I have got.

I also can't find any software available for Atari 8 bit machines to download. When I log on to Telecom Data, I find plenty of public domain programs but I cannot find any way to download them!

Can you tell me of any program that will allow me to use the full capacity of my 80200? I have one from the American magazine Computer that allows me to open up the 1300C to a greater extent than the normal AtariLink suggests. Do you know of any program that does not have to be downloaded, so that I can use

I RECENTLY bought Mapping the Atari by Computer Books. I really think that it's as good as everyone makes out. Instead of giving examples of programs it constantly refers back to past magazines or books for example, which of course I haven't got as some are so far back as 1982. I find this very unhelpful.

For example, one of the main reasons why I bought the book was so I could find

out how to DRAM a line in machine code using a routine in user. But when I looked it up, all it gave was the start address for the DRAM routine, giving no explanation on how to use them. - **Matthew Stevens, Basing, Wiltshire.**

Mapping the Atari is not a tutorial book, but a memory map - as the cover indicates. It has to cover every single location within the machine, and to help

you out gives references to more comprehensive reference works on that particular subject.

The machine code drawing techniques that will allow you to plot and draw are explained in greater detail within the Operating System manuals, but Mapping the Atari does cover them within its CIO description.

You could also look at our CIO tutorial series.

# Machine code drawing

the CompuLink program with a believe it or not line.

I also have a camera program from AmigaSoft called HomeSnap. The trouble is that it gives "insolent error" as soon as I try to load it. Clearly there is something wrong with the readers, as what am I doing wrong please?

Also, what am I doing wrong with the Telesom Gold system that stops me from downloading? The information comes up on my screen but I cannot get anything on to disc.

I using Atari HelpLine in London only to be told that there was nothing else available that uses the Danish setup. If there is no other program on the market, could you advise me if someone can contact who can put me on to something larger, that better suits my needs? I find it hard to believe that the only program available for Atari 8-bit users is so limited.

Great Luck to Atari ST User. Some top 8-bit users can enjoy a full catalogue of software. That brings me to another small query. What is Page 2?

I know it is a magazine, and I know that it is a Frontal page, but I think from my reading of the April issue of

## ATARI USER Mailbag

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

The address to write to is:

Mailbag Editor  
Atari User  
Europe House  
66 Chester Road  
Hazel Grove  
Stockport SK7 5NY

✉

your mag that it is also something inside my computer. If this question sounds odd, please forgive a dummy.

As a grandfather, I'm rather old to be learning anything so perhaps this is something the youngsters learn in their first lessons but I seem to have missed its significance somewhere along the way. - **Peter A. Wilkins, Luton, Bedfordshire.**

● Communications always seem to provide many problems for users, experienced or not. However, you do seem to have had more than your fair share of them.

All of your problems stem from the fact that the MultiWestern software doesn't

work very well, but no other software will recognise Mirco Technology's Danish interface. Thus HomeFax can't access the modem because it can't find the correct interface (the Atari 800).

However, at last help is at hand, in the form of Mini Office II. This package contains six modules, one of which is a communications package which will support the Danish cable.

When using Mini Office II with MicroLink/Telesom Gold you will be able to spool your downloaded programs straight on to disc, or use a 128 internal buffer if you prefer. It also supports the 10000 ramdisk so you can store up to 64k of text into the ramdisk before needing to save it back on to floppy.

While this software doesn't support Frontal, you will find it very much more powerful for general communications than MultiWestern.

As to your final query, page 8 is an area of memory inside the Atari. One "page" of memory is 256 bytes, and so the sixth page of memory starts at address 16384 (Hex 07000 Decimal). This area is special because no part of the Operating System, Basic or Dos uses it for storage.

This means that it is left free for the programmer to use, and it is often used as a safe area for machine code programs or player missile graphics data.

## Monthly discs

I read with interest two letters in your April issue which referred to Atari User monthly tapes and discs. As I have recently acquired a disc drive I would be very interested in obtaining your monthly disc if this facility were reintroduced.

In fact I would also like all of the earlier copies, a couple at a time, and I catch up. If not I would indeed like to see compilation tapes/discs. Perhaps these could be split into two types: Games and Utilities. I sincerely hope that enough readers respond to make this worthwhile. - **G.McHenry, Leamington, Warwick.**

## Vital statistics

I own an Atari 800XL and being a student studying for a psychology degree, I would like to know if there are any programs available dealing with statistics, preferably in disc as I have a 1080 disc drive. - **Walter Robinson, Southampton, Hants.**

● Synapse Software has released a product called Sym-Trend which may be of some use to you. It is more applicable to business trend analysis, but you will almost certainly be able to adapt it.

## Printing graphics

Could you tell me how to make graphics work on the 1020 printer? I copied both Spring from your September 1988 issue and it only printed to screen, not to the printer. I fiddled around with it and it still

## Proofreading problems

I own an Atari 800XL and I frequently use AtariWriter. When I discovered that Proofreader is spelling correction I installed it, bought a copy from Silos Shop.

According to the package I had all the requirements, but it is only when you read the instructions (recent issue) that it becomes clear that the difference cartridge is also necessary - thus unless you are prepared to spend £30 to downgrade from the disc version, your money is wasted.

I wrote to Silos Shop but never received a reply. Can

you offer any advice as I'm sure I'm not the only person caught in this trap? - **Norm Clarke, Southampton Spa, Hampshire.**

● I've contacted Atari and mentioned this problem. The reason Atari Proofreader does not work on disc is because the Proofreader itself requires to be online in drive 1. This conflicts with AtariWriter, which should also be located from drive 1, so there is no way to run both modules.

I suggest that you try and get a refund or trade-in from Silos Shop.

would not work. — **Miked Simms, Crawley, East Sussex.**

■ The programs we printed worked fine to the best of our knowledge, so perhaps you are not using them correctly. Program 1 was the subroutine for the actual screen dump. The second program was simply a program that set up the screen with something to be printed out. Linking the two should produce the required output.

If this still does not help you make sure that the programs are typed in correctly.

The bit-image graphics on your 1020 are described in detail within the 1020 manual, but to help you out here is a brief outline. When the 1020 is in bit image mode (graphical) any bytes sent are not converted to an ASCII character but are printed as a 7 bit vertical bar.

Each bit can be 0 (no dot) or 1 (dot). By sending combinations of bytes you can make up a matrix of dots. Printing more lines extends this matrix down the page, thereby building up a large picture.

The problem is in working

out the correct bytes to send to the printer. This is what the screen dump in this magazine has to do.

## Computing by post

I WAS interested to read in the March edition of Atari User about Roy Gering and the computer correspondence course he is offering. However, you forgot to publish any details of how to contact Mr Gering, so could you please tell me his address? — **S. Baker, Cardiff.**

■ Roy Gering can be contacted by writing to him at RJO Programming, Brookhampton Road, Havant PO9 1NT. Tel 0705 401214.

## Games shortage

PLEASE could you tell me why many good games are not being brought out for the Atari? Games like PDS Trading Company, Space

Harris, The Last Ninja, Hyper Sports and the long awaited Elite.

Also, could you tell me why we faithful Atari users are getting brushed aside? Atari keeps bringing out excellent games — like Paperboy and so on — for machines such as the Spectrum, Amstrad and Commodore. Why do we lose out on all these Atari arcade games that every other home computer owner can play — except us Atari fans? — **Paul Satchler, Bedford.**

■ If you take a good look at the market, there are lots of new companies releasing games for the Atari. They obviously want to test the water first, so when a company does make Atari software available, write and say what a wise move it was. That way it will be interested in producing more.

As for the "Atari" arcade titles you mention, these are usually developed and owned by Atari Coin-Op, not by Jack Tramiel's Atari Corp. These are now two completely separate companies, and Atari Coin-Op will sell the rights to its games to whoever pays the

## PEN PALS

Mr George Jackson, 87  
Horsley Road, Barnham,  
Wokingham, York and  
Near RG26 6WJ.

Julius Houbart, Val de  
l'Orme, Font D'Isoir,  
93700 Aubernay, France.

Cyril Mandaviet, Scrip-  
stead 13, OZZU-108 Lifford,  
Holland.

most for them.

It then becomes a decision for the software house that buys the rights as to which formats it wants to convert the game to.

Thus, as we said before, the more you let them know that there is a demand for Atari products, the more likely it is that such classics will soon become available.

## Tape mangler

WHEN I load games into my computer I get a strange noise — and if often shows up my tapes. Can anyone tell me what is wrong with my 80011? — **Remus Sigurdh, Liss, Hants.**

■ It sounds as if your tape recorder's motor or tape-guide and capstan are at fault — certainly chewing up tapes is not a feature that most recorders boast about. I suggest that you return your recorder to your dealer for fixing.

## Cassette or disc?

I RECENTLY read your review of Action! and was wondering whether it is possible to use it with a cassette rather than a disc drive. I am impressed by your review and I'm very interested in buying it. If it

I RECENTLY purchased an Atari 8001 computer with 1050 disc drive at a pack from Compa. This also included some software which I was very pleased with.

However, after having a pair of 10 double sided double density discs from a mail order company advertising in your magazine, I became rather worried as I could not format any of them.

I first thought that the discs were at fault, and so sent them back to the company which had supplied them, asking for a exchange. The same discs were later returned with a letter assuring me that they were error free. They had been checked,

and one had even been left formatted with Dos 2. When I tried to format the remaining discs with Dos 2, Dos 3, Home Filing Manager or AtariWriter, error messages seemed to indicate that there was something wrong with the discs. Could you please tell me if there is a fault in my drive or software.

I think your magazine is excellent, it is my main source of information about the Atari range.

I'm especially interested in the gadgets section by Len Colloff, and would like to know if he will be including an article on speech synthesis. — **S. Ballerfield, Nicos, Cyp.**

■ It is possible that your

disc drive is at fault. The 1050 should be able to format any normal 5.25in disc you give it, especially in single density mode.

Try using the P option on Dos 2.6 to do a single density format. If this still doesn't work, take it back to your dealer for service.

Thanks for your comments about the Gadgets series. You may be interested to note that WJ Design, the company which handles the PCB manufacture for us, has had such a good response that it is now able to supply the completed gadgets. For a price list, write to R.H. Design, 120 Stonefield Avenue, Harrogate, North Yorkshire HG2 7NS.

won't work, could you please tell me the name of another computer and where I could get it? And? — **Matthew Craft, Berks.**

● You'll be glad to know that Action! can be used with a cassette recorder as it is cartridge based and all I/O operations may be transferred via tape rather than disc. You will obviously find that loading and saving take a lot longer, and making up a library of INCLUDE sub-routines might be a little harder due to the nature of tape.

The only major problem you will find is if you want to use the RunTime package or Programmers Aid Toolkit because they both come on disc and would need to be transferred before you can use them.

Also, if you want to make sub-time machine code files, Action! isn't designed to generate cassette autoloader files. You could convert the binary load format into an autoloader form, or use a little Basic loader routine. This only applies if you want to save a free-standing

machine code program, as Action! source code can be loaded from cassette, compiled and then run with no problems.

## Manual labour

I HAVE recently bought an Atari 800X1 plus 1256 disc drive, and also a copy of your helpful magazine. I am sure that I'm suffering like all new deers due to lack of information. The manuals I received with my computer were not terribly good and don't explain the Basic commands or give any technical information whatsoever.

I am therefore led to believe that there must be a much better text available, and I hope you can give me its title. Also are there any other versions of Dos and Basic available, and which are the best?

I have so far bought only one copy of your mag but have already found it very

helpful and have used some of the excellent floppy disks. Keep up the good work! — **C. Skippin, Billes, Co. Durham.**

● There are many books that uncover the hidden qualities of your Atari, but they can be very technical and hard to understand at first — we normally recommend a combination of the best books available.

Be patient when learning — it can be a long and confusing task. With that in mind, start off by getting a copy of the 1300X Handbook or Your Atari Computer (Revised Edition) from your dealer.

When you want to dig a little deeper, Mapping the Atari tells you what all the functions in memory do, and is an indispensable reference guide. Do-Do-Atari is another good source of information on applying the power of the Atari to its fullest.

These two books cover off the ground rules needed, but they are heavy going. You can also buy various other books which skip lightly over complex matters and these would be fine for a beginner.

There are many alternatives to Atari's Dos and Basic, including: Dos 1.0, Dos 1.0, Dos 1.0, Dos 1.0, SpartaDos, Dos-81, My-Dos, S-Dos, Microsoft Basic, Basic81, Basic80, and various compiled versions of Basic.

Ask your dealer for his recommendations, but the combination of Basic80E with either Dos-81 or SpartaDos would be very powerful indeed.

And keep looking at Atari User. Helping users get the best out of their computer is what we're here for!

## User friendly

I WANT to tell fellow Atari users of the good, friendly and fast service that Computer UK has provided me.

Four months ago I bought

a 1050 disc drive with the free games, but on January 26 it would not boot properly so I rang them up and they gave me a floppy address to send the drive to.

I sent it off and four days later I got the disc drive back. Well done Computer UK for the fast service.

## Dutch dilemma

I RECENTLY bought an Atari 1300E 1.0 in Holland and I was therefore supplied with a manual in Dutch. It is impossible to obtain a manual in English, so until I do, I can't use my computer fully.

I would therefore be grateful if anyone can help me. — **L. De Barten, The Hague, The Netherlands.**

● Why not write to Atari UK, as we'll be sure that they'd be able to help you with an English version of the manual.

Failing that, try to get hold of a copy of a book called The Atari 1300E Handbook, or another entitled Your Atari Computer. Either will give you lots more information than the manual does.

## Computer support

Following advertisements in your magazine by Computer Support (MS) Ltd, on the 10/11/88 I asked them to supply a 64K upgrade for a

## Spellbound help

I HAVE a few tips for Spellbound. To get the lift working take the Miffins from behind the Hobbies, Summon Star to the left using the lift icon.

Give the Miffins 2000 and then command him to help with the Wand of Command from the roof. That will now fit the control box with the Miffins enabling you to go to the basement.

The Elf here can be obtained from Saracen The Strong on the 2nd level.

To get past the gas mine on the 1st floor collect the Red Herring from the 2nd floor and Power Pony from the basement. This will enable you to cast a

Firestorm Protection spell.

To get past the dark room on the 2nd floor you must collect the glowing bottle from the 1 shaped room on that floor.

To get extra energy collect the Bottle of Liquid from the roof and give it to Florin, then take it back again and you will now have full energy.

To blow up the wall on the 4th floor collect the pocket later than the ground floor. Summon Lady Rosemary to the 4th floor and give her the laser.

New command for to help and she will blow up the wall using her cat! Blow Star to the laser. — **Neil Richardson, Canterbury, Surrey.**

## MicroLink

All program listings in Atari User are now available for free downloading on MicroLink, the UK's fastest growing on-line mail service. They join hundreds of programs already available on Britain's national on-line database.

GGAL, the obit being coded as 201180.

Several letters followed requesting the reason for delay in delivery without reply, until recently my latest letter was returned by the Post Office indicating that this letter was not delivered and that they had gone away.

In desperation I am writing to you in the hope that you know the whereabouts of this company, so that I can try and receive my \$29.95. It is disappointing that this firm has not answered my letters especially when another firm - Homezone - was still advertising in your magazine as a dealer for Computer Support as recently as February. — **R. Preddy, Harrowdon, Oxford.**

Computer Support has moved to a new address and should be able to sort out your problems at Computer Support, 155 Parrot Street, Gravesend, Kent.

## Compatible modems

I am interested in knowing the difference between modems offered in the UK and modems offered in the United States. Are they compatible? And if not, could you provide some information on these differences. It would be greatly appreciated. — **William R. Thompson, Huntington, West Virginia.**

There are differences between the UK and American telephone systems so the tones which the modems use are not the same. Unless you have a modem that can produce both tones they cannot communicate with each other. The American system is called Bell and the UK standard is CCIT.

Another point to remember is that American modems are not approved by BT and thus you are unable to use them here.

## YOUR HINTS AND TIPS

### PROLONG YOUR ACTIVE LIFE

**Brace Lee:** On the eleven-screen you will see two orange masks. Run into these and you will be awarded an extra life. Go off the screen, then go back and collect them again! You may do this several times, but if you complete the game the masks will not be there on your second play.

On the last screen the one with the obtained perfect spitting at you; you must run straight across without stopping.

**Bookish:** On the first screen, go behind the water tank and jump at it. It will fall, opening a trap door.

**Threat:** Here is a new screen stopping method. Simply shoot the reactor until the countdown has begun, then thrust upwards until you warp. The mission will have failed, but you skip on to the next screen without losing a life.

This will work for the first few screens, but as the reactor gets deeper and deeper into the complex it will become harder to pull this stunt off — so just shoot the reactor and wait. This time you will lose a life but will still skip on to the next screen.

When you thrust upwards, do not shoot as the shots will fly back into you. Also, when you first warp on to a screen it is possible to shoot before your ship actually appears — this may help if you warp in somewhere inside the complex.

**Montezuma's Revenge:** The following set of operations will solve all levels except two. U and O

stand for Up and Down, and L and R are Left and Right. T and M refer to Top and Middle, and K and F mean collect Key or Torch.

DM/K RT/DM/K K LM/LT/LT/DM/RT/DM/K DM/LT/K K LT/DM/LT/RT/RT/RT/K LM/LT/LT/DM/LT/K DM/RT/RT/DM/RT/LT/LT/T DM/RT/RT/RT/DM/LT/LT/RT/K LT/DM/LT/DM/RT/K RT/K LT/DM/RT/K RT/K DM/Downed Mine. — **Ben Halligan, Peony Pot Lane, Harrogate.**

### FINDING THE DRAGON IN ZAXXON

I'm writing in response to the recent plea for help in getting past the third level of Super Zaxxon.

Having spent many hours myself trying to crack it, just do the following: Look at the height indicator on the left of your screen. At the first wall, it should read two-and-a-half screens, at the second three-and-a-half, at the third one-and-three-quarters and at the fourth and final wall two-and-a-half again.

All of this work is worthless, though — the dragon is the next stage. And some excellent graphics. — **Lee Hodgin, Chigpenham, Wilt.**

### MEDIATOR

All reply to the letter from C.P. Slater who needed help with Mediator. After collecting all six boxes, the horse appears from the jail. You then have to guide the horse over the river by walking on the

line to the far right hand side of the screen.

The horse has to be directly behind you when walking over the area. This is how to complete this stage — but you've got a lot more problems ahead of you! — **Robert Taylor, Finner, Middle.**

### BOUNTY BOB EXTRAS

**Bounty Bob Strikes Back:** Go to the menu screen and move the cursor to the Special Code register. Set this to #1000. Now hold down the F key and press Option. Then press Start.

You will now be able to see the following keys: F. Bob can fly anywhere on the screen. Press F again to stop.

O Go to next screen.  
A Go back a screen.  
S Bob goes back to his original position.  
Z Reset Screen.

— **Michael James Clatworthy, Lichfield, Staffs.**

### PASSWORDS, NETS AND DITTIES

**Starquake:** Passwords are Arid, Trud, Kana, Mison, Crank, Arari, Peia, Coon, Delta, Saha, Gash, Agon and Zap.

**Warhawk:** On the higher levels, a glowing net appears; if you touch it you can fire twice as fast.

**AtariArtist:** On the main screen, position the cursor over the centre line of the star logo. Press the end a little mousey ditty is played. — **Nicholas Linahan, Tidworth, Berkshire.**



# Your two-year index

*What's appeared in Atari User over the past two years*

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**TO ORDER TURN TO THE FORM ON PAGE 59**

HELLO, it's your old pal Brillig here again, but this time I feel a bit odd. My adventuring mind is still as sharp as ever — as . . . sharper in fact. Looking in the mirror I can see no changes; looking outside tells me everything is the same — but I am somehow different, somehow rejuvenated in both mind and spirit.

A truly amazing thing has happened my friends, and Brillig is now consumed with solving every adventure known to man and beast. My three hearts pound in unison as frantically I rush to my computer console and without a moment's hesitation load up the software, reach into the maelstrom and embark upon my own special quest — to help adventurers one and all overcome the fiendish tricks and traps that have befallen so many others in the past.

Some news comes to the cave this very morn of a bunch of role playing games seem to be available from S&L, called *The Wizard's Crown*, *The Rings of Zille* and *The Shards of Spring*. Also coming out soon are *Phantasia II* and *It*.

Level Nine is about to release its first totally new adventure for many reasons. Entitled *Night Orc*, it puts you, the adventurer, into the guise of an actual orc who has been arranged by humans. The game contains some startling new ideas from the Austin brothers whose text compression techniques are famed throughout the known universe.

Not content to stand still, they have developed a new coding system — a way to dispense with map-making; type in the name of the location you want to go to and the character will head off in that direction. You can also tell other characters to run other errands at your behest. They have at

# Exit maps, courtesy of Night Orc

## By Brillig

last done away with those awful graphics that used to dominate their stories and instead are using digitized pictures. It all sounds bliss to me, and not accused as soon as *Night Orc* is in my hands I will give you the full run down.

A tip to the offices of Magister Scroto is something of an adventure in itself since it is tucked away in a tiny corner of south South London, not a stone's throw from London Bridge. I received a warm greeting from the programming team and was quickly provided with a cup of coffee (which, I am reliably informed, is a ritual — you will never see them without one).

"So you've come to play *Guild of Thieves*, have you?", they all inquired as they gave each other those "he doesn't know what he's letting himself in for" looks. Taking no notice of the idle banter, your fearless hero sat down at the keyboard and began to type.

The adventure is set once again in Keravnia and revolves around your attempts to become a better thief and to join the infamous Guild of Thieves of the title. The game opens with you and the Master Thief in a small boat adjacent to an old jazy. He gives you your instructions, which are to relieve a nearby castle of its treasures and return them to him in his boat. You start with just a sash bag to your name, and a great deal of hope.

The pictures in *Thieves* — and there are around 30 of them — are possibly even better than those in *The Pawn*. After some wandering around the mountains you will come across the castle, complete with its splendid moat, and it's here that most of the action takes place.

There was some talk of *Thieves* being easier than *The Pawn*, but you can put off notions of that sort of your mind. Some of the puzzles are pretty tricky to say the least. *Thieves* also has the same ability as the new Level 9 offering in that it too has the excellent new GO TO command which will let you revert a location automatically. You can even type GO TO SWORB if you can't quite remember where you left it!

The room descriptions are good and neat, and there are lots of little clues hidden in the text that could easily be overlooked. The teamwork that ran through *The Pawn* (remember the Porter is Hell!) is very apparent. I found one lovely sequence while in the library that involves over 25 differ-

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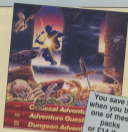
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