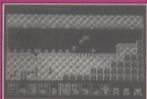


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Issue 66 February/March 1994

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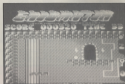
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The next issue of
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Editorial copy date is 21st February

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A NEW DISK MAGAZINE FROM HOLLAND

AMG Software from Holland have introduced a new disk magazine, advertised elsewhere in this issue, but this is a disk magazine with an amazing new feature - you get to choose a commercial game free with each issue!

The diskmag is called **THE BEST OF POKEY** magazine and Issue 1 is available now. On side A you will find 804 of terrific carefully 'packed' so that there is room for your choice of a free commercial game - chosen from over 28 games written by, or marketed by, AMG. The contents on Issue 1 include: *Kilobaud* - reviewing reviews etc., *Mailing* - securing letters and adverts from subscribers, *Machine Code* for beginners - learning to program in machine code, *Turbo Basic for Beginners* - learning to program in Turbo Basic, *Forciv* and *Crashbox* - how do they work and how to make them, *Shopping* - what is smart, what is digital etc., *Game Tips* - how to solve games and subroutines, *Preview* - a preview of the next game T-34, *Highscore List* - what's got the best scores, *Review on Turbo Basic* - a special by the

Contents crew, *The Making of Turbo Games* - a review by Frankenstein and more.

Once on side B of the disk you'll find a selection of software supporting the magazine together with programs such as *Unicorn*, an advanced clone, *Spacebox*, a one or two player ball game, *Pico*, a nice, a good Polish demo from Mirage plus a *Disk to Tape* converter and others.

THE BEST OF POKEY is available from AMG on subscription at a price of £12 for 3 issues, £22 for 6 issues and £32 for 12 issues. These prices include postage and VAT and also the cost of the commercial game, so the around £4 or less you can get a disk mag and a commercial game. How's that for value?

AMG will also send you their catalogue free of charge which will include full details of The Best of Pokey and other magazines and software. At the very least you should send for the catalogue.

AMG can be contacted at AMG Software, Nieuwendorpstraat 69, 3714 EA Soestdijk, Holland. Tel. (045) 411-0510-027 17 22.

MICRO DISCOUNT NEWS

Remember the disk interface announced by Micro Discount a couple of years ago? Well, after two years development, the device should be available early this year with a target release date of March. The interface will allow any PC or PC+ standard PC mechanism or ST drive to be connected to an Atari 8-bit and formatted up to 720k. The price of the interface will be under £50 and with drive mechanisms on offer at shows for as little as £25 a disk drive for your Atari will be a reality at the lowest price ever.

Micro Discount are also developing a true 8-bit mouse interface which will allow you to reproduce mouse as good as on the ST or PC. This will be an external module that just plugs into the joystick ports, so over-riding the built-in of many cases of springing up their Atari and violating the existing law.

Micro Discount are at 365, Chester Road, Newark, Not. Midlands NG24 5BA.

RAMBIT STILL AROUND!

Following our review of Micro Discount's Turbo tape deck last issue we received a call from Dave Richardson of Rambit who was unhappy so to let that the article gave the impression that Micro Discount are the Turbo producers rather than retailers of Rambit products. Dave Richardson assures us that Rambit is still around and still owns the copyright in the Turbo-tape systems and the various specialised loaders in the Turbo software. As far as we know, Micro Discount are the only company to sell a tape deck with a Turbo-enhancement ready fitted and that is what the review was about, but we are happy to put the record straight.

Thinking that Micro Discount are the Turbo people is, perhaps, understandable since they have been the main promoters of the device in the past year or so and it is several years since we have heard anything of Rambit. However Rambit is still active producing the Turbo versions of software marketed by Micro Discount and what is more they also run a trouble shooting and tricky conversion service whereby, for little more than the return postage cost, they will attempt to place Turbo versions on Side 2 of the original tape, as done by Micro Discount. As an example he has recently converted PAGE 8 WRITER, published by New Atari Users, for a reader who was having difficulties.

You can get in touch with Rambit at 18, The Green (Barby), Warwick, Leicestershire CV34 0AA or telephone 0779 424433.

RIGHTS TO ZEPPELIN GAMES

Micro Discount have announced that they have now purchased the rights in the Zeppelin range of Atari 8-bit games to look out for some interesting re-releases in 1984. A total of 26 games should be reaching your way.

MAZE PRINT MISSING LINE

The MAZE PRINT listing in Issue 65 had a line missing. Just drop in the following:

30 GRAPHICS 4-POKE 708,176-POKE 712,38-POKE 710,39

otherwise you won't be able to see what is going on!

SWIFT SPREADSHEET

With very little serious software now available announcements of re-releases of quality application software are most welcome. The Atari Classic Programmer's Club have acquired the rights to *Logicomic's* SWIFT SPREADSHEET.

The manual has been re-written for the Atari version and the product re-packaged and the new version was released towards the end of last year. It retains the £19.95 on disk with a cassette version - promised at £9.95. We hope to bring you a full review of the Swift Spreadsheet shortly but we certainly recommend the product to anyone requiring spreadsheet facilities on their Atari Classic.

Swift Spreadsheets can be obtained from ALPC, Five Zephyrs, Chapel Clark, Elmgrove, Angewy, Cornwall LL37 7GR.

AMS

A NEW SPRING SHOW

AMS is now the highlight of the year for Atari Classic owners and in 1984 you will be able to get double the enjoyment as the organisers have added a new show to the Spring. You'll find full details of the dates and venue elsewhere in this issue.

If you missed AMS '7 last November, then you missed what was probably the best supported event for the Atari Classic owner with most of the companies and individuals providing products and services for the Atari in attendance. Attendance from users was, however, down quite a bit on previous years and if you were one of those who didn't attend you missed a lot of fun, and a lot of bargains. You could have picked up 80081's for a fiver, 810 disk drives for £25 and 1008 disk drives for prices lower than they have ever been. Incredibly some of these bargains remained

unused at the end of the show! You would also have had the opportunity of meeting the folks behind EXPERT from Germany and ASG from Holland since they both made the trip across the Channel just to meet you.

The weather for AMS '7 was appalling so maybe that was one reason, but make sure that you give your support for future AMS events which are now the only national forum for the supporters of your computer. In the next issue we will give you a rundown of all the exhibitors of interest who will be attending the Spring event so that you don't miss out. Finally a note to exhibitors - if you are planning to attend the Spring AMS please tell us, and give some details of what you will be showing, so that we can give you full publicity in the next issue.

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For your diary -

Autumn Show (AMSB) - Saturday 12 November 1994

Mailbag

Last year .. this year?

For your old Mailbag Editor, it's that difficult time of year - the latest issue of *New Atari User* has just been published, the copy date for the first issue of 1984 is already looming, and Christmas is fast approaching! Although you won't be reading this peerless prose until the beginning of February, it has to be collated well in advance. So apologies if this Mailbag turns out to be somewhat slower than usual, but the Stagecoach from darkest Stafford has only had the opportunity to deliver a small amount of correspondence so far...

Allan J Palmer
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SOFTWARE - RATINGS, UNDISTRIBUTEDS AND A GUIDE

An anonymous letter writer from parts unknown (please sign your letters and include your address on it. Mailbag items get separated from orders and other correspondence has a few interesting thoughts:

"Why not give precise ratings of the software you test. How many other magazines do I need to remember Lee commenting on this in a previous issue. When it comes down to it, ratings will tend to be subjective and what appeals to one person may not rate highly with another. Personally, I wonder how you can really rate software on a percentage scale? Perhaps some how Murray could give us his insight on how to apply a percentage scheme to his PD reviews. What do others think?"

The letter continues: "Their 10,000 programs of all sorts have been written about the Atari range appeared in 1979/80. Each future issue of D&M could bring the opportunity to build up a very complete guide to existing software on the Atari Classic. Of course, this is a tremendous and ambitious project but the number of 8-bit owners in all countries tend therefore the different programs everyone has could make this possible."

I think Erik Nordstrom's "A - 2 of Golden Oldies" which was in issues 83 - 85 was a very impressive attempt to document a great part of the Atari Classic commercial software library. I assume the "10,000 8-bit" game quoted must include PD software as well. You it would be a very interesting project, but the time and energy to actually compile such a report that would be considerable. Any volunteers?

And more... "We are all those, numerous software companies commercial products for the Atari Classic that very few people are normally aware. Some were even written but never saw the light of day for the companies found that the Atari Classic sales figures could not be high enough to ensure profit. If the Atari 4000 market is definitely hot, why not put these "lost" games out on the PD market?"

There have been one or two articles in previous issues about "lost" software. Can anyone give a clear picture of the intricacies of copyright and what prevents such software becoming available through PD channels or other means? And how do you seek permission from Companies that no longer exist?"

SID'S BITS AND PIECES...

Regular correspondent Ted Berry from 17 Old Pond Road, Ashford, Kent TN23 2JN sent in a letter which just missed the deadline for the last issue. Ted wrote that he was due to go in to hospital for an operation "...and may be laid up for some time afterwards - I may not be able to write again for some time so with regard to issue 84, the first comment is for Les. Mr. Dillingham, Pop Dog, Shavers-Goo, etc., ... so you can see from the comments above I will be laid up at home after my operation and while I am I would be able to check out the article on Expanding Your Atari if you would like and this would keep me out of trouble with the daily rag. I'll have to call a close to this subject I'm afraid as I have absolutely no idea where the unpublished parts of this series now are ... maybe returned to the original author ... maybe among the two ton loads of stuff that had to go down the tip when we moved offices. Sorry hardware friend! Ted

"In response to the debate on Home File Manager, and Nigel Ludlow the reason I stopped using it apart from the easy method not working, was the small layout. If I wanted to use more cards I would also not be with all the capabilities of the Atari just to create I decided to write my own filing system that could be used as a database. This was quite good and I wanted to share my recent collection and could not fit it all in the memory or on one disk.

"As to the debate on StarOffice I was there all the time, mainly in connection with work. I had to produce an application list with retail prices and cross references to other manufacturers' part numbers and cost prices. I had intended to use a database until I found that restricted they could be, so in desperation I used AMV - and although it is not ideal it does allow me to produce a good looking document and use it. I used it. I am still looking for a good database with flexibility and access to hard drives. The finished document is 200 characters per line on 48 lines wide paper so the 250 characters per scrolling line on the 48" display is ideal to work with and with search and replace both up and down the file it works well with the only drawback being memory - even with 48K per file it requires 20 disks to store all the data."

"The problem with the bank switching system on the L3000 is upgraded ROMs. In that AMV was written around a 128K system and is unaware of extra memory. If I ever have time I will investigate this further. As to Richard Preston's problem with

the ECP1120 printer I also use a Panasonic, among others a ECP1120 multi-media write carriage printer, and have connected with HP's - and the printer manual contains drivers for different functions. This is easy to do and all the instructions are in the HP's user guide.

"In reply to: R. Rogers of Southampton I have just obtained a 480 interface very cheaply because it had no manual or pin - this works fine with the Struberg printer via the serial port which can be obtained from HP's with the Print II. manual, etc. The 480 transfer is part of HP's - and is installed at boot-up. Just one question for R. Rogers - did he ever belong to the club user group that used to meet at the Field Forum? I used to belong to that group before moving to Kent.

"With a quick note to David Cartwright I am sorry I have not replied to your last letter. I took it to work to photocopy on I send copies to my brother-in-law in Portsmouth and it fell into the cleaning tank in the workshop and was destroyed! If you would like to write again with your address I will be more than glad to answer.

"Also in reply to Fred Meyer, I also use *Encyclopedia* for indexes in Europe but for America I have found that credit cards are the cheapest way to purchase and most American suppliers expect customers to pay this way.

"And also to David Bennett from Coventry - this problem with the 1050 drive not reading enhanced disks could be a fault, or most often, that the head requires cleaning. A dirty head will read data from services before 720 but because of the layout of tracks on the disk these sectors the middle are packed tighter together. These sectors are only used to enhance disks and I would suggest David clean the head and see if this solves his problem, and while on the subject of disk drives, if he'd a 1050 has been unable to find a power pack for the Intel 107 drive it could make some sense but it's on the drive for him and outside the power requirements and if need be contact a power supply for him, if this would solve his problem please contact me at my home address.

"And a few words for Mr. J. Montgomery - if he uses *Database* with *Spreads*, he can set up a *Database* to use it, this is much quicker also, *Spreads* also a valid good note reader and can be used to copy data from files without losing track of source pointers - under file 2.3.

"And finally I wish Neil Taylor from Devon, thank you for with the user group. Before moving to Kent I lived in Portsmouth and will have a few contacts in the area I will contact them and see if you they are aware of your endeavor."

"Well Sam, I read that in the weeks since your letter arrived and the publication of this issue, you have managed to sell well from hospital and are on the road to recovery. Thank you for use of your usual in-

cluding letters. If I had a printer to send for regular letter writing in terms of quantity and content, I would have to send it to the - unless of course anybody else would like to write more regularly and on a wide range of topics. Perhaps I should ask: how if we can afford a small price for the "Star Letter of the Month"?

PAGE 6 WRITER

Ernest Phipps from Bradford, West Yorkshire reports that he has discovered two unacknowledged instances of that character's "Page 6 Writer". Restored back in issue 90.

"Pressing COMPILE + Q gives you the option to exit to DOS. I haven't tested this thoroughly, as I don't have a disk drive and can't use the cassette version. Secondly, if you press RESET, the computer appears to lock up, and all that hard work is lost... but pressing BREAK twice will return you to Page 6 Writer complete with your work intact."

"While I'm on this subject, I wonder if anyone has a solution to a problem I have using Page 6 Writer - it does not like mixing elongated text (especially when centred) with normal text (I use a 1050 printer). Incidentally, if anyone has problems using this program to print using the international character set, the answer is simple, while setting up the control characters for the 1050, assign to a key of your choice the AFANIC codes for the characters you want. For instance, if you want to give the pound sterling sign, you could give it an ASCII value of 27 and translate it a value of 23 under the "European" and "International" characters - respectively and inverse it a value of 10 under the pound sterling symbol. Then to get your symbol, at the appropriate point in your text you press SELECT + SHIFT + A, SELECT + SHIFT + B, SELECT + SHIFT + C - this should work. Can I think of other than I haven't tested it fully yet..."

SOME QUESTIONS

Could you also answer some final questions that will be of interest to other users as follows:

- 1) Is *OpenScript* v3.0 any good?
- 2) Will Digital Editor or anything like it be available on cassette?
- 3) Has anyone ever heard of the Atari 1450SLD computer or the VCR 3000/3200 software?

Hi Art Altemeyer, Starbridge, or Fantasy - all producing games for the S-10?

Thanks for your tips and comments, Deekham. Regarding your questions, I'll try never send the product, but it's computer Special (also from COMPTON) magazine was a good basic introduction, any comments from other readers? Would anyone

like to write a feature comparing different word processors? (I think that you'll see a cassette review of Digital Editor because it would be very important to consider the loading of different fonts and Print Shop items, etc. on a regular basis from top-level) the sort of application that really needs a random access device. I.e. a disk drive (I) back in 1985, Atari announced their new XL range - 800XL, 800XL, 1450SLD and 1450SLD - you should be familiar with the 800XL and 800XL models as they did enter production, however, although published photographs appear in the July and December 1985 issues of *AMTEC* magazine the 1400XL and 1450SLD never entered production. Just to what your appetite: the specification for the 1400XL was 64K RAM, built on BASIC (Rev. 3), diagnostics, programmable function keys, a built-in system and a more sophisticated! The "P" suffix on the 1400SLD indicated that it had the same specification as the 1400XL, but with a built-in 5.25 inch disk drive (1050 model) and with an expansion bay space for a second drive! Disappointing, isn't it? Would anyone care to contribute an article on building a pseudo-8LD machine? - and hi to!

DATABASE DECISION

Martin Anderson from Derby has "... a very large collection of CDs, LPs and cassettes, which I would like to put on a database. This will be updated more every week or so. Can you please point me in the right direction as to which database would be the most suitable. Or, will accept possibly thousands of entries, is fully easy to set up and is convenient to add to and use. I have got *AltWork*, *MiniOffice* and *File-It* amongst others, but haven't done much with them. I don't want to start off with the wrong one and have to transfer everything. Is there a program made program in the public domain which will already be suitable for my needs?"

Perhaps you should talk to Ted Berry - see his comments above on databases and preceding information. This of course could be the subject of another article for the magazine (but - a comparison of various database programs. The Page 6 PD Library has *Database* (35, 58).

CB OR NOT CB

Back in issue 84, Arthur Martin enquired about using CB to transmit Atari data. Nick Ashley from Epsom in Middlesex responds:

"I am afraid this is a no-no, only telephone line speeds is allowed to be broadcast on Citizens Band (CB)."

GENEALOGICAL PROBLEMS

Mark, Ability is also "...having problems trying to run the Genealogy program (Page 4) PD about 10000 using double density formatted disks. I was hoping that I could increase the disk file capacity and although I have transferred the program and files to double density disks (formatted by HighDOS using SpartaDOS, the program will not run properly."

I suspect Mark, that the program's record handling routines, to cater for the insertion, amendment and deletion of records, are built around "standard" Atari DOS conventions i.e. maximum number of sectors, etc.). Writing the program to cater for various density formats may have made the operation too complex - the author may not have had access to a double density drive. Maybe someone out there has developed a patch which can be applied to allow Genealogy to support a different density structure.

M.U.L.E. Players

Jason Kendall from Bourne, Lancashire was pleased to see his letter printed in issue 66 and reports that he's already had a reply to his Contact column page for Billy with Ultima. Now he knows that there are people out there who do respond to queries, he's got another one for us:

"I have recently been playing a 'jostle' disk" - M.U.L.E. from Electronic Arts. This is one of the few games to accommodate 4 players, i.e. 4 joystick at once. On other minor games such as Family Dynamics (page 6) PD Library, 4x4 7th gen com. control players 1 and 3 with one joystick and players 2 and 4 with the other touch better on Family Dynamics than normal 2 player mode). With M.U.L.E. the DOSX only runs on the 1 or 2 player option. The game recognizes players 1, 2 and 4 on the starting screen (as there 'win' messages light up). I thought that the SE had hardware enable ports 1 and 4 to be on joystick 1 and 2 respectively. I have tried using the 800 'Amiga' disk, but this has no effect. Can anyone tell me if a port adapter could be made, or if I need to obtain an old 800?"

I think the confusion here is that the SE Operating System actually maps the values for joystick 1 and 2 into the shadow registers (addresses 554 and 634) for sticks 1 and 4, this doesn't mean that it will use those values to act as 'pseudo' joysticks. M.U.L.E. is probably written to request responses for joystick 1 and 4 on NORTH (address 54877) - that's fine on the 800 machine, but the SE and SE machines do not have a physical PORT1.

This location is used for memory management so no chance of using 4 players on a 1000K - unless of course someone finds better?"

SOLUTIONS OR NOT?

Kevin Cooke from Exeter in Devon has been tempted to write following DOSX Canada's comments last issue about game solutions appearing in magazines. Kevin notes "...Despite supplying some of the best solutions in the last couple of Tiptop columns, I have rarely seen solutions to complete a game permanently, or I don't wish to waste my money on something that won't challenge me. At the end of the day it comes down to how much self control you have. If you haven't completed a game, just stop it read the solution. On the other hand, when you are stuck, the solution is there for you to use!"

Clearing ERROR 9

It Rogers sends a note regarding Ian Fitzgibbon's Variable Lister. To be fair to issue 66, I'm sure that CDDING has resulted a normal time generates a "Error 9" because WORDS is already DeMorganised. Mr Rogers suggests inserting a CLR command before WORDS in DeMorganised so that subsequent calls of the routine find WORDS un-DeMorganised and the DM statement then operates without generating the error message.

PRINTER SOLUTIONS

Another regular correspondent, it Rogers from Southampton writes with some questions to operations raised in issue 66:

"Mark Barrow writes about printer problems that is having with a serial printer. It should be noted that only 4 users are REGISTERED for correct function of a REGISTERED interface being TX DM, RX DM, and Control. Others are detectable, but not successful. Assuming Mr Barrow has used the cable correctly, the current print is correctly printed on page 66 of issue 66, the most likely problem is a lack of serial understanding of the implications of using a serial printer. First, it should be noted that most commercially produced software will not recognise the printer as being present, when the assignment is often made that the printer will respond to the 'P' device. Also (which is, I believe, one exception to this rule, since it allows for the definition of custom printer drivers. The solution is as follows - send output to the 'P' device (named, obviously, 'PRINT: LST P'), etc. will not work. To fully understand how to

get the printer running, simply should be made of the 'R' device protocols and, to a lesser degree, the DM command. What follows should serve as a learning to copy/compare feature. It is absolutely essential that before buying that 'useful' device, one fully considers exactly what it is and how one intends to use it. Failure to do so may result in heart failure.

Way Francis wants to know about printer buffers. Since these devices are connected either by a REGISTER or Dynamics interface, they do not need to be 'Amiga compatible'. The best place to find printer buffers is to look in magazines such as Computer Magazine. The one I purchased about two years ago has 256K RAM on board, and cost about 25 pounds. Price may be somewhat higher at the moment due to an inflationary increase in RAM prices."

Thanks for all the information and suggestions. Mr R, for some our readers will find this of interest.

WHICH LIGHT GUN GAME?

Finally, Kevin Cooke has a question:

"While looking at 1048 Atari User magazine and Volume 8 number 8, I noticed a game for the Light Gun on the front cover - the game appears to be called 'Trouble Shooter' - I have never heard of this game, but the magazine description of it sounds like 'Big Hunt'. Can anyone tell me whether it was re-named for release?"

Here is the Light Gun feature...

And with that, it's time for me to get this mailing column in the post, hopefully to meet the pre-DOSX copy date! I look forward to hearing from you all in 1994. Let's have lots of discussion of all things Atari to take us through 1994!

A DEDICATION

This year I'd like to dedicate the column to Dan Bell of Ontario, Canada. Dan has run the excellent **BelCom PD Library** for the Atari Classic since 1988. BelCom has always been a friendly and professional operation. Really, the level of interest in the Atari Classic has not dropped to a point where Dan feels it is no longer practical to keep the BelCom Atari 8-bit PD Library running, and consequently the service closed on 31st December 1993. Thank you Dan for your support of the Atari Classic and the great service you gave the Atari 8-bit community during the last 7 years. Good luck in your future ventures!

Alan J. Palmer

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Some basic notes on ...

GRAPHICS

Ann O'Driscoll concludes her series on the Graphics modes of the Atari with the modes that are generally thought to be available only on the XL/XE models but are in fact available to all

GRAPHICS 9 to 15

Graphics 9 to 15 are made up of 8 screen types. The GTIA modes (Graphics 9 to 11) which allow the use of extra colours, two multi-coloured text modes (Graphics 12 and 13) and two high resolution drawing or map modes (Graphics 14 and 15).

THE GTIA MODES

Graphics 9 to 11 are called the GTIA modes because they use the Atari's GTIA chip. These modes were not accessible from BASIC on the first Atari, which had a GTIA chip constraint. All three modes have the same dimensions (640 screen by 192 dots), they do not have text windows and they do not have screen loaders.

GRAPHICS 9 uses only 1 colour text that can appear in 14 different locations on the screen at the same time. The background screen colour is controlled by register 4 at memory location 710 and you can set it using POKE 710,C*16 or SETCOLOR 4,C*0 where 'C' is the colour number (0-15) that you want. The 'background' or last value in the SETCOLOR command does not have to be 0, but this value is usually chosen as it enables the full range of backgrounds to be shown. Next, you use the COLOR command to change the font colour of this value so that you can see things printed on the screen. While the color command would normally use values in the 0-15 range, you can in fact use any number in the 0-255 range and not get an error message.

GRAPHICS 10 uses 8 colour registers in all. As well as the 8 'standard' registers at memory locations 709-712, this mode also allows access to the 4 extra colour registers at locations 704-707 which are normally used for player visible graphics. You must POKE values into locations 704-707 but you may use SETCOLOR or POKE to place colours in the registers at locations 709-712. The COLOR command is then used to pick a register as follows:

COLOR 0 = location 704(background)
COLOR 1 = location 705
COLOR 2 = location 706
COLOR 3 = location 707
COLOR 4 = location 708
COLOR 5 = location 709
COLOR 6 = location 710
COLOR 7 = location 711
COLOR 8 = location 712

One thing to note is that in this mode, memory location 704 holds the background screen colour generally held by register 4 (location 710). Location 712 acts as a 'normal' colour register in Graphics 10.

GRAPHICS 11 uses 16 different colours which can appear on the screen at the same time. All of these modes have the same font colour, which is controlled by register 4 at memory location 712. You can set it using POKE 712,L or SETCOLOR 4,L where 'L' is the font colour number (0-15) that you want. You then use the COLOR command to select the different colours by pointing to the screen.

A DEMONSTRATION

LISTING 2 is a simple program to show the 8 GTIA modes in operation and give you idea of the range of colours available on these screens. The 'O R P O C O S' letters and numbers 0, 10

```

00 4 000 -----
01 0 000 0  SOME BASIC MODES ... 0
02 0 000 0  ON OPTION 1 TO 10 0
03 4 000 0  ON ON SCREEN 0
04 0 000 0 -----
05 0 000 0  NEW BASIC MODE 0
06 7 000 0  January 1984 0
07 0 000 -----
08 0 000 -----
09 0 000 -----
10 0 000 -----
11 00 000 0  GRAPHICS OPTION 11, LINE 1
12 00 000 0  GRAPHICS OPTION 11, LINE 1
13 00 000 0  GRAPHICS OPTION 11, LINE 1
14 00 000 0  GRAPHICS OPTION 11, LINE 1
15 00 000 0  GRAPHICS OPTION 11, LINE 1
16 00 000 0  GRAPHICS OPTION 11, LINE 1
17 00 000 0  GRAPHICS OPTION 11, LINE 1
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98 00 000 0  GRAPHICS OPTION 11, LINE 1
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100 00 000 0  GRAPHICS OPTION 11, LINE 1

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Listing 1

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01 00 000 0  GRAPHICS OPTION 11, LINE 1
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100 00 000 0  GRAPHICS OPTION 11, LINE 1

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Listing 2

and 11 are set up using PLOT and DRAWTO instructions and a different color (whenever it differs with the COLOR command before each routine is called up). The default settings indicated on LINES 300, 410-420 and 540 may be changed if you press the OPTION key, while pressing OPTION brings you on to the next screen.

If you want to take a further look at the GEM modes, a good place to start might be some early disks from the Page 5 Public Domain Library. Disk #40 has two drawing programs, one in Graphics 0 and the other in Graphics 11, while Disk #2 has some Graphics 10 screens.


continued 

TABLE 1
REDEFINITION OF 'O' USING
DIFFERENT COLOUR REGISTERS

REGISTER 706	REGISTER 709	REGISTER 710
00000000 (0)	00000000 (0)	00000000 (0)
00010101 (21)	00101010 (02)	00111111 (03)
00010001 (17)	00100010 (34)	00110011 (21)
00010001 (17)	00100010 (34)	00110011 (21)
00010001 (17)	00100010 (34)	00110011 (21)
00010001 (17)	00100010 (34)	00110011 (21)
00010001 (17)	00100010 (34)	00110011 (21)
00010001 (17)	00100010 (34)	00110011 (21)
00010101 (21)	00101010 (02)	00111111 (03)

DISK DIRECTORY HEADERS

By reading the directory of commercial disks it can be seen that in many cases the directory contains a header of some form giving details like a title, version, date, etc. Such a header could be written to a newly formatted disk by using a disk sector editor but this can be confusing and time consuming, since it must always be remembered how a disk stores its data. In order to overcome these problems in a user friendly way, "Disk Directory Header" was born.

Disk Directory Header can create a header consisting of up to eight lines, completely filling the first directory sector if required where each line can consist of up to eleven characters, the normal file name length.

Disk Directory Header V. 1 provides nine standard headers which can be selected from the main menu as well as allowing you to create a custom designed header.

THE SCREEN

The top section of the screen comprises of the title. The central and the lower sections comprise the main working part of the screen.

USING THE DIRECTORY HEADER

When Disk Directory Header is first run, the central section contains a menu and a prompt. To select one of the nine standard headers, press the appropriate number key, the menu will be erased and the chosen header printed in its place on the left side of the screen. If the chosen header requires a date then this will be requested before prompting for the formatting details.

As a part of the main menu, the bottom line of the screen contains a small two option menu, as a reminder, that at any time **START** can be used to cycle through the background colours while **SELECT** is used to reset the colour back to blue. If a custom designed header is selected from the menu, the menu is again erased and the necessary details printed to enable its construction. As each line is entered, it is printed to the screen and a cursor is displayed on the bottom line. Select **Y** to continue and enter the next line, **P** to exit early and to prepare the disk or **ESC/AF** to exit back to the menu. If and when an eighth line is entered, the **NO/ESC/AF** menu is bypassed and control is passed directly to the 'Prepare disk' section.

PREPARE DISK

This section is entered after a header is completed and RETURN pressed. **ESC/AF** will exit back to the menu.

Prepare disk allows a disk to be first formatted in either single or enhanced density. **ESC/AF** again is used to exit. **N** is pressed to select single density or **E** is pressed for enhanced density. After selecting, **CAUTION** is displayed on screen requiring **Y** to be pressed to continue. Any other key will return back to the previous stage to select the format density.

Upon pressing **Y**, the disk which is currently in drive #1 is formatted and the header written into the directory. After this, the disk's directory is read and printed to the right hand side of the screen to confirm its presence.

Once the header has been written and the directory displayed, the option to write the **DOS.SYS** file is given. Upon pressing **Y**, the directory display on screen is erased and the **DOS.SYS** file written to the disk and loaded. The disk's directory is then once again read and displayed.

Regardless whether or not the **DOS.SYS** file has been written to the disk, the option to prepare another disk with the same header is presented. Pressing **Y** will allow the format density for this disk to be selected. Any other key will exit back to the menu.

MODIFYING THE STANDARD HEADERS

Naturally the standard built-in headers will need to be amended to incorporate the users name rather than just own initials. The standard headers are stored at the end of the listing in the form of basic DATA. When modifying the headers, the single line format must be maintained due to the way that the program selects the various headers. Each set of header DATA terminates with the **CR** character which is more probably the least likely character required for a header. It can be used within a line of characters but must not be used alone. The

GUARANTEED TO BLOW YOUR MIND

Puzzle games are a relatively new phenomenon in the Atari 8-bit world. Before the likes of *Ko-Soft* and *A&E*, centered on the screen, there were few in spirit of, but German and Eastern European programmers have now emerged as experts in the field. As far as we're concerned, the stream of new and sometimes innovative puzzles is far from drying up.

MINES

MINES is another clone of the popular mine-sweeping puzzle game which PC users will find lacking in every copy of Microsoft Windows. Having previously reviewed both *Se-Soft's* *Demis* and *RP's* *Minerogator* I'm wondering how to describe this game without duplicating the same paragraph.

You are faced with a grid of squares, some concealing mines (hence the title) and others quite harmless. Using the joystick as a pointing device and depressing the trigger for short or long periods you are asked to identify the safe and dangerous areas respectively. To enhance the game-work, adjacent safe squares display a numeric digit which indicates the number of adjacent mines. It's a mine against the clock but it pays to consider the logic since you are penalised just one incorrect selection - any more mistakes and your mine sweeping days are over! There are twenty different grids for each of three difficulty settings. Thanks to the inherent addictive nature of *Minerogator* and a computer helping of music and graphics, **MINES** is a very playable game indeed. This is the best clone so far.

THINX

The *Centech* crew, who are apparently known in the world of deino programming, have come up with a puzzle game on the theme of shifting tiles. **THINX**, in common with many puzzles, involves the manipulation of variable squares in a confined area. There are five designs of tile linked to one another together with special tiles, walls and exploding corners. Your objective is to bring tiles with a similar appearance together and thereby make them disappear - the intention being to clear a white screen before the countdown timer signals your demise. A joystick cursor is used to direct the movement.

Sounds too easy? Well, naturally there has to be a complication and, in this case, certain restrictions are imposed on the moves. The main problem seems to be that a tile can only slide along the adjoining edges of two or more adjacent tiles. Special tiles can move along diagonals too and don't have to be removed, whilst exploding corners demolish the surrounding walls and flip the position of other tiles. You must be very careful not to end up with tiles that have no matching partners. It's a bit easier to play the game than explain the rules, but the authors have at least attempted the latter by supplying a detailed instruction booklet. There incorporates good graphics and music and to me of these games that seems to offer lasting appeal.



Top - MINES Bottom - THINX
Right - WHOOOPS 2

SAPER CONSTRUCTOR

For those both addicts of *Saper*, *A&E*, have now released the **SAPER CONSTRUCTOR**, a utility that enables you to edit the levels of this excellent puzzle. It can handle both the *Se-Soft* and *Jordan* versions of the game and includes sixty four of the original levels if necessary, so that they can be modified as required. The editor lets you 'paint' game features onto the levels and subsequently save them to a diskette or *Saper* disk for immediate play. There's not much more to be said, other than obviously you will need *Saper* to make use of the *Saper Constructor* - and yes, it's well worth having.

TO IND



by Paul Rixon

WHOOPS 2

In case you want more of the same, **WHOOPS 2** is a variation on the **THINK** concept. As before, the playfield is viewed from overhead and comprises several mazes configured differently for each level. There are various symbols contained within the playfield boundaries and your aim is to bring matching items into contact, whereupon they explode and disappear. When you push on the joystick, all the symbols are propelled in the corresponding direction and continue to move until they collide with an obstruction. Certain symbols, suitably described as 'bombs', cannot be removed but initially serve to assist you in the task of steering the others into matching groups. Later on they also become a real nuisance!

Because there are so many new positions to compare after each move, this game presents a real challenge. It seems straightforward on level one but there are thirty-nine other screens to master with increasingly complicated layouts. You only have sixty seconds to complete each stage, but it's worth taking time out to appreciate the nice graphics and pleasant background music.

There are just a few of the many leading games you come across in several weeks. Puzzle enthusiasts now have an extensive range of software to choose from - but for me the biggest challenge is facing time to play them all!

MINES, WHOOPS 2, THINK and SAMURAI CONSTRUCTOR are distributed by A.M.G. Software who can be found at **Wikkelerlaanstraat 69, 3114 RK, Schiedam, Netherlands** - look for their advertisement in the pages of *New Atari User*.

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Throughout 1994 you will see lots more - the **PIPER**™ in **ADAMAWOOD** is on! Watch out for future New Atari User, **THINK** and **Alert Classics** offers - that's if the printers can keep up with us!

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GEISTERSCHLOSS

Our German K&S friends at KI-Job have recently released an arcade adventure for the Atari XL/XE and Light-gun. Geisterschloss is KI-Job's answer to Creations by Atari Corp.

The game comes in a large orange box with a roll-drawn scroll on the front cover. Inside you'll find the game/editor disk, an A4 pad of grid maps, 8 small wooden figures in different colours, 12 keys (yellow tabby-writh), and documentation in German. Luckily enough, I also had some help files in English by Donald Evans himself. However, even without these, the game is very simple to follow.

In Geisterschloss you must guide your character through a castle which is laid out in a grid of up to 12 x 8 rooms. As you travel through each room you must draw the castle on your grid map and move your wooden figure to show your current location. It's like a mixture between an arcade adventure and a board game!

Scattered throughout the castle, there are a number of boxes containing numbers. These numbers form a code which will allow you to exit the castle. However, the rooms of the castle can contain many different things. There are ghosts, keys, teleports, earthquakes, etc.

PLUG IN THE GUN

Upon loading the game disk, you are greeted by a title screen displaying a blurry "Geisterschloss" seen up in the game selection screen. Everything is controlled via the light-gun. You must even "shoot" the letters of your name - a nice touch! A small cross-hair is used to target numbers and letters.

After selecting all your game options, you must "shoot" a level to play. There are 28 castles on the disk (A-T). They begin with 50 rooms on level A and increase to 84 (8 x 10) on levels L-T.

First, the main game loads from disk whilst an atmospheric, gloomy music appears on the screen with a big black door. A good introduction to the game!

You appear as a clumsy character very like the Troll in ActRaiser at the center of the screen. There are passageways which take you through the castle rooms. To exit to an adjacent room you must shoot the door; you will then run off the screen and appear in that room. It is at this point that you really notice the poor response of the light-gun. At the edges of the screen the cross-hair becomes very "wacky" and you end up simply tracking the screen with your light-gun to gain a good shot. This becomes increasingly annoying.

The rooms of the castle are all drawn in black graphics, although very colorful. They are not of a high standard. There are four different background designs covering the 8 various levels of the grid map. Well there's Food, Drink, Stone and Iron.

Stuart Murray tests a new game from Germany that is part board game, part computer game - and requires a light gun

As I've already mentioned, you must find the boxes which contain the code numbers. However, to open a box you must get a key - these can only be obtained by defeating a ghost! When you find a ghost in one of the rooms it's the white thing that looks like a deformed pig; what you must shoot it with the light-gun. The ghost can be one of two things - a key or a secret door. Whichever one it is, you must play a game to defeat it.

If it's a key, the game is to protect the key as your character travels from the left of the screen to get the key at the right. A number of ghosts will try to grab the key - shoot them or lose the game! Your character moves VERY slowly in this game so you'll have to shoot many ghosts, and they speed up after a while! If you manage to grab the key you are returned to the room and allowed to take a yellow tabby-writh to show that you have lost key. This is then placed in your name box at the top of the grid map.

SECRET DOORS

If the ghost is not a key, it will be a secret door. You must then play a similar game, except this time you have to protect your character from the ghosts as he tries to reach the door handle at the right-hand side of the screen. If you make it to the handle, a secret door (or doors) will appear when you return to the room.

When you find a box, you must shoot it to reveal the code number. It will only open if you have a key! Write this number in the room on your grid map.

There are several other obstacles along the way. Sometimes, when travelling from room to room, you'll get caught in an earthquake. You must play another light-gun game to gain entry to the next room. In the earthquake game you must



shoot falling rocks (they look like giant blocks of cheese from a Tom and Jerry cartoon) before they hit the ground or land on your head (ouch).

On later levels, you'll encounter the teleporters. Like the earthquakes, you'll get caught in a teleporter between rooms. You must then shoot your way out. This time, laser beams appear from the bottom of the screen. There must be shot before reaching ground level or you will be teleported to another room in the castle.

Some rooms flip by 180 degrees as you enter the room - I liked this a lot. It is a fun addition to the game which makes travelling throughout the castle a little more challenging.

Also, in some rooms the lights will go out and you are randomly sent through one of the doors. This is NOT fun and can become VERY annoying after you've been returned through the same door five or six times!

FINDING YOUR WAY OUT

After finding all the keys and entering the code numbers, you must make your way to the castle exit to large black circle with an 'X' inside. Here you must enter the correct code by shooting the numbers. The numbers are taken in order from left to right and top to bottom on the grid map. After entering the code, your score is displayed and the game ends.

As you can see, Geisterschloss sounds like a great new action-packed game for the light-gun! However, before you rush out for your Excitebike or DAFs, I must say that although it sounds great, it isn't that's the problem with this game - when you describe the gameplay it sounds like an enhanced version of Grandiose. Unfortunately, it is nothing more than a poor rehash.

The gameplay is let down badly by poor light-gun response. As you get closer to the left and right edges of the screen, it becomes almost impossible to shoot correctly without sticking your light-gun about 30cm from the TV screen! No other light-gun game has this problem.

The graphics are colorful but they're not up to much. A good description is 'blocky'. Found in basically the odd-club, late 80s era.

This game is definitely not for inexperienced game players/ the game screen, especially the earthquake game, because

VERY fast and, with the poor response from the light-gun, almost impossible for younger children. Although I personally liked this difficulty level, a range of master settings would have been of benefit to younger game players.

Also, air/quake control for the other three (and in three of them they simply become annoying) screens. I did like the teleporter game with its laser beams which moved like the car from Pole Position.

Geisterschloss is basically a shoot and shoot game. There's a lot of shooting items like, shoot ghost, shoot fire, shoot rock, shoot star, shoot rock, shoot door, shoot laser beam, shoot door, etc., etc. Sounds boring? It is! The shoot-game screen is neglected and doesn't add much to the game except to display your current location and the amount of keys held (andy re-created without the face).

AT THE END .. NOTHING!

At the end of the game, after battling your way through all of the rooms and entering the exit code, you are simply returned to the game option screen. There is no title screen, no picture and even a big 'Well done?'. I hate it when games end like this!

I liked playing Geisterschloss with a friend to see if multiple-players would change my attitude to the game. Although it was slightly more fun, my opinion of the game itself remained unaltered. However, I can imagine it being more fun with three or four players in competition (although such a game will involve an awful lot of light-gun swapping).

In this game by, I would have advised you to try Geisterschloss before you buy it. However, this is impossible today so I'd only recommend this game to those of you who have money to burn and are desperate for some new light-gun software. As a full-price game, Geisterschloss is, in my opinion, over-priced. True, I do like the effort spent on the packaging and game pieces, but the game itself is of budget quality (i.e. under the pounds). There simply isn't enough in this game to hold your interest for more than a few hours.

On the plus side, there is a very good Editor program on slide 8 of the disk. It is entirely keyboard controlled and very simple to use (there are on screen instructions). Use CTRL-L and CTRL-S to load and save respectively. Also, use CTRL-C to check the grid before saving - I liked this part!

RE-Soft have released some great games in recent years, including Jetix-Land, About 3, Devils, Super, Techno Kings and Radar II. Unfortunately, as much as I'd like to, I cannot add Geisterschloss to this list.

Title	GEISTERSCHLOSS
Publisher	RE-Soft
Supplier	RE-Soft, c/o Konrad Konrad
Price	Disk (light-gun required)
Price	£12.50 + £2 P&P

As a footnote to this review, despite some negative remarks regarding Geisterschloss, I urge you to support Konrad Konrad as much as possible, otherwise he may soon become disheartened with the About 3-Soft by his last 32-Bit disk. Several comments that he accepts British pounds. Send a couple of International Reply Coupons for his time, and please consider ordering something. We cannot signed to have 32-Bit to the 14-02 market? Send to: RE-Soft, c/o Konrad Konrad, Poststraße 24, D-84437, Mühldorf a.d. Teufel, Germany.

TUTORIAL TIME

UNDERSTANDING TEXT

I have had a letter from a fairly new Atari user who is having difficulty with the manuals which come on disk with some of the public domain software. I understand his problem. The manuals are usually written by the same author who wrote the program, and he must be very familiar with all aspects of the Atari Classic. This very algorithm is a disadvantage when writing a manual as it is too easy to assume that the reader is also familiar with all the basics of using the Atari, and therefore the trap is to present the information about the program in a way that is incomprehensible to a newcomer who is just getting to grips with the practical use of his computer.

I have therefore decided to switch from BASIC tutorials to tutorials about the use of some of the practical programs in the Page 4 Public Domain Library. I will start with Textpro and will take two to maybe three issues to try and give a step-by-step guide to its use. This time I will cover the absolute basics.

INITIAL PREPARATIONS

Before you do anything else I strongly recommend that you make a backup copy of the Textpro program disk; also make sure that you have a blank formatted disk available for saving your documents. A duplicate Textpro disk can be made using IBM options if you do not have any better program for this task. Just follow the prompts - it will take a bit of disk swapping, remember this is a double sided disk so you need to duplicate both sides.

Slide 1 of the disk has the Textpro documentation on it. If you want to print out the documentation from side 2, make sure your printer is on line and select which part of the documentation you want. The screen suggests there are 3 parts to the documentation:

- 1 Using Textpro: 22 pages
- 2 Keyboard Macros: 21 pages
- 3 Textpro extensions: 21 pages

Note that part 2, Keyboard Macros is on side A of the disk, so the -> key must be turned over to print it. The print will land on a 'P' as an easy Desktop printer such page was slightly further down the page will eventually the bottom of one page run over to the top of the next. Maybe it works out better on a sprocket feed dot matrix printer. You can also look at this documentation from within Textpro if you want to save paper as I will discuss later.

KEY CONVENTIONS

Textpro uses quite a number of key combinations. I will use square brackets to indicate the various special keys on the Atari keyboard and a ~ to show where these are used in combination or in combination with any other alphanumeric

character. For example [SELECT]+[CONTROL]+L means hold down SELECT and CONTROL and press L.

BOOTING UP AND GETTING STARTED

Now put away your original Textpro program disk, insert the duplicate in your drive and switch on your computer in the normal way. Do not hold OPTION as Textpro automatically disables basic.

In this first article I will describe how to get started in Textpro and lay out a straightforward letter. I guess basic word processors also need more for letter writing than anything else. Once you have a nice letter layout prepared on a form that phrases you it is easy to start it and use it again and again.

Once the program has booted you will be presented with a rather daunting blank screen with one line of text across the top: "TEXTPRO 1.2a with Extension 2.5a" is what the latest version from the Page 4 library shows. This does not seem very helpful, but if you just launch in to a bit of typing you will find that you can enter text in a manner that is very similar to the normal basic editor screen. Try experimenting a little - you will notice first that Textpro starts up with a different font from the one you are used to. The letters are rather square.

If you type to the right hand edge of the screen you will see that word wrap is automatic - any word which does not fit on the end of the current line will move to the start of the next. As with most word processors you can just keep typing till you reach the end of a paragraph, you should not get in a carriage return or [RETURN] as it is on the Atari at the end of a line. When you do use [RETURN] you will see a hard cursor symbol on screen.

If you press [DELETE BACK SPACE] it deletes the previous character to the left of the cursor while if you do the same with [CONTROL] pressed the character under the cursor is deleted. [CONTROL] with the arrow keys moves the cursor around the text.

When you have finished playing about and your screen is getting cluttered by [CTRL]-H - this moves your cursor to the home position at the top left of the screen. Now press [CTRL]-G. The line at the top of your screen will go red and show the text "Delete H H H RETURN is on". You can delete text by pressing H to delete a word, it is delete a sentence (to the next full stop or exclamation mark or question mark), or F to delete a whole paragraph. Keep pressing F until you have a clear screen. Then press [RETURN].

ENDING PRO

```
48. Roundstone Crescent
East Preston
West Sussex BN16 1JG

13 December 1983

ADDRESSEE
CODE
HERE

Dear

Start of main text.

Yours sincerely,

Ian Finlayson
```

The sort of letter template you are aiming for. Of course you can vary the layout in any way you wish.

A LETTER FORMAT

Now we will set up a letter. The default settings in TeXtop are suitable for most printers which use American Quarto (9.5"x11") or A4 paper and for a normal "typewriter" font like Courier with a pitch of 30 characters per inch. If you press [OPTION]-d you will see a window populated with showing the print commands with default values after a \backslash symbol. The defaults are:

```
Columns across (that is page width in characters)  80
Left margin  5
Right Margin (measured from the left edge)  75
Page length (lines)  60
Top margin  5
Bottom margin (measured from the top edge)  50
```

These can be changed, but for now we will stick with the defaults. To get rid of the Print Command help screen press any key and you will be returned to the blank text screen. Don't be worried about remembering the [OPTION]-d key press. TeXtop is full of help, and pressing the [HELP] button on your computer will bring up the top level help screen which tells you how to find all the other help screens.

I apologise for constantly wandering away from the main topic - typing out a letter - but I think it is probably easiest to introduce each concept in some detail as it arises. I am beginning to see why many instruction manuals are so un-readable. It is not easy to be thorough, clear and succinct at the same time! Here we will start.

Type [SELECT]-a at the same time and a small window appears on your screen. This window "controls the text in this line between the left and right edges of the paper". Thus type the first line of your address and end with [RETURN] giving the first arrow symbol. Then [SELECT]-c again and the second line of address and so on. The last line will never before your eyes as it would be a commercial "what you see is what you get" word processor, it stays at the left margin, but it will be centred on the page when you print. Centred text is not centred between the margins so if you move the margins, centred text will appear to be off to one side though it is still centred on the page. The narrow characters do not print.

After your own address put two [RETURN]s then [SELECT]-e and a date. Select a more the text in that line across to edge with the right margin. Then type two more [RETURN]s and then on successive lines "ACKNOWLEDGEMENTS COLLECTIVE HERE"[RETURN]. Now type two more [RETURN]s and then "Dear [RETURN][RETURN]". Now type "Start of main text"

and 2 or 4 [RETURN]s, [SELECT]-e "Yours sincerely", 5 or 6 [RETURN]s and your own name.

Now that we have created the bare bones of a letter from it is possible to save it. Put a blank formatted disk in your drive and press [CTRL]-e the top line will show "Save File(s)". Type "lettop" upper or lower case and [RETURN] and the file will be saved to disk.

PRINT OUT

If you have an Epson or Epson compatible printer you can see how this looks in print by pressing [CTRL]-p, the top line on your screen changes to "Print File(s)". Make sure your printer is on line and press [RETURN]. If your printer is not ready TeXtop will print a few seconds and stop you back into the editor. Your printer should be like Figure 1. If your layout is not satisfactory you can make adjustments by putting control codes in the first line. The print commands help page is activated with [OPTION]-e. Some of these are a little complicated and I will come back to them later, but most are straightforward - just put in [SELECT]-appropriate letter (use appropriate number). For example to move the right margin to from its default position 75 type [SELECT]-r followed by 60 (two spaces) and your text width will be reduced by 15 characters. Use the lower case letters - upper case does not work. Experiment with the letter format to set it up to your preference. In the next issue I will go into some of the more fancy capabilities of TeXtop.

If you want to look at the TeXtop documentation without printing it out you can load the file and use the [DOWN ARROW] to scroll through them. The main file can be loaded by inserting the TeXtop disk with the back side upwards and typing [CTRL]-L then [CTRL]-P[RETURN]. In read about keyboard macros or macros extension use the file names MACROEXT or EXTENDED.PRM. These are printer files, not true TeXtop files, so if you want a printout it is better to use the procedure mentioned earlier than to try printing from within TeXtop.

If you have specific questions about TeXtop please write to me with a SASE and I will try to find an answer for you. My address is:

Ian Finlayson, 48 Roundstone Crescent, East Preston, West Sussex, BN16 1JG

DISK BONUS

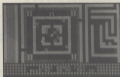
ARENA

A fully playable shareware version of a quality game
by A. Guillaume

The object of the game is to get a set amount of Power Pods into the Exit on each level. The Pods come out of the pod bag at the start of each level and move around the playfield. When a Pod hits a wall it turns left and carries on, you must work out how to move the Pods to your best advantage. All you can do as the player is move a cursor on the playfield and Insert and Delete walls to influence the Pod's movement. The playfield scrolls up/down the screen to allow access to the rest of the level. If a Pod hits any of the scoring squares it is killed. The Exit is an opening/ closing square, and several of these are located at the top right of level one.

Use a joystick in port 0 to control the cursor. The fire button will either insert a wall if the cursor is over a blank space or delete if it is over a destructible square. Your inserted walls are always destructible but most of the scenery isn't. You must get the required number of pods to the exit before the Bonus time runs out.

Each level is loaded as required and has a different



number of pods to get and bonus time limit. If the level is successfully completed the bonus time remaining is added to your score, otherwise a life is lost and the level is re-loaded. You start with 3 lives.

At the end of each level the status screen is displayed and your score is calculated. The total of inserted/ deleted blocks is subtracted from your score, so don't just go putting blocks everywhere if you want a high score! Each goal frame scores 500 points.

You may see letters scattered in some of the levels. These are Bonus letters and can be:

- P - Extra Points
- T - Extra Bonus Time
- L - Extra Life
- ? - Any of above or Mystery Effect

Press **SPACEBAR** for **PAUSE** during the game, and **ESC** to quit.

After every tenth level a password is awarded. Press **SELECT** on the Title screen to enter a password. Enter a false password to begin on level one again.

Press **SPACEBAR** or **quit** of the Title screen to see the High score table.

Press **FIRE** button to start game.

ARENA THE FULL VERSION

This version of **ARENA** is a fully playable share version but with only 10 levels available while the full version has 50 levels - and a disk based High Score Table! Our password has been included from the hour available and is different from the full game.

The full version will challenge your skills to the limit and will keep you occupied for a long, long time. For a copy of the full version of the game please send a cheque for \$5.00 overseas, please add \$2 mail cost to Sterling to:

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Worwickshire, B49 5AB ENGLAND

Please make cheques payable to A. GUILLAUME

THE NEW ATARI USER ISSUE 66 DISK

ARENA is the **BONUS** on the Issue 66 disk of New Atari User which also contains all of the other programs from this issue ready to run. Disk subscribers will receive their copy with the magazine but the disk is also available separately for just \$2.95.

Send your cheque, postal order or Access/Visa details to:
PAGE 6, P.O. Box 64, Bradford, WF4 1DB or order by telephone using your credit card on 0782 212626

TUTORIAL TIME EXTRA

continued

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65 570 LINE 141:GOTO 601+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
66 580 LINE 142:GOTO 610+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
67 590 LINE 143:GOTO 620+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
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82 740 LINE 158:GOTO 770+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
83 750 LINE 159:GOTO 780+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
84 760 LINE 160:GOTO 790+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
85 770 LINE 161:GOTO 800+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
86 780 LINE 162:GOTO 810+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
87 790 LINE 163:GOTO 820+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
88 800 LINE 164:GOTO 830+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
89 810 LINE 165:GOTO 840+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
90 820 LINE 166:GOTO 850+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
91 830 LINE 167:GOTO 860+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
92 840 LINE 168:GOTO 870+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
93 850 LINE 169:GOTO 880+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
94 860 LINE 170:GOTO 890+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
95 870 LINE 171:GOTO 900+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
96 880 LINE 172:GOTO 910+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
97 890 LINE 173:GOTO 920+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
98 900 LINE 174:GOTO 930+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
99 910 LINE 175:GOTO 940+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
100 920 LINE 176:GOTO 950+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
101 930 LINE 177:GOTO 960+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
102 940 LINE 178:GOTO 970+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
103 950 LINE 179:GOTO 980+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
104 960 LINE 180:GOTO 990+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
105 970 LINE 181:GOTO 1000+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
106 980 LINE 182:GOTO 1010+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
107 990 LINE 183:GOTO 1020+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
108 1000 LINE 184:GOTO 1030+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
109 1010 LINE 185:GOTO 1040+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
110 1020 LINE 186:GOTO 1050+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
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112 1040 LINE 188:GOTO 1070+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
113 1050 LINE 189:GOTO 1080+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
114 1060 LINE 190:GOTO 1090+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
115 1070 LINE 191:GOTO 1100+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
116 1080 LINE 192:GOTO 1110+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
117 1090 LINE 193:GOTO 1120+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
118 1100 LINE 194:GOTO 1130+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
119 1110 LINE 195:GOTO 1140+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
120 1120 LINE 196:GOTO 1150+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
121 1130 LINE 197:GOTO 1160+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
122 1140 LINE 198:GOTO 1170+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
123 1150 LINE 199:GOTO 1180+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
124 1160 LINE 200:GOTO 1190+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
125 1170 LINE 201:GOTO 1200+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
126 1180 LINE 202:GOTO 1210+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
127 1190 LINE 203:GOTO 1220+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
128 1200 LINE 204:GOTO 1230+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
129 1210 LINE 205:GOTO 1240+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
130 1220 LINE 206:GOTO 1250+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
131 1230 LINE 207:GOTO 1260+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
132 1240 LINE 208:GOTO 1270+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
133 1250 LINE 209:GOTO 1280+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
134 1260 LINE 210:GOTO 1290+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
135 1270 LINE 211:GOTO 1300+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
136 1280 LINE 212:GOTO 1310+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
137 1290 LINE 213:GOTO 1320+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
138 1300 LINE 214:GOTO 1330+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
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141 1330 LINE 217:GOTO 1360+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
142 1340 LINE 218:GOTO 1370+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
143 1350 LINE 219:GOTO 1380+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
144 1360 LINE 220:GOTO 1390+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
145 1370 LINE 221:GOTO 1400+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
146 1380 LINE 222:GOTO 1410+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
147 1390 LINE 223:GOTO 1420+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
148 1400 LINE 224:GOTO 1430+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
149 1410 LINE 225:GOTO 1440+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
150 1420 LINE 226:GOTO 1450+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
151 1430 LINE 227:GOTO 1460+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
152 1440 LINE 228:GOTO 1470+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
153 1450 LINE 229:GOTO 1480+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
154 1460 LINE 230:GOTO 1490+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
155 1470 LINE 231:GOTO 1500+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
156 1480 LINE 232:GOTO 1510+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
157 1490 LINE 233:GOTO 1520+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
158 1500 LINE 234:GOTO 1530+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
159 1510 LINE 235:GOTO 1540+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
160 1520 LINE 236:GOTO 1550+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
161 1530 LINE 237:GOTO 1560+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
162 1540 LINE 238:GOTO 1570+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
163 1550 LINE 239:GOTO 1580+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
164 1560 LINE 240:GOTO 1590+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
165 1570 LINE 241:GOTO 1600+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
166 1580 LINE 242:GOTO 1610+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
167 1590 LINE 243:GOTO 1620+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
168 1600 LINE 244:GOTO 1630+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
169 1610 LINE 245:GOTO 1640+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
170 1620 LINE 246:GOTO 1650+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
171 1630 LINE 247:GOTO 1660+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
172 1640 LINE 248:GOTO 1670+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
173 1650 LINE 249:GOTO 1680+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
174 1660 LINE 250:GOTO 1690+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
175 1670 LINE 251:GOTO 1700+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
176 1680 LINE 252:GOTO 1710+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
177 1690 LINE 253:GOTO 1720+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
178 1700 LINE 254:GOTO 1730+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
179 1710 LINE 255:GOTO 1740+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
180 1720 LINE 256:GOTO 1750+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
181 1730 LINE 257:GOTO 1760+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
182 1740 LINE 258:GOTO 1770+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
183 1750 LINE 259:GOTO 1780+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
184 1760 LINE 260:GOTO 1790+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
185 1770 LINE 261:GOTO 1800+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
186 1780 LINE 262:GOTO 1810+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
187 1790 LINE 263:GOTO 1820+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
188 1800 LINE 264:GOTO 1830+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
189 1810 LINE 265:GOTO 1840+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
190 1820 LINE 266:GOTO 1850+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
191 1830 LINE 267:GOTO 1860+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
192 1840 LINE 268:GOTO 1870+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
193 1850 LINE 269:GOTO 1880+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
194 1860 LINE 270:GOTO 1890+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
195 1870 LINE 271:GOTO 1900+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
196 1880 LINE 272:GOTO 1910+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
197 1890 LINE 273:GOTO 1920+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
198 1900 LINE 274:GOTO 1930+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
199 1910 LINE 275:GOTO 1940+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
200 1920 LINE 276:GOTO 1950+PUSH 040+PUSH 040+PUSH 040+PUSH 040+PUSH 040
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XL/XE TYPE-IN

SPACE CHECK

SPACE CHECK is a "Mastermind" type game which uses redefined characters in the shape of spacelike to stand of the conventional page or column squares. It is played on an Atari 4 graphics screen. The aim of the game is to duplicate a sequence of 4 pictures set by the computer in as few moves as possible. A correct picture in the wrong place is shown by a white symbol, while a black symbol indicates a correct picture in the right place. The purpose of these is to give you clues as to whether or not you are guessing in the right direction.

USING THE PROGRAM

On running the program you will see 4 spacelike in a line to the top left of the screen. Move the joystick up or down to select a different picture; move the stick left or right to pick different spacelike on the row. Press fire when you are happy with your selection for the whole line. The computer will then assess your guess and print a black spacelike for each picture you got exactly right (i.e. correct shape, correct position) or a white spacelike for each picture you got nearly right (i.e. correct shape, wrong position). The process continues on the second and subsequent rows until you either guess correctly (you win) or you run out of screen (you lose). A game to the right of the screen shows your score - this is based on how quickly you can catch the sequence. You are given a "go again" option after 3 rounds of play.

by
Ann O'Driscoll
and
Phil Cardwell

THE

HEY?



TIPSTER

TAYLOR'S TIPS

A few words first to Paul Taylor of *Dateline* before we get on with his tips. I have finished that book. I have to get up to go to University and the radio's on Radio One. There you see it does pay to ask questions!

Paul's games are easy to buy so go.

TOMAHAWK

On **TOMAHAWK** how do you control the **KIDDER** and select **NEXT TARGET**, **REACTOR** and **HELPFULY** targets, says Paul, you use the keys in the relay. As you feel try a joystick to port 2 and so what you get. As for the left and right are the trigger controls and the fire button is the **NEXT** button. Good or what? What can't remember what the up and down do as it's been a long time since he last played this game!

SCREWY TAPES

Ever had your favourite tape game go wrong on you? You know the scene, happily loading and then all of a sudden **BOOT ERROR** at the same point every time. Well all is not lost, simply copy the tape on a tape to tape deck. Remember that this copy is purely for your use and should not be given, lent, or loaned to anyone else. Paul managed to get **AMERICAN ROAD RACE** working again after the coffee machine. The barbie looks quite well. He also used this on **KNIGHT ONE**, which had thrown a wobbler. Remember that you must keep the **TREBLE** high and the **BASS** low.

JET BOOT JACK

Play on the Practice (P) levels and it's easier to unlock the screens. Once unlocked, you can play a screen on any level up to 5.

ELECTRIC STARFISH

CLOSE the game and then when it is loaded hit **XXXX**. Look for the bit which says **A003** in the data. Change 03 to the example 0A. Change the number after the comma at the end of the line to end with 77 instead of 75. then press **RETURN**. Now the program and you now have 10 lives **00A**. Other values up to FF are legal but remember to change the character. For example **020** (from **000**) lives requires 0F

changed from 7B to the last two digits.



Well Christmas has come and gone and I hope you had a very nice one and that Father Christmas brought you everything that you wanted. I presume Paul set off over indulged in the Season's spirit. I know I did. I'm still trying to sleep it off! Anyway this isn't getting the work done so it's time we get on with the order of the day and produced another Tipster column.

TURBO CHARGER OR TURBO CHARGER?

Paul says that Turbo (as used in Derek Price's Turbo Leader) is handy for adding extra lives, time etc. to games. Paul has changed **TERRE**, **MUPPETS**, **ASTEC**, **CLEMMY COLIN**, **TRUCK ATTACK** and more besides. Paul says that he is working on the bug in Rockford but he's progressing slowly and helped by the fact that he can't write a disk loader for a program that he needs to help him.

MORE PLEASE PAUL!

I would like to hear more from you Paul on how to do these additions to the above games so that they can be included in this column.

TWILIGHT WORLD

To complete level one of **TWILIGHT WORLD** you will have to follow Daley Sawley's of London instructions that are short, precise and easy to follow. Really? O.K. lets go!

Go up to the top, go right and collect the key. Now go back down to the bottom. Finally, go left and take the 5th door from the right (it's the one with no keys in it). There I told you it wasn't very complicated.



MORE LETTERS . MORE LETTERS . MORE LETTERS .

Paul Taylor would like help on **KNIGHT ONE (PART ONE)** He'd like a solution and I know that at least one of you out there has the game so get going and into the Tipster of the hour award!

Deaths Paul of Auckland in New Zealand has dropped me a line (oh I did think of you on Christmas Day 19 hours early cooking your turkey in the heat of the mid day sun!). Graham would like hints and tips on Level 5 of **BERSEYATOR** the one after the one with the two portraits, as he has absolutely no idea what to do and loses all of his lives trying to find out. Also she would information on any games that have 4 players or more at once, either **4X4** or **4X2**.

SOFTWARE CLASSICS



Mark Stinson begins a new series of reviews that concentrates on games that have become 'classics' in the world of the Atari Classic. Many of the classic games for the Atari are long gone but the difference in this series is that all of the titles reviewed are still available - and no collection will be complete without them!

THE TAIL OF BETA LYRAE

The Tail of Beta Lyrae is a game which is well known to most long standing Classic owners. It will run on all formats: £39,995 is £4,995 and is available from Page 6 on disk and cassette. The game was released back in 1989 by Databyte and is probably one of the few games most of us go back to time after time. The game is of a similar nature to the arcade game Scramble which was a huge success. Other variations are available, such as Air Raider. CD in game. This is in my opinion the best of its kind. At 99p on cassette and £1.99 on disk it simply can't be missed.

The game story is well thought out, and instructions for play are given in the packaging and on the disk. The box is a slim plastic sleeve which helps greatly with neat storage.

The Tail of Beta Lyrae is set in a vast and planeted tail of the star system Beta Lyrae. The tail of the stars were a result of escaping gas and dust from the violent gravitational attraction of the twin bodies. The gas and dust combine with remnants of the system's inner planets, which, due to unstable orbits, had exploded some before. The result was an outer tail brimming with planetoids of various sizes.



The Tail of Beta Lyrae - one of the few games that has absolutely everything!

Colonists made settlements on these planetoids and mined them for precious metals which are to be found deposited in large quantities. In recent times a massive wave of alien has taken occupation of the tail, after continuous attacks on the colonists. Survivors are now terminated on site. As if you didn't know already, your job is to destroy the alien war machine and return the colonists to their rightful place.

In the game you play the part of a Tailor Wing Commander assigned to the Beta Guardian. The mission will take you through a myriad of enemies, and will pit you with against a plethora of different hazards. Your battle for each quadrant takes you through a mountainous terrain, through caverns, and over city settlements. If you survive for long enough, the computer will locate and take you to the alien power generators. With their power source at your mercy the alien flee, and you get the opportunity to destroy their retreating fleet. You will then be taken to the next nearest alien presence. As you travel in the sector you will again need all of your skill to navigate through the debris of the tail.

The program allows you to choose from up to four players. Five or seven wings (ships), and six levels. I have only ever played on the lowest level and I dread to think how difficult the higher levels must be. There are many targets to destroy during your mission, including components of an antenna, alien vessels, plasma reactors, protonic reactors, mining or industrial bases, missiles, satellites, transmitters and alien outposts. Points are obtained for destroying any alien installations and hardware, although the main task is to survive through the remains of the quadrant to find the alien power generators. Some great effects are employed in the game, with large explosions on destroying the bigger targets. You have to be careful not to destroy any target at too close a range though, as you may be destroyed by the debris.

REVIEWED THIS ISSUE

THE TAIL OF BETA LYRAE

Publisher: Databyte
Price: £1.95/99p
Disk or Cassette

AIR RESCUE

Publisher: Atlantis
Price: £2.95
Cassette only

FOOTBALL

Publisher: Atari
Price: £7.99
ROM only

All these titles are currently available from the PAGE 6 ACCESSORY SHOP and some may be available from other retailers

The game is great to play, and has a high addiction factor, but it is by no means easy. Points are lost each time you fire, and it is very easy to blast away all your points very quickly early on in the game. Some of the obstacles presented during the game are very difficult to pass. For example, cannons fire vertically from the ground and are very often protected by mountains. To pass these particular cannon takes some considerable skill. There are also a number of indestructible barbed-wire which can make navigating a nightmare. The gameplay is also very fast which makes each mission all the more challenging. The game makes good playing for novices and experts alike, and will just keep you coming back for more.

So, if you think you're up to the challenge strap your seat in to the cockpit of your wing, put your pilot skills and marine skills to the test and destroy the enemy. Remember, only a few have what it takes to make the mark, and you are the Galactic Wing Commander.

In the Tail of Beta Zone you get excellent gameplay, superb graphics, fast action, and good sound effects and music. Add to this the incredible low price and it's a sure fire winner. Buy it now.

AIR RESCUE

Air Rescue is an excellent budget game from Atlanta, featuring you as a helicopter pilot charged with the task of rescuing captured prisoners from the clutches of evil war. The cassette tape informs you that peace has been shattered as the Military Junta moves against the popular uprising. Civil war rages, having separate factions into killing to escape the guns, tanks and missiles of the opposing armies. There is only one way to get them out - AIR RESCUE.

The game is similar to one or two other games in which you take it to air lift survivors whilst avoiding enemy fire - most notably *Chopper* by Dataforce. After having played Air Rescue for only a matter of minutes it became obvious that this one is by far the most well implemented version, and definitely worth buying even if you, like me, already own one of the other similar games.

Air Rescue has clear, colourful, well defined graphics, adequate sound effects, and a simplicity of play that makes the game a winner from the start. Small touches such as the ground shaking when the chopper is hit also add atmosphere to the game. There are ten levels of increasing difficulty, the last of which will keep the most seasoned of games players challenged. Level 1 presents a screen which compares a home town (The Hospital, Trees, Skidoo, Houses and Land based artillery). The object of the game is to navigate the helicopter over enough to houses in land and pick up the prisoners whilst avoiding the sea level objects mentioned, plus gunfire. Level 1 did not present much of a challenge, and after one or two refinements with trees and the like, I completed the mission and moved on to level 1. In this point I wished I had stuck to administering I found myself under fire from the artillery, from tanks, and from deadly missiles. On top of this, books of birds were my chopper flying about madly in an effort to keep it in one piece. The game kept me coming back for more and I moved up to level two, in which the computer presents a strong themed zone with much more fire power.

In summary, I would not hesitate to recommend this one to any games fan, especially at the price. You can't lose. Good news also for disk drive owners is that this one is Translatable - XTENDED, uses standard read, default settings.

FOOTBALL

(the American version)

Football is one of the latest releases of Atari Corp. under their name Endorphin™. It is a simulation of American football, but with a great deal of material has been observed - mainly a very extensive set of rules and play formations.

Before playing Atari Football I knew very little about the game, other than that it appeared similar to rugby except that the ball is thrown forwards rather than backwards. Basically, the object is to beat the opposing team by scoring touchdowns in the End Zone, field goals and safeties. The first two scoring methods are equivalent to a try and conversion in rugby. I am not completely clear on a safety, but it has something to do with the defensive player furlough back on the field. Needless to say, there are a lot of rules to digest, especially if you know little or nothing about American football, but it is well worth the effort when you get to play the game.

Football is very unusual as games go. The difference with Football is that it is designed specifically as a two-player game. There is a player's computer option, but it is not a full game, rather a practice format in which you can learn and receive and the art of passing. The game therefore requires two joystick, even in the player's computer option (you alternate between the two teams - the computer controls all defensive actions).

The game commences with options for a full game or practice game. Game length can be set at six minutes or fifteen minute quarters. Once you commence play you must select your offensive formation out of fifteen variations. The defence then chooses a formation from five variations and the action begins.

First the ball is snapped, or passed to the Quarterback. The Quarterback changes colour and you gain control of his movements. It is up to you to select where you wish to throw the ball, and your aim is to direct the ball in a manner as one or other side of the pitch. Once the ball reaches your other player (it isn't intercepted) then your control switches from the Quarterback to the receiver. You must keep the ball moving towards the opposition's End Zone where you can score a touchdown or field goal. The defence will be relentless in trying to prevent this, and if you fail to advance ten yards in three plays, you lose the ball.

The instructions for the game are quite comprehensive, and even include a playcard giving details of offensive/defensive plays and tactics which is placed between the two players. The game is certainly novel, however, in order to get the most out of it you must have a partner to play with.

reviewed by
Mark Stinson

BEYOND THE WINDOW

Every point on your Atari's graphics or text screen has its own memory location in RAM. Different graphics modes use different amounts of memory so the size of the "screen RAM" area varies with the graphics mode. However, it always begins immediately above the display list and you can find the starting memory location with

```
PEEK(80) + 256*PEEK(81)
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TABLE 1 shows the amount of screen RAM used by the different graphics modes. It can be seen that there is a large variation in memory usage, with high resolution screens such as Graphics 5 (150 lines at 48 bytes per line) needing 50 times as much memory as a low resolution mode like Graphics 2 (12 lines at 25 bytes per line).

All the points on your text window screen are stored in RAM too. The points for this area are at locations 800 (low byte) and 801 (high byte), so

```
PEEK(800) + 256*PEEK(801)
```

gives you the starting address. In all modes, the text window screen begins above screen RAM at memory location 40960 and uses 160 bytes (4 lines of Graphics 2 at 40 bytes per line). This brings you to the top of RAM at memory location 40980 (called RAMTOP).

TABLE 1
SCREEN RAM BY GRAPHICS MODE

GRAPHICS MODE	NUMBER OF BYTES	
	FULL SCREEN	SPLIT SCREEN*
2, 3	240	200
1, 4, 13	480	400
0	960	-
5, 12	960	800
6	1920	1600
7, 14	3840	3200
8, 10, 11	7680	-
9, 15	7680	6400

* plus 160 bytes for the window

SAVING AND LOADING SCREENS

PROGRAM 1 uses the information we have on screen RAM to show how a graphics screen can be saved to disk and then loaded back in again. The program selected communications channel number 5, which uses memory locations 640 to 685, for output (writing) and input (loading). The routine beginning at LINE 530 is used to save the screen data. LINES 540-570 PEEK values into some of the channel's memory locations, while the machine code sequence at LINE 580 takes care of the actual data transfer. The 170 channel bytes are stored as follows:

START+2: We must tell the computer whether we're putting (writing) or getting (loading) data. PEEK at 11 to put data, or 7 to get data. These variables are defined in LINES 230 (writing) and 450 (loading).

START+4 AND START+6: We give the computer the starting memory address that the data is to be transferred from (writing) or to (loading), in low byte/high byte order. In our case, this will be the PEEK(80) (low byte) and PEEK(801) (high byte) memory locations, as this is where screen RAM begins.

START+8 AND START+0: We tell the computer how much data is to be transferred by PEEKING in the low byte and high byte respectively of the number of bytes being moved. The program uses the difference between RAMTOP and screen RAM start to tell us this (LINES 540 (writing) and 440 (loading), although not all these bytes are used - For instance, a Graphics 7 screen occupies locations 36800 to 41189 (5390 bytes, as shown in Table 1), so there are 548 free bytes before our window RAM starts at 40980. These bytes are used for screen RAM in Graphics 7-15, where there is no text window. LINE 550 reserves the bytes figure into the highest whole number divisible by 256 (the high byte) and the remainder (the low byte).

Ann O'Driscoll gets to grips with the part of memory you see each time you use your Atari and shows you how to perform a trick or two

GRAPHICS RAM

The colours and graphics mode are transferred using BANK, at LINES 220-230 and 420-430. This banking uses a Graphics 3 screen, which can be extended by changing LINE 110. As might be expected, the high resolution modes take up much more space on the disk than the low resolution ones. For instance, a Graphics 3 screen uses 53 sectors (as against 19 sectors for our Graphics 3 one BANK).

```

10 100 REM *****
11 140 REM *****
12 140 REM *****
13 110 GRAPHICS 3:PAGE 702,0:PAGE 8000 TO
14 110:COLOR 0:MODE 0,0,0,0,0,0,0,0,0,0
15 1000 REM *****
16 110 T=0: PAGE 8:SET:PAGE 704,0:
17 110 IF 0:PAGE 704,0:PAGE 8000 TO
18 110:MODE *****
19 100 REM *****
20 110 CLOSE #1:PAGE 80,0,0,0,0,0,0,0,0,0
21 100 *****
22 110 REM *****
23 100 REM *****
24 110 REM *****
25 110 REM *****
26 110 REM *****
27 110 REM *****
28 110 REM *****
29 110 REM *****
30 110 REM *****
31 110 REM *****
32 110 REM *****
33 110 REM *****
34 110 REM *****
35 110 REM *****
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41 110 REM *****
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74 110 REM *****
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80 110 REM *****
81 110 REM *****
82 110 REM *****
83 110 REM *****
84 110 REM *****
85 110 REM *****
86 110 REM *****
87 110 REM *****
88 110 REM *****
89 110 REM *****
90 110 REM *****
91 110 REM *****
92 110 REM *****
93 110 REM *****
94 110 REM *****
95 110 REM *****
96 110 REM *****
97 110 REM *****
98 110 REM *****
99 110 REM *****
100 110 REM *****

```

INTERNAL CODES AND WRITING TO SCREEN RAM

The numbers held in the screen RAM memory locations are the Atari internal codes for the characters. These codes are derived from the order in which the characters are stored in RAM. They are not the same as the ASCII characters but it is possible to convert from one to the other, as shown in Table 1. In practice, the codes work like this: Suppose you print the letter "C" somewhere on your screen. If you PEEK the RAM location which holds this print, you'll get the value 33, because this is the internal code for "C" (i.e. 65 - 32) (see Table 2). You can also print things on the screen by FORKING directly to screen RAM. Again, you must FORK the internal code rather than the ASCII value of the character.

PROGRAM 3 modifies a Graphics 7 display list to transfer a line of Graphics 0 and then uses screen RAM to display the text message. LINE 10 changes the 10th row (DL+10) into a Graphics 8 line, and LINE 220 calculates where screen RAM begins for the modified line. Each Graphics 7 line gets 80 bytes. The first starts at SCRN+100 (defined as LINE 210), the second at SCRN+190, and so on, with the 10th starting at SCRN+900. The FOR NEXT loop converts the ASCII code of

continued

```

10 100 REM *****
11 140 REM *****
12 140 REM *****
13 110 GRAPHICS 3:PAGE 702,0:PAGE 8000 TO
14 110:COLOR 0:MODE 0,0,0,0,0,0,0,0,0,0
15 1000 REM *****
16 110 T=0: PAGE 8:SET:PAGE 704,0:
17 110 IF 0:PAGE 704,0:PAGE 8000 TO
18 110:MODE *****
19 100 REM *****
20 110 CLOSE #1:PAGE 80,0,0,0,0,0,0,0,0,0
21 100 *****
22 110 REM *****
23 100 REM *****
24 110 REM *****
25 110 REM *****
26 110 REM *****
27 110 REM *****
28 110 REM *****
29 110 REM *****
30 110 REM *****
31 110 REM *****
32 110 REM *****
33 110 REM *****
34 110 REM *****
35 110 REM *****
36 110 REM *****
37 110 REM *****
38 110 REM *****
39 110 REM *****
40 110 REM *****
41 110 REM *****
42 110 REM *****
43 110 REM *****
44 110 REM *****
45 110 REM *****
46 110 REM *****
47 110 REM *****
48 110 REM *****
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56 110 REM *****
57 110 REM *****
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59 110 REM *****
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61 110 REM *****
62 110 REM *****
63 110 REM *****
64 110 REM *****
65 110 REM *****
66 110 REM *****
67 110 REM *****
68 110 REM *****
69 110 REM *****
70 110 REM *****
71 110 REM *****
72 110 REM *****
73 110 REM *****
74 110 REM *****
75 110 REM *****
76 110 REM *****
77 110 REM *****
78 110 REM *****
79 110 REM *****
80 110 REM *****
81 110 REM *****
82 110 REM *****
83 110 REM *****
84 110 REM *****
85 110 REM *****
86 110 REM *****
87 110 REM *****
88 110 REM *****
89 110 REM *****
90 110 REM *****
91 110 REM *****
92 110 REM *****
93 110 REM *****
94 110 REM *****
95 110 REM *****
96 110 REM *****
97 110 REM *****
98 110 REM *****
99 110 REM *****
100 110 REM *****

```



```

20 100 REM *****GRAPHICS*****
25 100 REM
30 100 GRAPHICS 0,0,400,200:G=GRAPHICS
   G$
40 100 POSITION 1,LINE "A MAY SCROLL USE
   *****SEE THE DISPLAYS ON PAGES 164
   & 167"
50 100 REM *****GRAPHICS***** Screen on 40
   & 100 G$ G$ G$ G$ G$ Limited scrolling
   value as screen has start
60 100 *****BLANK *****PAGE 164: *****
   *****PAGE 165*****
70 100 REM *****GRAPHICS*****
80 100 G$ G$ G$ G$ G$ G$ G$ FROM 170
90 100 REM *****GRAPHICS***** Add 4 G$ G$
   & G$ to GRAPHICS 4 bytes from scrolling
   ***** keep within limits
100 *****GRAPHICS***** AND *****-*****
   *****
110 100 REM *****GRAPHICS***** Add 48 bytes
   to GRAPHICS 48 bytes from scrolling
   ***** keep within limits
120 100 *****GRAPHICS***** AND *****-*****
   *****
130 100 REM *****GRAPHICS***** Convert 80 into
   high and low bytes and POST the values
   into the display list
140 100 *****GRAPHICS***** LINE ***** PAGE
   ***** *****
150 100 REM *****GRAPHICS***** Go on
   ON to LINE 100 to wait for keypress: 1
   movement on and repeat.
160 100 GOTO 100
170 100 REM *****GRAPHICS***** END THE
   PROGRAM
180 100 GRAPHICS HOLD 1000

```

change LINES 100 and 200. LINE 110 puts a 2 byte Load Memory Scan instruction into the display list to tell Acorn to show the reserved area, beginning at page 158, on the next line. This is followed by another LINE LINE 200 to tell the computer to go back to showing the regular screen RAM. The pointers for the 16th line of the Graphics 8 screen were worked out in LINE 170. LINE 244 enables the row list. The scrolling routine at LINES 160-160 works by incrementing the low byte pointer for the line by 1 until it gets to 215, bringing it back to 0 and repeating the sequence, where 215 is a full page less 40 bytes per Graphics 8 line.

GOING FURTHER ..

Some of the listings here could be adapted for use in your own programs. For instance, the screen wrapping technique from PROGRAM 8 might be used in a game - the instructions could be stored on a separate screen which is called up when any, the HELP key is pressed. Or perhaps PROGRAM 9 could be adapted as part of a title screen, with the scrolling message saying "press a key to continue. . ." In this case, if you change the screen to Graphics 1 or 2, you should remember that these modes only use 20 bytes per line, so LINE 170 will have to change too. In any event, all the listings have plenty of REMs to help you along the way as you experiment.

```

190 100 REM *****GRAPHICS*****
200 100 REM
210 100 REM *****GRAPHICS***** PAGE 164, *****
   *****
220 100 REM *****GRAPHICS***** Move row 0
   ***** 4 bytes to page 158
230 100 PAGE 158,100
240 100 REM *****GRAPHICS*****
250 100 REM *****GRAPHICS***** *****
   *****
260 100 *****GRAPHICS*****
270 100 REM *****GRAPHICS***** Can
   vert ***** to internal row and PAGE 0
   ***** into reserved RAM area
280 100 *****GRAPHICS***** AND ***** PAGE
   ***** ***** *****
290 100 REM *****GRAPHICS*****
300 100 *****GRAPHICS***** *****
310 100 *****GRAPHICS***** ***** *****
320 100 *****GRAPHICS***** ***** *****
330 100 *****GRAPHICS***** ***** *****
340 100 *****GRAPHICS***** ***** *****
350 100 *****GRAPHICS***** ***** *****
360 100 *****GRAPHICS***** ***** *****
370 100 *****GRAPHICS***** ***** *****
380 100 *****GRAPHICS***** ***** *****
390 100 *****GRAPHICS***** ***** *****
400 100 *****GRAPHICS***** ***** *****
410 100 *****GRAPHICS***** ***** *****
420 100 *****GRAPHICS***** ***** *****
430 100 *****GRAPHICS***** ***** *****
440 100 *****GRAPHICS***** ***** *****
450 100 *****GRAPHICS***** ***** *****
460 100 *****GRAPHICS***** ***** *****
470 100 *****GRAPHICS***** ***** *****
480 100 *****GRAPHICS***** ***** *****
490 100 *****GRAPHICS***** ***** *****
500 100 *****GRAPHICS***** ***** *****
510 100 *****GRAPHICS***** ***** *****
520 100 *****GRAPHICS***** ***** *****
530 100 *****GRAPHICS***** ***** *****
540 100 *****GRAPHICS***** ***** *****
550 100 *****GRAPHICS***** ***** *****
560 100 *****GRAPHICS***** ***** *****
570 100 *****GRAPHICS***** ***** *****
580 100 *****GRAPHICS***** ***** *****
590 100 *****GRAPHICS***** ***** *****
600 100 *****GRAPHICS***** ***** *****

```

TABLE 2
INTERNAL CHARACTER CODES

INTERNAL CODE	ASCII NO.	HOW TO CHANGE ASCII TO CODE
0 - 93	32 - 95	subtract 32
94 - 95	0 - 31	add 94
96 - 127	96 - 127	no change
128 - 191	160 - 223	subtract 32
192 - 255	128 - 191	add 64
256 - 255	224 - 255	no change

At last, LEMMINGS comes to the Atari Classic with ...

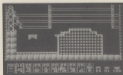
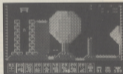
Here at last! Yes, the eagerly awaited conversion of Progress's classic arcade game Lemmings has arrived, some two years after German publisher Ko-Soft first commissioned work on the project. Some thought THE BRINDLES would never see the light of day but Ko-Soft are not inclined to make rash promises. Indeed, they said it would be good and they weren't kidding!

Lemmings (or Brindles) are small arctic rodents who are renowned for having scant regard for their own safety - if there's a fire they are burned, if there's a chasm they go for a swim, if there's a hole they fall straight in! The only way to prevent the Brindles marching headlong into potentially fatal situations is to tell them exactly what to do instead. This is where you come in. By prompting individual Brindles to carry out special activities you can help them avoid the direly consequences of their ignorance - or at least save enough bodies to qualify for the next round of slaughter!

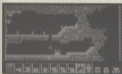
The input device in this game can be a joystick, mouse, CD 68 numeric keypad or Sonnet Animation Station. A mouse is ideal, though I've found the game is still reasonably playable using the standard joystick option. If you don't have a mouse you might consider buying one to play Brindles - needless to say, Ko-Soft can offer you a good deal on one of these!

The Brindles fall into view through a small trapdoor. The speed at which they do this varies from level to level though it's possible to increase the rate if desired. There are ten different landscapes - from dark caves to peaty swamps, several woods and the depths of a volcano - visited over a total of one hundred levels (only sixty levels are supplied with early release copies of the game, the remainder will be available free of charge on application to Ko-Soft).

To complete a level you are required to guide at least the specified number of Brindles to the exit (and within a restricted time period). Depending on the allocation of special functions to the level environment, you can issue various commands to the Brindles to ensure they are safely homeward bound. Instructions may be issued by clicking the screen cursor on a corresponding icon in the lower part of the screen, and then selecting a particular Brindle to carry out the chosen activity. With your help a Brindle can assume the role of a Climber (able to climb high walls), Floater (able to survive a fall from a great height), Blocker (able to stop other Brindles passing a given point), Bomber (able to destabilise and demolish the immediately surrounding walls), Builder (able to con-



THE BRUNDLES



Title: **THE BRUNDLES**
Publisher: **Ko-Soft**
Supplier: **Micro Discount**
Price: **£15.00**
Format: **Disk**

Reviewed by Paul Rixon

abstract strategy-type *Arklund* or *Digger*. *Diggers* come in three varieties, having an ability to dig straight ahead, straight down or diagonally in direction. To successfully tackle each level you'll need to discover the correct combination of activities to earn a sufficient number of Brundles - but one slip and all could be lost.

The first few screens are reasonably simple to master and serve mainly to introduce you to the different features of the game. The activities are only allowed in the quantities required, thereby preventing you with a subtle hint of appropriate tactics. Later on, however, the difficulty rating is stepped up. The number of Brundles to receive is increased whilst the time allowed to do it is reduced, the route from entrance to exit point may not be at all obvious and the activities supplied may not seem appropriate. But that's the fun of *Learning!* It may take hours and hours of frustrated experiments to find the solution to a level but the feeling of satisfaction when you finally crack the puzzle is unmatched by any other computer game. Particularly each level has an associated rule book displayed at the start so, as long as you remember to write it down, you can always continue playing where you left off.

The *Brundles* is, without exaggeration, a visual masterpiece that has to be seen to be appreciated. The scenarios have been meticulously drawn with a highly commendable use of colour and animation. The ten landscapes are accompanied by their own corresponding theme tunes (for example, *Grieg's Walk of the Mountain King*) and the overall effect suggests that the game's two years of development have certainly not been wasted. From the title page to the in-between screens and the scrolling level descriptions, it's clear the author has spared no effort to obtain perfection.

This is definitely the most exciting new release for some time and clear appreciation should be shown to *Ko-Soft* for supporting the speculative development of an amazing game.

The *Brundles* is quite simply an essential component of any respectable games collection - it's right up there with *Lord of the Rings*, *Star Wars* and *Rescue on Fractalus*. What more can be said than ... buy it today!

Next, on this page, other issues: *Ko-Soft* have recently announced the first English language edition of *ZORK*, their regular paper-based *Amigazine*. *Ko-Soft's* programmer *David Eaton* has promised more English songs in the future - providing enough interest is displayed by British readers. A full review will appear next issue but, in the meantime, don't hesitate to check it out.

BANG! BANK!

The title page of this successful game is accompanied by one of the most original examples of music to have featured in an Atari game since... maybe *The Tail of the Scorpion*? Anyway, if you're into computer music then you'll want to acquire **BANG! BANK!** straight away, purely as a great example of what can be achieved with your Atari. Incidentally, the game screen and its sometimes short suggest that this game is actually named *Bank! Bang!*, though we'll stick with the outer packaging which has it the other way around! The story is that a town's bank manager has received a tip-off suggesting that a group of desperate bankies are planning to rob his premises. He's decided to place an armed guard on the door, just to ease the manager's mind. Guess who's been volunteered to help?

Your screen view comprises three large doorways, underneath a collection of small boxes. The doors open and close at random to reveal either a robot guy, a

customer or a bank! with a gun. You've got to make a quick decision as to whether you should fire at these characters or leave them well alone. If you don't, unlike a banker you'll be shot yourself and lose a life - but if you harm an innocent customer then you'll lose one anyway! For shooting the bad guys you gain points and dollars. Your aim is to fill three boxes corresponding to the current score with dollar values before you move onto the next set of doors. There are four sets to the first level and you can access different sections by scrolling across when all the doors are closed.

In later stages you meet some new characters, such as Jake the Gunfighter who usually he's shot before he's drawn his gun and Pete the Mexican Banker. Also, the number of bad guys is increased while the doors open and close at a more frequent rate. The game is intended to

stretch your powers of hand-to-eye coordination to the limit. It succeeds.

Bang! Bank! is a pleasantly original game and is blessed with the great graphics and sound effects that seem to be a trademark of Mirage. The quality of this and other recently imported games is quite astounding, if you haven't tried any of these yet, you have quite a surprise to share!

Title: BANG! BANK!
Publisher: Mirage/ALN.G.
Supplier: Micro Discount/ALN.G.
Format: Disk
Price: £5.95
Reviewer: Paul Dixon

BOMBI



The authors of **BOMBI** - the latest Power-Pac Past import to arrive from DGG - were also responsible for creating the amazing **QUICK** programming language reviewed in issue 53. Naturally, they used Quick to write this game!

You are required to guide Bombi (another Mr. Blobby in a blue outfit) through various dangerous platforms which are littered with explosives. Bombi has to prime the bombs and avoid getting caught in the resultant blast. The platforms are drawn using the 3-D graphics

style of Markie Madson, such that the graphics themselves must be used to control movement. Surprisingly, the platform is a 'deadly slope', so you must be very careful not to stray Bombi over the edge. When Bombi touches a bomb, its detonator is immediately triggered and there is only half a second's chance to escape the square!

There are three different types of bombs. Small bombs will only destroy their own square so you can quickly step aside to avoid injury. Medium sized bombs also wipe out the four neighbouring squares, which may contain their own bombs and thereby set off a chain reaction. The largest bombs affect the eight neighbouring squares, so you'll need to have an escape route planned before tackling any of these. To finish a level you must detonate at least ninety percent of the bombs, without harming Bombi, and also catch a bonus cross which jumps around the platform at random.

Well, I've made quite an effort to master this game but I have to conclude that,

really, the frustration factor (in case of dying) is simply far too high. The author has put lots of effort into the visual components of the game but then he gets in upset that essential ingredients - playability. The resultant series of screens may be very pretty to look at but they don't substitute for an addictive game. Better luck next time chaps!

If you own a light gun you'll no doubt be pleased to learn that DGG have just released a light gun game called *Alien Blast*. For *Bombi*, tape users they have also translated *Partner Ball*, *Clugs* 3 and *Miss Stranger* into turbo format. Finally, it has been announced that the News-Disk publication (distributed to issue 54) has been renamed *The Atari 8-bit News-Paper* to reflect the fact that it's now distributed on real paper! Features of these products will be coming soon to SMI.

Title: BOMBI
Publisher: Power Pac Past
Supplier: DGG
Format: Disk
Price: £4.95
Reviewer: Paul Dixon

SPECIAL FORCES

Good news for Operation Wolf fans: Instead of on the heels of A.N.G.'s excellent Wolf clone Operation Blood, comes SPECIAL FORCES, an Operation Blood II, from Poland's talented Mirage Software programmers.

You are alone in the control of a battle-field, equipped with a rapid-fire machine gun and a small quantity of grenades. Your view is through the sights of your gun, and your actions are to wipe out anything that moves - except, of course, Red Cross carriers transporting the injured to safety. As you blast away at enemy installations, tanks, jeeps, fighter planes, boats and other adversaries, the tally remaining for each category is updated on a status line. You need to annihilate the specified quotas before you can progress to the following level.

Your supplies of bullets and grenades are limited, so it's wise to keep an eye open for bonus packages, which drop from the sky by parachute. An accurate shot will add the contents of a package to your inventory, but meanwhile you must

avoid taking too many hits from the ever persistent opposition. Their wish is to sap your energy level to the point of expiry. Fortunately, you have some lives in reserve! Tactics? I'm tempted to suggest

that you should close your eyes and keep pulling the trigger, but hardened Wolf addicts will no doubt have a strategy based on the fire power of the various enemy units, conserving energy and making every shot count (and how do you conserve lives too?).

The graphics are fairly well detailed, though rather lacking in colour (why do games of this type always have such drab colour schemes?). Animation techniques have been expertly used to define a good deal of simultaneous action without compromising the speed of play. The title page is particularly appealing and amusing (which isn't heard during the game itself) to top notch stuff. If you have a mouse, you'll be pleased to know the authors



have included an option for mouse as well as joystick drive operation.

The instructions contain a strategy that may be a bit far off and Special Forces is not intended to suggest it can achieve anything other than misery and destruction. However, since the majority of computer games involve some kind of violence, I guess the moral arguments do not need to be specifically directed at this one.

Title: SPECIAL FORCES
Publisher: Mirage/A.N.G.
Supplier: Micro Discount
Format: Disk
Price: £6.95
Reviewer: Paul Nixon

BATTLE SHIPS



Who wants a game of battleships? For those who do, A.N.G. Software have discovered a new game from Poland's Mirage Software called (wait for it...) BATTLE SHIPS.

The game kicks off with a neat loading sequence featuring an excellent battle ship drawing and a snazzy "airload" prompt for you to flip the disk onto side B. After a somewhat alarming message "marching" routine, the title page is revealed. This again is a marvelously artistic affair with re-defined characters forming the main text and superb battle

ship drawings used as a backdrop to the game's title. From this screen you select whether to play against a human or computer simulated opponent, in the former case using either one or two players. Pressing these buttons into the game itself.

As you'd expect, the first task is to place some battle ships (five in all) onto the battle grid. There are five classes of ship which occupy between two and six grid squares.

Using a joystick controlled screen pointer you must select each ship from a panel on the left of the screen. This sets the respective position on a battle grid of four hundred squares to the right. When you're satisfied with the layout of your fleet, you can click on an "end" area to continue play.

If you're opted to challenge the computer the next cycle of events involves little interaction from you. First you observe the computer making its shots against the grid, then you can sit back and watch the battle commence to the game's shriek on tones of an apt page. When this

rather lengthy but graphically pleasing sequence is over, it's your turn to play from the ship. Initially you have twenty shots at the grid but the number is reduced if any of your ships are sunk by the opposition. A status panel indicates the strength of your fleet and, when the worst comes to the worst, replaces attack requests with "OO" symbols. When a player wipes out the other's entire fleet, a triumphant page up to announce the victor.

Until now the best battleships game I'd encountered was a type in being from the long defunct Big K magazine. Battle Ships surely takes its place as the ultimate version of this incredibly addictive game. Mirage have gone to town with brilliant graphical effects and good music. A splendid effort!

Title: BATTLE SHIPS
Publisher: Mirage
Supplier: A.N.G. Software
Format: Disk
Price: £4.99
Reviewer: Paul Nixon

SOMETHING SERIOUS ...

Send Alert! We have crash-landed on an alien planet deep inside the Classic PD Zone. It is known only as 'TF'. Due to engine failure we cannot take-off and must therefore negotiate with the most brutalists, the Piers. They have offered us a new hyper-drive engine if we undertake an examination of three Pteronian offerings they have received via mail order from the planet Astart. We have agreed the terms and accept the offerings...

LEAGUE ORGANISER

LEAGUE ORGANISER is a unique piece of software which will allow you to organise and schedule leagues of up to 31 teams. Whether you play in the local football league or run a weekend chess league, this program will be of some use to you in streamlining all the grueling hours of organizing league fixtures.

The disk is double-sided with the documentation on Side B. I'm one of those people who never read docs before using a program, so I looked Side A first. A good title screen appeared on the screen (always a good start) and was soon followed by the main menu, which was split into three sections: the title bar, the main division (listing the options available) and the sub-menu (providing information) and error messages.

Having after unsuccessfully attempting to select an option, I decided it might be best to read the docs before progressing any further. I therefore flipped the disk, loaded the docs menu and printed them. Sixteen pages later and they were printed! The program actually allows you to set the size of your page before printing. I suggest you use a page length of about 80 lines for normal A4 sheets.

The documentation is a joy to read! It takes no more than fifteen minutes and tells you everything you need to know, without ever getting too technical. At the end there is a small example which takes you through each stage of setting up a league.

Getting back to the program itself, we were at the main menu... There are eight options available at this menu: Edit Team Names, Edit Seasons, View Fixtures, Save File, Load File, Disk Directory, Delete File and Format Disk. Each option is selected by using the cursor and arrow keys and then pressing Spacebar.

The Delete-file option is self-explanatory. It is the first three options which make League Organiser tick.

Edit Team Names allows you to enter and edit the names of up to 31 teams (or players). This should be more than enough for the vast majority of league tables. Entry is quick and easy.

Next up is Edit Seasons. This option creates the seasons to be played. It begins by requesting the season starting date. You

enter this in Day/Month/Year format. The screen then quickly displays the calendar of the month you have chosen. A cursor highlights the first day of the season. A very professional touch!

Next, you must mark the first day of the season and follow it with the final day. After doing this a window will appear within which you can enter weekly time slots over the marked period, i.e. when the games are to be played and the number of playing areas available.

A quick press of the Return key and you are back to the Main Menu. The next step is to create the fixture list. Select View Fixtures from the menu and you will be requested to choose either the whole time slot or an individual team. After making your selection you can enter who is playing at home and who is playing away. If at this point you'd like to print the fixture list you just hit Spacebar. I suggest that you position your print head at the top of your paper on the list when an entire page before moving onto the next.

League data can be saved to disk at the main menu by selecting Save File. On Side B you'll find the example league under the filename EXAMPLE.LIG. Use Load File to load it into memory.

I found League Organiser to be a very professional piece of software. It has the feel of a program which was written by someone who takes great pride in his work, and indeed the Atari 8-bit. The author, Adrian Hyland, even states in the documentation that his main inspiration behind League Organiser was a letter which was published in New Atari User issue 28 (8-85 Etc).

The print option is very useful and allows both whole and individual fixtures lists to be printed (very handy for making sure that everyone arrives on time).

I use League Organiser as the first step to an expanded program (covering all the options above plus a 'Manager' program to control the league in progress, i.e. results, current standings, etc. How about it, Adrian?)

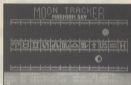
If you are involved in a league of any kind you really should check out League Organiser - it'll save you many hours of organisation and do all the tricky calculations for you (e.g. how many games are played when 28 teams play each other three times?) Before leaving your mind, just boot up your drive and let League Organiser do all the work for you!

CLASSIC PD ZONE RATING: 81%

LOOK TO THE STARS

LOOK TO THE STARS features six astronomy programs for all you budding Patrick Moore's out there. The programs are Moonwatcher, Star Gazing, Planetsation, Horizon, Star Encounters and Moonwatcher in Space.

The first program on the disk is a very interesting and quite unique piece of software. **MOONWATCHER** is divided into two parts. Part 1 (Moonwatcher) will display the positions of the sun and moon for any date. It will also give you the moon phase. Part 2 (Moonplaner) is described as a "computerized farmer's almanac". In other words, it's a farmer's calculator which gives you the best days to perform certain farming tasks, according to the position and phase of the moon. The farming tasks included are planting, sowing, cultivation, pruning, harvesting, weeding and raking timber. The prices, good and fair days are given for a selected month and year.



Included with the Moontracker documentation is an interesting section on calendars and plotting by the moon. I can't even see myself actually putting this new-found knowledge to use but it was an interesting read nevertheless.

Next up on the disk is **STAR GAMES**. This program is subtitled "A Winter Anticipation Quiz" and that's exactly what it is, albeit a very basic one (there are only five questions to answer). However, there is a Review option which goes through all of the calculations and shows them in the graphics window.

PLANETARIUM is a small graphics demo which cycles through various constellations. It is very similar to the Northern option in Star Games.

The next two programs are aimed at experienced astronomers and photographers. **MONEY** is a coordinate calculator which gives you the height and direction of a celestial object.

As a brief point of note, *Horizon* was programmed in December 1978 - that's FIFTEEN years ago! I love examining old programs like these!

STAR ENCOUNTERS is another old program, this time from 1976. It calculates the distance between the Earth and a selected star. The author advises the use of a star atlas when using *Horizon* or *Star Encounters*.

The final program on *Look to the Stars* is **MARSHALLED BY SPACE**. Programmed in 1980, from a revision for the TRS-80 computer (Scott Adams' old favourite), *Marshalled by Space* is an interesting little program which simulates itself as a space. You are trapped on a planet and your only chance of escape is to use the clues given to identify the name of the planet. Simple, but good fun!

Overall, *Look to the Stars* brings you the unique Moontracker, two small quiz games, a basic graphics demo and two old astronomy utility programs. Oh, so it's not a spectacular disk, but it does seem to offer a good mixture of programs. Moontracker and *Marshalled by Space* are both very good! The other four programs will only be of interest to you if you enjoy the class of old programs or if one of your main hobbies is astronomy. A wealth of links are from the usual menagerie of arcade games and disk utilities.

CLASSIC PD ZONE RATING: 73%

CHILDRENS' SONGS

I thought I'd briefly mention a disk which my four year old cousin has recommended to everyone. **CHILDRENS' SONGS** features 37 songs for the young at heart. The songs include many timeless classics such as Pop Corn The Wizard, Teddy Bear's Picnic, Waiting For Santa, Popcorn, Old MacDonald, etc.

Children's Songs is a Composer's Choice II disk. The songs are played via an on-screen keyboard. Each note is represented by one of four colours. The effect makes well and while in the feel of the disk.

All 37 songs can be played automatically one after the other. The program then goes back to the first song. You can therefore let it play on for as long as you wish. You can also select individual songs to play back.

My young cousin Levin loved this disk - I could tell by the silence as he stared at the TV screen (although after a few songs he did ask "where's the drummer"). However, he's started to ask his mum and dad for an Atari. I guess you've come to the family!

Children's Songs is one for kids under five.

CLASSIC PD ZONE RATING: 72%

SEE-YA!

The *PIERS* have agreed to assist us with the replacement of our laser-drive engine as we will soon be taking off. Prepare yourself for the force of the boomers by checking... *Gameplay.org*! That's the local link for Long Live the Atari 8-bit! *PIERS* games and old going wrong! Until next time... Use your 8-bit leg and prosper!

This issue's reviews have been:

DISK DS#95 - LEAGUE ORGANISER

DISK #93 - LOOK TO THE STARS

DISK #133 - CHILDRENS' SONGS

P.S. The answer to the *League Organiser* question is 1218.

with Stuart Murray as your guide

DISK FILE MANAGER

David Sargeant brings you a 'front-end' program for using DOS utilities and controlling programs

For anyone who has used an IBM-compatible Personal Computer, I am sure you have found the usual DOS prompt very unattractive. It is usually just an under-line character of a greater-than sign with no indication of how to carry on. You have to refer to the manual to find out. By using a program loosely termed a 'Front End', a PC can be made much more user-friendly.

As part of the boot process the 'Front End' program is loaded and runs automatically. A menu is displayed from which you have instant access to DOS utilities and program execution. No more typing long-winded commands at the system prompt. Now all you have to-do is choose an item from the menu. Just a few key strokes are required to perform your task.

As far as I am aware there is no 'Front End' available for an Atari Classic computer. Since such a program is very useful to the PC world, a similar utility ought to be available to make the Atari more accessible. BASIC does have the EXEC command that can be used to perform DOS tasks, so it would seem possible to write a menu program that provides these useful functions.

Disk File Manager is a straight-forward Atari BASIC program, although I have used a little machine code as DOS utilities and programs can be loaded or run with only a few key presses. Follow these steps to create the necessary files and a boot disk.

1. Type the listing and save it to disk in LIST format as `DFM.LST`. (This is your back-up copy, keep it safe).
2. Save it again in `SAM32` format as `DFM.BAS`.
3. Format your boot disk and put the DOS files on it.
4. Copy the `DFM.BAS` file onto your boot disk.
5. To get `DFM.BAS` to load and run automatically on booting your system, it is necessary to have an `autoexec` file. Use the `SETUP.COM` utility supplied with DOS 3.3 to create an `AUTOEXEC.BAT` file on your boot disk to load and run the `BASIC` program.

Use this new disk to boot your system in the normal way.

USER GUIDE

After a short introduction screen the main screen is displayed together with the main menu. From this and subsequent menus you indicate your choice by pressing the highlighted character.

BASIC - This terminates the program returning you to the normal default screen with the `READY` message. You can also end the program by pressing the `ESC/PC` key.

DIRECTORY - You are prompted to type a file specification which must comply with the normal DOS file naming rules. For example: `**` is used to indicate all files and `*.LIST` means all files with that particular extension. If you just press the `RETURN` key without typing anything, the program assumes the default specification of `*`.

The files which match the specification are then read into the directory buffer and the file and sector counts are displayed. The first block of 20 files is transferred from the buffer to the screen. If there are more than this number of files in the directory buffer, the next block can be displayed by pressing the `Space` bar.

Note that `DIRCHG` and `UTRANSH` are not available until the working directory has been read into the buffer.

FORMAT - A disk can be formatted to single or enhanced density. Press the respective key of your choice or any other key to abort.

LOAD/RUN - Choose this option to execute a file. The `LOAD/FILE` screen is displayed and the first file is highlighted. You can press the `Space` bar to display the next file block if you want. Indicate the file on which you want to work by pressing the relative cursor key to highlight it, then select from the menu.

ENTER - You are returned to the normal default screen. The commands `NEW` and `ENTER` (`to filename.txt`) are displayed and can be executed in direct mode. The cursor is placed over each command in turn. Press the `RETURN` key to reverse this or the `IRREAK` key to abort.

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```

continued

- LOAD** - Load a BASIC program into memory.
- RUN** - Load a BASIC program into memory and run it.
- SYSTEM** - You are prompted to insert your system disk. Press the **ESC/AF** key to abort or any other key to continue. If the disk drive can access the **DOS.SYS** file, it is loaded and run; otherwise, the process is aborted.
- UTILITIES** - Choose this option to access the disk utilities. The menu procedure is the same as that for **LOAD/RUN**.
- COPY** - The highlighted file is read into the input/output buffer and you are prompted to type a new name. Type this and press the **RETURN** key. The file in the buffer is written to the disk using the new name. If you just press the **RETURN** key at the prompt without typing a new file name, the program assumes that you want to copy the file to another disk, in which case you are prompted to change disks. When you have done so press the **RETURN** key and the file is written using the same name as the original. Whether you copy to the same disk or to another one, the disk directory is read again to show that it has been updated. The size of the input/output buffer is set by the variable **FSIZE** on **DISK** bytes (160 sectors). Any file greater than this limitation should not be copied using this program, although you are free to alter the size of this buffer to suit your needs.

- DELETE** - See note.
- LOCK** - See note.
- RENAME** - You are prompted to type a new name for the highlighted file. Type this and press the **RETURN** key. If you just press the **RETURN** key at the prompt without typing a new file name, the remaining routine is aborted. After the file has been examined the disk directory is read again to show the alteration.
- UNLOCK** - See note.
- VIEW** - A BASIC program saved with the **LIST** command. You are prompted to type a line number in the range 0-32767. If the number is outside this range (i.e. not an acceptable line number), you are returned to the menu. If you just press the **RETURN** key at the prompt without typing a line number, the program is listed from the beginning. Otherwise, the program listing is started from the line number that you have indicated. NOTE: when a file has been listed, unloaded or deleted the directory buffer and the screen are updated to show these various changes.
- WRITE DOS** - You are prompted to press Y to write the **DOS.SYS** file to the disk on any other key is abort. Note that the **DOS.SYS** file is NOT written as well. Use **COPY** from the utilities menu to copy an existing **DOS.SYS** file to your new disk.

DISK FILE MANAGER

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DA PRG: PRG 99 TO DISK:AMERIC99.DAT
DA PRG: PRG 100 TO DISK:AMERIC100.DAT
    
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PROGRAM VARIABLES

Strings

FILES Each entry in the disk directory to read into FILEB prior to being stored in DIRCDD:PRG

DIRECTORY Disk directory

DIRSFLD:R File specifications for directory access

FILESPEC File specifications for disk access

STATS Status of file (locked, unaltered or deleted)

TEMP Temporary storage

FILENAME New name for copy or extension control

WCUR Machine code to highlight a file

MCUR Machine code for disk to output

BUFFER Input/output buffer

MCVLEN Area data to read here prior to being printed in the text window

LINER Starting line number for viewing a program

FLINER Program line number in buffer

Arrays

OFFSET File offsets into DIRECTORY

BLADDR Screen addresses for file highlighting

TEXTWINDOW Text window addresses for screen

Numerics

BLEN Size of buffer used for file input/output

INPTR Address of input/output buffer

BYTER Number of bytes passed in / received from input/output routine

RAMTOP Top of RAM - stored to reserve space for the screen, the top line and the viewing screen

SCRML0 Low byte of address of top of screen RAM

SCRMLH High byte of same

VIEWN0H High byte of viewing screen RAM

LIST Display list address

BL0 Low byte of same

BLH High byte of same

MINDR High byte of address where data for this screen is stored

PAGE Page counter for the screen

TOPLINE High byte of the address - where data for the top line is stored

TRINDEX Indicates which screen to screen (range 0-9)

COL Current column position

ROW Current row position

KCT Value of keyboard input

NUMFILES Number of files loaded into DIRECTORY

LNCR Number of sectors to use

USED Number of sectors not to use

FILEARR Indicates which block of files to access in the program. (1 or 32) The maximum number of files in the buffer is 64 and they are accessed in blocks of 32

FILE File counter

FLASH

Loop-counter for flashing cursor

DIR Direction of highlight. -1 = up 0 = no movement 1 = down

LINR Starting line number stored from LINR for comparison

FLINR Program line number to be compared

ADDR Current address being processed

REPFR Flag for the key repeat character value

UPDATR Initially set to 0 - set to 1 or 2 after a disk operation depending on type performed. 1=unread directory 2=update screen

CHARCODE ADDR of prompt character

Loop and string position counter of loop counter

A Data read here prior to being stored in a machine code string

F Formatting

X Character used to END routine

ERROR Error number

Program flags

to all cases 0 = off 1 = on

DIRR Disk directory read into DIRCDD:TOPR

HIGHLIGHT Highlight file

CHARFLAT Character to be printed to prompt area for keyboard input

NUMACTR Matching line found in the program buffer

ESC Escape key pressed

THE ACCESSORY SHOP

ISSUE 66

CLASSIC ROMS

ACE OF ACES



ROM
CARTRIDGE

At last a good flight simulator once again although not a simple flight sim, this excellent one has a game feel of its own and some of flying that you would expect from a flight simulator. One of Aces puts you in the cockpit of a Mustang, the excellent RAF fighter (which has also done the amazing RAF job of flying the Mustang in WW2). It's a white-knuckle aerial combat situation with the gun-sounding pressure of enemy confrontation. Four missions to challenge you - great test wings, which you get, make your way to attack from the rear and then the front.

OUR PRICE £7.95

AVAILABLE AGAIN!

A lot of the games that long time owners regard as the original classics have been unavailable for some time but we are delighted to be able to bring you, once again, a selection of these classic cartridges - including some of the best games ever for your Atari. If these games are not in your collection, your collection is not complete. And if you are a new owner there are guaranteed winners - grab a couple today!

RESCUE ON FRACTULAS



ROM
CARTRIDGE

One of the all time classics available again. You need to rescue the Elliptical (quite stranded on the planet Fractalas) by being your rescue crew in through the mountains and completing the tricky landing. You don't have long as the pilots will see you in the gaudy atmosphere. Designed by George Lucas, of Star Wars fame, and regarded the turning point of home computer game design. Fast flight simulator, fast arcade shoot, lovely graphics, totally compelling.

OUR PRICE £7.95

LODE RUNNER



ROM
CARTRIDGE

Back again, but only for a short time. One of the most tightly coded and challenging platform games of all time that let's you play forever! Uniquely for a ROM game, Lode Runner allows you to create your own games and levels. If you have a disk drive, with its built in editor, you can jump and move just any through the possibilities in its challenging levels before you start to design your own. Sure to be in great demand but we only have a limited stock.

OUR PRICE £7.95

TENNIS

Forehands and backhands, driving approach shots, angled volleys, overhead smashes and tricky lobs - you've got all the strokes in Tennis Plus a mixed serve that goes where you want it. Surely the action packed game that challenged you to play at your best. Play single against the computer or another player or double against another player. Either way the action is fast and furious.

ROM CARTRIDGE
OUR PRICE £6.95

POLE POSITION

Everyone has heard of Pole Position, the racing game that inspired almost every racing game since. It may be the original and some other games may have added features but Pole Position still retains its challenge after many years. One of those games that has clearly the right balance of game play and graphics to make it a classic that will last forever. If it is not in your collection, make yourself now while it is still available.

ROM CARTRIDGE
OUR PRICE £5.00

MILLIPEDE

Simply crawl, keep the jumping spiders, buzzing bees, bouncing beetles, mosquitoes, dragonflies, mosquitoes and wasps from invading your garden path - and you've got to beat the best to get rid of them! But watch out! The millipede are the most insidious insects of all! Fast action graphics and real bug sounds make this game just like the whole world of them. Great for TRAM-BALL.

ROM CARTRIDGE
OUR PRICE £5.95

JOUST

In days of yore when knights were fools - they never saw anything like Joust! You joust your helmeted horse (and your lance) to the battle with the evil Buzzard Riders in deep against! Place yourself in the right of you, then step to the left - learn to flex as you may! It's an easy to learn game. All the thrills of the arcade game for one or two players.

ROM CARTRIDGE
OUR PRICE £6.95

BASKETBALL

The original basketball game, shot back to back but, like the NBA version, is full of fun. You can double, shoot, pass, block, steal and even steal shots. This classic game features a full range of moves and a realistic feel. It's an NBA classic, but the early game, simple graphics but most addictive play and a lot of fun!

ROM CARTRIDGE
OUR PRICE JUST £4.00!

**ALL ITEMS ON THIS PAGE ARE
NEWLY FEATURED THIS ISSUE -
ALSO NEW ARE OGRE AND
BATTALION COMMANDER ON
DISK - SEE OVERLEAF**

More new software

OGRE



Challenge the Ogre, a cybernetic super-tank programmed to easily annihilate anything in its path. Set on 21st century battlefields, the game of strategy is for either you or the computer's programmed forces with an environmental terrain, speed controls, lock-ons and shields that are actively deployed to defend a command post. The composition and placement of units is critical in destroying the Ogre which has multiple weapon systems and high armor plating. Ogre is an adaptation of a well-regarded board game and will transport you all strategy fans. A game option is included for leading events.

DISK
ONLY

OUR PRICE £6.95

BATTALION COMMANDER



NOW ON DISK!

An exciting and free tactical game with you as Battalion Commander in charge of an entire armored Battalion. Choose from five different scenarios from a leading mission against a Soviet tank battalion to tough assignments against the Chinese. You can adjust the tactical strategies of your forces and the composition and choice from 35 different terrain maps and five different scenarios. Enough variety to last for years!

DISK

OUR PRICE £5.95

DRUID



Another world in which, as Lord of the Forest Druids, you wander through the Jungles of Azeo, mazes with your mighty Staffs for your staffs as a wizard to destroy the four demon princes, as you drive them into the Jungles you will find chaotic competing spells of formidable power to aid you and Possessions of Life which will heal and revitalize you. Excellent graphics and superb gameplay have made this one of the best arcade adventures on the Atari.

DISK
ONLY

OUR PRICE £3.95

FOOD FIGHT



Charley loves to eat. One day he visits the carnival and finds strength for the Food Fight contest. Help Charley turn sounds of fabulous food at disorganized chefs, popcorn, bananas, tomatoes, watermelon and his fingers almost as you fry and make the chefs sweat. You are after the giant ice cream cone that melts if you make it across the screen. Enjoy the fight ... and the mess!

ROM

OUR PRICE £7.95

CENTIPEDE

Imagine you live in an enchanted mushroom patch filled with luscious bugs. Get those Centipedes with your long blaster. Watch out for the spiders, bees and scorpions, they all have magical powers - and they are after you! 1 or 2 players

ROM CARTRIDGE
OUR PRICE £5.00

ASTEROIDS

Asteroids surround you! Use your photon cannon to deflect your spaceship from a field of asteroids. These enemy asteroids become progressively smaller, quicker and more dangerous. Watch out for enemy saucers too! For 1 or 2 players.

ROM CARTRIDGE
OUR PRICE £5.00

ARCHON

A unique battle combining elements of fantasy with the strategy of the chessboard. You now represent the forces of good and evil and when they meet, capture the enemy figures. The Board turns into life with wizards, goblins and sorceresses. They cast spells, throw flames, move like an chess officer's chess and chessboards. You can play the light or the dark either solo or with another player. A really unique game.

ROM CARTRIDGE
OUR PRICE £7.95

HARDBALL

All the thrills of American football can be yours at a quarter price, even in the bullpen. Set behind home plate, along the left field line, down the right field line or join the manager in the dugout. Look over the pitcher's shoulder as he throws the next ball. The control of the action of the national, national and national are you try and think your way to the top of the league. An exciting game for one or two players.

ROM CARTRIDGE
OUR PRICE £7.95

PLASTRON

Take your player to a small land of plastic cut to steel foot force from the intense competition in the galaxy. You must guide your shuttle craft along the surface of the planet Plastron to gather as much fuel as you can from the heavily defended moon areas and then rendezvous with the supply base at the end of each level. Plastron got a great review in Star Trek Line and has some excellent graphics.

CASSETTE ONLY OUR PRICE £2.95

BATTLECRUISER

If you are a strategist, who has fought hard before then you may need to learn their skills to be tested all state. Battlecruiser gives you the opportunity to receive real assignments during World War II between Great Britain and Germany in the North Sea's surface battles between British Forces and German U-boats. There are 16 scenarios of ship to control in seven stages of surface battles. An excellent and unique game. Details of all of the ships and guides you through every aspect of play.

DISK ONLY OUR PRICE £7.95

US FOOTBALL



American Football is a big craze in this country and you can now play at home. Outsmart the defense, pass with amazing accuracy, run with speed and agility, make tackles, select offensive and defensive plays and more. You can take on the computer in a practice game or challenge a friend in a dramatic video level game of your own in a packed stadium. All the thrills of the gridiron.

ROM CARTRIDGE OUR PRICE £7.95

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TWILIGHT WORLD

Enter the Twilight World. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



MR DIG

Mr Dig is a truly exciting and challenging game. It is a test of concentration and a genuine test of concentration. It is a truly exciting and challenging game. A genuine test of concentration.



SIDEWINDER

Experience the excitement of a truly exciting and challenging game. It is a test of concentration and a genuine test of concentration. It is a truly exciting and challenging game. A genuine test of concentration.



AZTEC CHALLENGE

Enter the Aztec Challenge. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



ON CUE

Enter the On Cue. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



MAD JAX

Enter the Mad Jax. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



FRUIT MACHINE SIMULATOR

Enter the Fruit Machine Simulator. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



FOOTBALL MANAGER

Enter the Football Manager. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



FOGOTRON

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MICRO RHYTHM

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STRATOSPHERE

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DAWN RAIDER

Enter the Dawn Raider. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



LEAGUE CHALLENGE

Enter the League Challenge. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



MOLECULE MAN

Enter the Molecule Man. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



CRYSTAL RAIDER

Enter the Crystal Raider. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



DARTS

Enter the Darts. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



SPACE WARS

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FENGOON

Enter the Fengoon. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



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Enter the Phantom. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



LAS VEGAS CASINO

Enter the Las Vegas Casino. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.



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Enter the BMX Simulator. Experience the latest in multi-media audio and video systems. Take your way through both the audio and video systems. This is a truly exciting and challenging game. A genuine test of concentration.

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ROCKET REPAIR MAN



Buried somewhere in the underground maze of caverns of the planet Lambda are essential components of your Astroship. Get into your space suit, strap on your Jet Pack and begin the most bewildering obstacle marathon. You must collect pieces of a rocket in which you can escape but beware the dreaded Neutron Cannon and the Quark Phenomena, out to stop you. Another real game from Real Life.

DISK
ONLY

OUR PRICE £3.95

SILICON DREAMS



Taking the role of Alan Kinsberley you are a leading participant in the colonization of Mars, a planet prepared for human habitation by an advance group of intelligent robots who battle with the natives and fight a desperate battle to die heavily structured and stable environment you must make your mark in the twenty first century. You can choose to play from a first person or a top-down perspective. MONTEZUMA, 100 Levels To Go! It's not THE WORKS IN PARADISE from Level 1, it's the next best of adventure.

DISK OR
CASSETTE

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NEW YORK CITY



Welcome to The Big Apple. This horrid jungle of steel, concrete and glass battles with fascinating nights and more than its share of danger. From the plastic grandeur of Central Park, there is no city in the world like New York, and here are you about to find that out in a thrilling contest you only have a limited time to see all the sights, but New York City has a little more excitement, a little more danger to show than a mere sightseeing trip to the zoo!

DISK
ONLY

OUR PRICE £3.95

NIGHT MISSION PINBALL



The ultimate arcade simulation with this computer, screen simulation, targets, score rollovers, low barriers and much more. In reality you have to insert a quarter before you can play, but that is the way you even fit the computer! Night Mission Pinball offers two different modes of play for 1, 2 or 4 players. Fully user adjustable via controls after you've tested your skills custom games or challenge any player made to your own specifications. Beautifully packaged and with an excellent manual, Night Mission Pinball will save you money by keeping you away from the arcade!

DISK
ONLY

OUR PRICE £7.95

GAUNTLET THE DEEPER DUNGEONS

If you have the original Gauntlet you know that you will have fun. This time you will have fun with the deeper dungeons. Over 1000 more dungeons are here for you to explore. This is the way to make you content in Gauntlet and play for many more hours or days! This is a disk only, only and requires the original Gauntlet disk.

DISK ONLY
OUR PRICE JUST £2.95

RAMPAGE

It's rough and tumble all the way as you control three incredibly deadly dinosaurs which bear a remarkable resemblance to King Kong. Destroy and demolish your way through an oasis of destruction in Chicago, New York and San Francisco. You have 100 days of destruction in 38 different cities. Time for some revenge!

DISK ONLY
OUR PRICE £3.95

THE E FACTOR

The E Factor represents the amount of time the energy sources on the planets in our galaxy will last. Many planets need emergency fuel supplies delivered if they are to survive. You must get the message, on course and guide your ship through the quantum field with obstacles such as space mines, alien fighters and exploding asteroids. Can you complete a mission and deliver your energy source before another planet dies on your watch?

DISK ONLY
OUR PRICE £3.95

CROSSFIRE

You are alone in a deserted city surrounded by aliens who shoot lasers from every direction. Your movements are confined but you haven't given up. If you are to survive you'll have to concentrate on where the shots are coming from otherwise you'll be caught in the CROSSFIRE. One of those fairly simple yet highly addictive games.

CASSETTE ONLY
OUR PRICE £2.95

ATARI USER TOOLKIT

New programs are written in this disk so you take advantage of your existing disk normally the disks of disk drive users. The Toolkit offers several commands to those such as Delete a block of files, Rename programs, Change variable names, List contents, Remove all FILES, Control files to be deleted, Run files to be deleted, Compile the printer. Just load the tape and all these additional commands are ready to use with your next program.

CASSETTE ONLY OUR PRICE £2.95

AIR RESCUE

Focus is shattered as the military Junta moves against the people uprising. Civil war rages forming separate fiefdoms and leading to escape the guns, bombs and missiles of the opposing forces. There is only one way to get them out ... Air Rescue! A shocking arcade game based on the classic Shogun! It's your chance to rescue your fellow countrymen but don't get shot down.

CASSETTE ONLY OUR PRICE £2.95

THE LIVING DAYLIGHTS

Control James Bond through tight and intense levels from Operation in Afghanistan and you will discover the true meaning of the title you so rightly and enjoyful and exciting every night and day. This is an original first edition. International game dealer and manufacturer, Arcade, has published several other top quality, the second edition of the game. You may still be here with the beautiful Czech artist Riva, but you can trust her!

DISK ONLY OUR PRICE £3.95

MONTEZUMA'S REVENGE

Wherever there is a mind-bending mystery, the living adventure and action action. Montezuma has to be in the form. In Montezuma's Revenge he gets more than he bargained for as you help him through his danger when Montezuma in the auto emperor's throne. The nation's greatest treasure. Finding the necessary keys, switches, secrets and answers to the way back to the city into the most deadly and exciting and thrilling world. Discovering the secrets, bridges and real world as the player starts!

DISK ONLY OUR PRICE £3.95

Some new ... some old ...

THE ETHERAL DAGGER



A highly recommended follow up to Wizard's Crown, this fully graphics based fantasy role playing game will keep you enthralled as you battle through the wilderness in search of the enchanted weapons that alone can save the folk of Middle World. Full of magic, mystery and intrigue this is one of the best adventures on the Main.

DISK
ONLY

OUR PRICE £6.95

BATTALION COMMANDER



An exciting real-time tactical game with you as lieutenant colonel in charge of an entire armoured battalion. Choose from five different scenarios from a training exercise against a Soviet tank battalion to tough assignments against the Chinese. You can enjoy the tactical strengths of your forces and the opportunities and choices from 40 different battle maps and five different scenarios. Enough variety to last for years!

CASSETTE
ONLY

OUR PRICE £4.95

SCOOTER

Scouters needs your help to get through the tight levels of this environmental building, invasive traps and unusual gimmicks abound. Great sounds have been heard from the new Scouting and the Castles of the World are sounding. What could it be? It's your job to move Scooter up through the tight levels to find the sound. But don't think it's going to be an easy task!

DISK ONLY
OUR PRICE £3.95

LASER HAWK

Your Laser Hawk helicopter is ready to go, but are you? To destroy the five command centres of the evil Irons, your ship will have to outfly or blast some 2500000 defence systems which include air cannons, smart missiles, falling mortars, heat rays and high speed bombers. But absorbing graphics and unbelievable music either make this game a winner!

DISK ONLY
OUR PRICE £3.95

THE COUNT

One of Scott Adams' famous graphics adventures in which you struggle in an antique forest land in a dark, claustrophobic world. It even looks like you are going to meet a certain toothy Transylvanian Count who goes by the name of ... Doctor! Will you escape or become one of the living dead? An adventure with full graphics, moderate level for ages 12 to adult.

DISK ONLY
OUR PRICE JUST £2.95!

BALLBLAZER

This year is 2007 and you are the champion in the most competitive and fun two most popular sport in the universe. Jump in, everybody! This fast-paced action game contains a blend of home rule skills against a selection of Chicks. Either way, you're in for the match of the century! Ballblazer graphics and skill covers action have made this one of the best choices.

DISK ONLY
OUR PRICE £3.95

KNOCKOUT BOXING

Challenges for the heavyweight champion of the World by forcing your way past nine progressively to become world champion. You will need speed and skill to defeat teny screaming knockout punches, some scoring more jobs or deadly upper cuts. You must concentrate to keep your guard up as the referee will warn or counting you out.

CASSETTE ONLY
OUR PRICE £3.95

JUNO FIRST

It's hot and hotlines again when you are threatened from Juno's daily, white melting of the same name. Systems of ship work will attack from all sides and you must be quick to deal with deadly and evil your enemies. If you feel that you are going to die then you must take the fast route and wrap your through a labyrinthine of color. Don't let weapons this fast about you can still avoid in any other game format.

DISK ONLY
OUR PRICE £3.95

TRIVIAL PURSUIT

The classic board game translated to the most fun desktop computer format. Now you can answer questions, pronounce words, guess and play with real people. It's your turn to play or you can play on your own. Over 1000 questions and all the convenience of the game board are all by the computer. Fun. Trivia has never been so much fun and has never been available before in this price.

DISK ONLY
NOW ONLY £2.95!

PANZER GRENADIERS

In this exciting military strategy and tactic war simulator for a number of the most advanced military software in the Personal Computer. You have your tanks, your infantry, your armor and your planes and your jets and the most advanced and best graphics available in this price. Challenge you with the most sophisticated of military strategy. It's about to be a family challenge you will be sure to remember an instant.

DISK ONLY
OUR PRICE £7.95

DECISION IN THE DESERT

Take command of the Battle of El Alamein. You can lead either side in an exciting simulation from the creation of the desert night.

CASSETTE
OUR PRICE £5.95

MIG ALLEY ACE

An aerial combat simulation set in Soviet style. It's a fast paced in communication, different skill levels and much more.

DISK
OUR PRICE £6.95

COLOSSUS CHESS 4

Chess is one of the most often programs of all. The writers of Chess.com. We combine it all together, but Chess is not Chess. This is a new chess simulation particularly for advanced players.

CASSETTE ONLY
OUR PRICE £3.95

EXTRA CASSETTES

WE HAVE A NUMBER OF OTHER CASSETTES BUT ONLY IN SMALL QUANTITIES - PLEASE PHONE

BLUE MAX

Everyone must have heard of this World War Two 4-4 flying game. We no longer have the full copyright but this version can be yours on disk and cassette.

DISK ONLY
OUR PRICE £2.95

FS2 SCENERY DISKS

WE HAVE A LIMITED NUMBER OF SCENERY DISKS IN STOCK AT £8.95 EACH - PLEASE PHONE

MAKE A COMMITMENT BUY SOMETHING EXTRA

Still Available

GAMES

ZAXXON

One of the all-time classics for the Atari. Zaxxon set new standards with its smooth 3-dimensional battle field and great graphics.

DISK/CASS OUR PRICE £2.95

TAIL OF BETA LYRAE

Our A-2 of Atari Software series says "The ultimate 'space' game with superb graphics and music." A great horizontal scroller.

CASS OUR PRICE JUST 95p

FIGHT NIGHT

Fight Night brings you all the thrills of the boxing ring as you take the most brutal fighters ever in five realistic battles. 12 players.

ROM OUR PRICE £7.95

SPEED HAWK

One of Atari's top games for the 8-bit can now be yours at budget price. A smooth scrolling arcade game in which you must defend the tiny earth of your solar system from pirates.

CASS OUR PRICE £2.95

PANZER GRENADIER

A wargame of German armoured victory on the Eastern Front. Five historical situations, and levels, superb control, graphics.

DISK OUR PRICE £7.95

NIBBLER

Slither through an alien land Nibbler finds himself in an ever-widening world of constant change. As time goes on his body grows longer and he gets turning into himself. Can he survive?

DISK OUR PRICE £1.95

JINXTER

An adventure from Magister. Bewildering, the least that you'll find in this adventure design Pleasure. 1280 x 2048 lines.

DISK OUR PRICE £7.95



LANCELOT

Lancelot retells the story of knights and the knights of the Round Table in a three part adventure spanning the complete saga of the quest for the Holy Grail. Superbly researched and superbly written for the real adventure in full atmosphere and highly interactive.

DISK OR CASSETTE
OUR PRICE £5.95

ZORK 1

One of the most famous adventures of all time. Classic fantasy in the original text and packaging. A real bargain.

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US FOOTBALL

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MAKING MUSIC WITH YOUR ATARI

BACK TO BASICS

After completing the Making Music article for the last issue I suddenly felt guilty about how much I now assume the reader already knows about MIDI and electronic music making. There must be many people just starting to use, or considering using, their Atari computer as a music production tool, who need to learn about the subject from scratch. It's exactly five years (yes, really!) since I wrote the original MIDI's Guide series of articles about MIDI as Mike Major, I've decided it's time we went back to basics. Over the next few issues I intend to look at MIDI again, starting with the basic concepts then moving on to consider how you can begin using your computer to help fulfill your musical aspirations.

Let's start with considering WHY you'd want to use a computer for music making. After all, musicians have managed perfectly well for centuries without one, so why start now? Well, the computer has evolved into a marvellous general purpose tool for the musician, so why not use one if it can help? It can provide musical education, help compose new music, provide assistance with musical arrangements, generate accompaniments, print out sheet music, and even record and playback complete musical works.

Most of this would be impossible without the parallel evolution of electronic musical instruments such as MIDI equipped synthesizers and their domestic offspring the "portable keyboard" (aka "home keyboard"), as produced by Yamaha and Casio. The synergy resulting from the combination of computers, electronic instruments, and MIDI caused a revolution in music making that is still in progress today. Unfortunately, Atari were probably the catalyst that caused the explosion in MIDI's

popularity. They fitted their computers with the hitherto missing, essential link between the computer and electronic instruments. I'm talking about the ST's MIDI ports, of course.

MIDI'S ROOTS

So, what is this MIDI thing and why is it so important? To answer this let's look at where MIDI came from, and start learning some of its greater jargon as we go. MIDI is an acronym for Musical Instrument Digital Interface, and it was originally designed in the early 1980's as a standard way of connecting together electronic musical instruments from different manufacturers, so you could control and play the sounds generated by one from the keyboard of another - as long as they were both MIDI equipped.

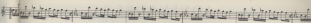
The "Digital" part of the name refers to the method used to send the control commands between instruments. They take the form of electrical pulses, each of which can be considered a binary digit, or "bit", with a value of zero or one. For transmission and storage purposes MIDI packages these pulses together in groups of eight to form a "byte" - a master stroke on the part of MIDI's designers, as this is one of the basic units of data storage used by computers.

The MIDI standard defines the pulse/bit patterns generated and transmitted when an instrument performs a given action, and hence the bit patterns in the byte used to represent it. Similarly it specifies the effect that value has on an instrument receiving it. In other words it defines the language for "performance" used by the instruments to communicate with each other.

Communication between two MIDI instruments takes the form of MIDI "messages", and each message usually consists of one or more, or three bytes depending on the type. The first byte is usually a "status byte", which tells the receiving instrument what action to perform. The rest are "data bytes", providing more detailed information about the action.

To illustrate the principle, let's consider what happens when you press a key on a MIDI keyboard to play a note. The instrument generates a MIDI message consisting of a status byte and two data bytes in this case. The status byte contains a value denoting it as a "Note On" i.e. start playing a note. The first data byte specifies which note to play i.e. its pitch, and the second one how fast the key was pressed (i.e. its "velocity", which can be interpreted as how loud the note should be played). The three bytes are then transmitted out through a MIDI port on the keyboard, along a MIDI cable which is plugged into it, and into a MIDI port on an instrument on the other end of the cable, which then receives and acts upon them. It act up correctly it immediately begins playing the specified note using its own sound generating circuitry at the specified volume. When you release the key, a "Note Off" command is transmitted in similar fashion and the attached instrument stops playing the note. Simple really, isn't it? This

**John S Davison's
regular guide to
music making**



is just one type of MIDI instrument, there are lots of others as we'll see later.

THE INTERFACE

The "transmit" and "receive" actions reflect the "intake/output" part of MIDI. An interface is simply a boundary between two things. In this case two electronic musical instruments. It has two main properties, namely the language used for communication across the interface (as discussed above), and the physical characteristics of the communication link, and the speed/location of plugs, sockets, and cables used for the connection.

MIDI uses a serial link. In other words, the individual bits making up each byte in a MIDI message are sent between instruments one after the other as a stream of bits via a single wire. The receiving instrument reassembles the bit stream back into bytes prior to interpreting them as MIDI messages. This method was chosen as it costs much less to implement and is simpler to use than a parallel transmission system, where all eight bits would be transmitted simultaneously using eight separate wires. The only potential snag is the speed of the link - it has to be fast enough to handle the data transfer without perceptible delay. The MIDI Standard requires that data will be transferred at a rate of 31,250 bits per second, which is more than adequate for most uses.

Originally there was a choice of plug and socket types used for connecting instruments, but the industry pretty quickly standardized on just one - the infamous "five-pin DIN" series of connectors as found in many hi-fi systems. For full MIDI facilities each instrument needs three DIN sockets, usually labelled as MIDI IN, for receiving MIDI messages; MIDI OUT, for outgoing messages; and MIDI THRU, for onward transmission of messages received via MIDI IN.

Connection between instruments is achieved using a MIDI cable, which has a five-pin DIN plug on each end. Only three of the pins are used in MIDI applications (the middle three), so it's easier to use ordinary hi-fi DIN cables for MIDI as the pin connections may be unreliable and cause problems. It's safer to buy proper MIDI cables from your local musical instrument shop.

The simplest MIDI connection is between a pair of instruments, allowing the sounds of instrument B to be played from the keyboard of instrument A. In this case you'd connect a MIDI cable from the MIDI OUT of A to the MIDI IN of B - and were playing. Transmitters is ONE WAY ONLY, so if you also want to receive the process and play A's sounds from B's keyboard (without having to mess around reconnecting the cables, you'll need another one-way connection, this time from B's MIDI OUT to A's MIDI IN.

That sounds for B's and OUT's, but what about MIDI THRU? Its function is to allow you to connect additional instruments into your system. Continuing our example above you'd connect a cable between the THRU socket of instrument B and the IN socket of instrument C - a process known as "daisy-chaining". Then any MIDI messages arriving at B's IN socket would also get forwarded into its THRU to C's IN - and may be followed by C as well as B. So, from A's keyboard you can play both B's and C's sounds. This process can be repeated with additional instruments, and all their sounds would be accessible from A's keyboard.

Additional instruments, and all their sounds would be accessible from A's keyboard.

MIDI CHANNELS

In the above scenario all the instruments would play at the same time, and we might not want that. Wouldn't it be nice if we could "mix" MIDI messages so we could play selected notes on a specific instrument? Well, we can - using MIDI's "channel" concept.

MIDI has 16 transmit/receive channels. Essentially these are just number tags added into the status bytes of MIDI messages. A MIDI instrument can be set to insert a given channel number into each status byte it generates, and in this set to transmit on that MIDI channel. Instruments may also be set to receive and act only upon messages containing a given channel number, and to totally ignore all others. In the example above if instrument A was set to transmit on channel 1, B set to receive on channel 2, and C to receive on channel 3, then when A's keyboard is played all A's sounds would be heard (assuming A always sounds when its keys are pressed). B and C would ignore the messages, as they're all tagged for channel 1. If A's transmit channel is then changed to channel 2, then you'd hear A's and B's sounds. If it's changed to channel 3, you'd hear A's and C's sounds. Get the idea?

It's possible to transmit a stream of messages on different channels, and even though you can use up to 16 channels all the MIDI data still goes down a single cable. The message filtering is handled electronically by each instrument, allowing each one to be played and controlled selectively. This is one of MIDI's cleverest features.

I've actually simplified the description above, as some instruments can operate in any of several MIDI "modes" which affect the number of channels they receive on. It's an unnecessary complication for now, so I'll come back to it in the next issue when we look more closely at MIDI instruments.

THE COMPUTER CONNECTION

"We've already noted that MIDI messages use a similar form of data representation to that used by computers. Why don't we fit MIDI sockets to a computer and convert it into a MIDI system? We could then run software on it to read and record MIDI messages from an attached keyboard, store them, and transmit them back later to the computer could "play" the attached instruments. There were Alan's thoughts when designing the original DT, which was launched with MIDI ports fitted as standard, and have remained a unique feature of Akai computers ever since.

An explosion of MIDI equipped electronic music hardware and music related software followed which brought undreamed of creative possibilities to the world's musicians. In fact, it went further than this, because it soon became apparent that you didn't need to be able to play an instrument in the traditional sense to make exciting music using these new facilities. That's another topic for the later discussion.

That's all for now. In the next issue we'll have a closer look at the different MIDI instruments available, and how MIDI hardware and software uses them.

GRANDDAD

AND THE SEARCH FOR THE SANDWICHES

Early last year the Museum's entire was treated to a wonderful by business, all-ages, graphic adventure game called *Granddad and The Search for the Holy Vest* in which an unlikely hero wandered around his house looking for his vest. Now we have *Granddad 2* and another treat.

Boot up the disk and... in classic style, the message to display "ALSO WHEN YOU THOUGHT IT WAS SAFE TO WEAR YOUR STINKY VEST... BEH BACK... BUT THIS TIME BEH MESSER... TONDBORN... SOBELLBORN... HE IS GRANDDAD... AND HE IS A MESSERABLE GUY!" And so the tone of humor is set, and if this tickles your fancy (and you can look forward to some wonderful cut-scenes) throughout the game.

After the intro, Granddad gets out of his wheelchair, his trousers fall down, and he falls flat on his face. Unperturbed the elderly oldster has mastered roller in his underpants, and proceeds to the park. Somewhere in the park he has lost his sandwiches and he needs to find them as he is getting parched. With your help, perhaps he will. The sandwiches are actually in Parkland and you won't get in without registering, but there is a great deal of fun to be had in the park first

with quite a few locations to explore and people to talk to before you need to register.

Granddad first appears outside the toilets and, soon enough, you can Granddad into the Clinic, and the Ladies, to visit the Cuddles on the wall! A great opportunity for you to discover what's in the toilet you are not normally allowed into! With

this dubious pleasure over, Granddad can soon off to find people to talk to. Everyone you find will be ready to Granddad, but Granddad can fend his own. As often as not, he's the one to start the abuse! Almost every exchange is humorous with plenty of Monty Python thrown in as when Granddad meets a Foreign tourist and says "How could my buttocks? The foreign tourist presents one of the first problems in his case—Granddad to take his picture. Doing so gains you your first points but then going for camera back proves to be a rather tricky problem. The tourist turns out to be a nasty piece of work and will stab you when you give the camera back, causing the game to be over, if you leave the scene with the camera. However, the police will be called and you will find yourself down the local rick with the game over.

Thank! There are plenty of other ways to die but instead of having to start over again, the clock is just wound back a few moments and you can play the scene again. Wouldn't you just love it if all adventures were like that?

If you do manage to get away from you can have a nice conversation with the local policeman too, of course, being Granddad you are

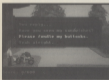


likely to make some silly remark like "Yes, there's a smell of park around here!" Further along you can meet a fisherman who threatens to run his rod down your throat and a tramp who's too drunk to really care. Granddad treats them all the same and doesn't make it easy to find someone to help him in his quest for those sandwiches.

Control is entirely by joystick with no mouse actions, which can increase the difficulty in several situations as you can't always do what you might want. Conversations are all by multiple choice selection with appropriate answers but once you have asked, a suitable alternative response is given and then you talk to the same person. Games can be saved and loaded so you can enjoy an where you left off, if life in the park gets too frustrating.

The graphics are top class with every scene drawn to perfection, and with several effects ranging from the engine of Granddad's trike, to birds chirping, the click of a camera and more. Granddad's trike glides smoothly about and the whole game conveys a truly professional approach. This is one of the few shareware releases where you will not feel badly having to register to see the rest of the game.

Without doubt *Granddad 2* is one of the best shareware releases of all time and one which gives you plenty of scope before you need to register. If only they were all as good as this.



GRANDDAD 2 is available as shareware from **PAGE 6** on a two disk set for just **£2.99 incl. £8** for members of the **PAGE 6 ST CLUB**. The registration fee is **£8** and worth every penny!

PINBALL MAGIC

Pinball, love the facts, is coming back in favour of the space invaders machine. Now it's for the ST/NTC in the guise of Pinball Magic from the re-release of the Loriciels game on the MSX budget label. Basically you have 12 tables that have to be completed by collecting the letters in the right order and their typing, and I stress the word typing, to go through the rest at the top of the screen in the next level. The game is fast and uses the keys for the flippers and ball release. The instructions for the games keys are a little wrong but a little experimentation will help you find them. The game allows you to play a few plays game by alternating at the keyboard.

The special effects are of the normal beep, beep and warble that you would find on the average pinball machine. There aren't any of those flashy screens that you get when you play the real machines that are shown. The graphics on the back of the box for the ST make it look like it might have Commodore 64 graphics but you are consoled by the

real graphics which are very close to the Amiga's. The graphics are important in that they add real fun to the gameplay and make it more interesting. The graphics achieve this in a certain extent but

some of the colour combinations would make my next machine lecture cringe! Game play is not quite like that of Pinball Fantasies on other machines but this again this one did come and believe that game so in that respect it very good. Play is basic and on only one screen, but the ball can be released at varying speeds to give you more control over it. On the subject of control there's a bug in the program that means that the ball gets stuck between two bounce pads on the second level and just stays there bouncing back and forwards until you give your score for overruns and you fill the table, hardly the high scores but totally boring to play.

This game should keep you going for a



week or two but not for that long unless you're a total pinball junkie but then you probably won't have time for this game, you you'll be too busy playing the real thing! One thing that is missing is a level select or save game feature so that you could build on these high scores. There is a level select of sorts but it's a bit klunky and doesn't always work properly.

This offering has a nice game in there somewhere but it's feeling it that takes patience. If you do show you'll enjoy it but if you find keyboard a small metal ball around a table mind numbingly boring then avoid this like the plague.

The average game player will find that this game will keep them happy for the next month or so. Definitely worth a look.

THOMAS THE TANK 2

With little new software being released now aimed at younger players this game based on such a well known character will be more than welcome for those whose family share the ST.

Unlike previous programs based on well-known characters, this is not an educational offering but a straight race game that can be played by one player against the computer or by two players head to head. It is, perhaps, too difficult for the youngest of players but should appeal to ages from 5 to 8 right up to those just reaching their teens.

The aim is to race against your opponent along a track to see which has the most obstacles and dead-end branch lines, in an attempt to beat your opponent and set a new course record. There are four courses to choose from including the Frosty Run and a Woodland Glade and you can choose any of the well known engines as well as Bertie the Bus. The Fat Controller ensures you start and the race is on. As this is a more aggres-

sive track, as well as your opponent, the temptation is to shoot off at high speed but you'll soon run into trouble. As well as these dead ends you must stop at signals and avoid other trains which tend to have a habit of reversing along the line. Jumping a signal or crashing will have you standing at it for several seconds as a punishment as you watch the other train continue on its journey. Failing to stop at a obstacle on the track will have the same effect.

The action takes place on a split screen demanding that you keep an eye on your opponent's progress as well as your own, and you must also keep an eye on the fuel gauge. Facing hard will soon have you running out of water, or out of petrol if you are Bertie, and you must find a water tower or garage to stop and refuel. If you don't you won't get far.

The graphics, from the opening sequence of a book showing the story and credits right through to the race tracks and the second score tables, are excellent and there is a choice of continuous

Title: Pinball Magic
Publisher: Loriciels / MSX
Price: 49.95
Reviewer: Nicholas Bevington

music or just sound effects. The fuel gauge is just about right with several easy drops of around one and a fuel indicator which will give children of all ages something to aim the without becoming boring in. With short runs the temptation to play again and again is ever present. And, of course, you can change engines race time. With right engines and low courses there are a lot of records to aim for!

Thomas The Tank 2 is an excellent game for young players and is highly recommended.

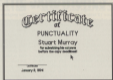
Title: THOMAS THE TANK 2
Publisher: Alternative Software
Supplier: Karkass
Price: Check your supplier
Reviewer: Les Kittingham

ST PUBLIC DOMAIN



ROUNDUP

AWARDS APTITUDES and APPLICATIONS



What better way to say thanks than a personalized award?

In *PC Roundup* this time I thought I'd take a look at some applications for your ST. After all, computers are supposed to be of some practical use aren't they? From the many types of applications available I've chosen an award maker, an aptitude test, and a calendar.

AN AWARD FOR EVERY OCCASION

AWARD MAKER is a program which helps you design and print award certificates. After loading has completed you arrive at the main menu which offers 11 options: Single Number, Title Font, Title Name/Text Font, Text, Signature, Date, Border Style, Border Colour and Import Picture. It is mainly around these options that *Award Maker* works.

Single Number leads to the style of award you want to use. As far as I can tell there are 280 award styles to choose from! You just enter the number required and it loads from disk. However, there is no style list as you will have to note the numbers as you can only see. I've used the first 80 on the list and those included Writing Award, Student of the Year, Certificate of Promotion, Photography Award, etc. With over 280 on the disk I'm sure you'll find something for your needs. If you can't find something ready made you can use some of the existing styles to

create your own personalized award. To do this you just use the Title Font and Title options from the main menu. Title Font allows you to select one of the four fonts provided ROM, English, Script Italic, Book Italic and Medical or load in your own font. There is a font preview box which shows the selected font.

Many of the award styles include pictures. For example, the Geography Award features a world map and a globe. This makes the final result very professional. The later styles on the disk allow you to use the Import Picture option which will load your own pictures.

The Name/Text Font option changes the font for the name to which the award is being presented but by using the Name option, the same font is then used for the lines of text underneath the name. These lines can be used to describe the award or achievement. Just use the Text option to format the text.

Next up is Signature. This uses a very small font to print the name of the person signing the award. This is printed underneath a line, above which a space is left for the signature.

After completing the Signature you move on to Date. This sets the date on which the award is to be presented. Border Style and Border Colour must be used to select a border for your award. There are eight impressive borders on the disk, ranging from a simple outline to some detailed patterns.

This version of *Award Maker* is a beta test version. However, I found very little wrong with it. The only bug was in the

border selection screen, where junk appears in the border selection windows. Also, the border names are not shown - you must click on an empty space. As soon as you click in the empty box a new border will load and the junk will disappear. Move the cursor up or down and click again to change the border. When you exit the program you'll see what I mean. To assist you with your selection there is a large border preview box which shows a version of the selected border.

After selecting an award type, entering the data and selecting a border you move onto the print menu. There are three options here: Preview Award, Align Paper and Print Award.

Preview Award is a very handy option which lets you check the whole award before sending it to your printer. Changes can be made at this point by selecting any of the main menu options, accessible from the print menu.

I've printed out quite a few awards and haven't experienced any problems. There are a whole range of printer drivers included with *Award Maker*, including Epson.

All in all, *Award Maker* is a very professional program which is quick and easy to use. I can't find any shortcomings on the disk but I get by nevertheless.

However, a complete list of all the award styles on the disk would have been very handy! Use the Preview option at the print menu to name the award style menu box. With 280 on the disk, this will take you a couple of hours!

After gaining experience with the prog-

rate and creating an award style number list you will be able to design and print an award for any event within five minutes! Good stuff!

COMPUTERIZED SELF-ANALYSIS

APTITUDES is a program which will analyze your aptitude, personality and motivation and then output the results in three bar graphs. From here, it will offer you a choice of occupations which are best suited to your strengths and weak areas.

The program is split into two parts. Part 1 is the Aptitude Test; a series of tests which collect all the data required for analysis in Part 2, the results section. Upon loading the Aptitude Test you are warned that it will take an hour to complete. Please heed this warning! If you are not prepared to spend an hour or so answering the questions and tabling the results then you will not gain full use of this program.

The Aptitude Test is series of seven tests and two questionnaires. They are VEQI detailed with each test, containing dozens of questions or puzzles. The seven areas tested are Numerical Reasoning, Verbal Skills, Verbal Reasoning, Analytical Ability, Technical Ability, Spatial Ability and Perceptual Ability. These range from speed mathematics to physics problems to visualizing 3D objects. There are strict time limits to each test which can sometimes be very hard to beat!

As each test is completed you are shown your score in the form of a bar chart. Performance is measured by how high the bar reaches up the graph.

After finishing your way through all seven tests you move on to the two questionnaires. First up is the Personality Questionnaire which asks how you and others see yourself. Next comes the Motivation Questionnaire which makes you choose between two tasks at a time. You must answer three points between the two choices available.

The results of both questionnaires are again shown in the form of a bar graph. Your personality and motivational characteristics are shown in different graphs.

It is at this point that you save all of your results in the Aptitude disk, and then load Part 2, the results section. Here you load your results from the disk and examine them on the bar graphs. There is a handy 3-Ray mode which allows you to superimpose all three graphs on top of each other. If you wish, you can also print the graphs.

From here, the program will analyze

your aptitude, personality and motivation and offer you advice as to the type of job which are best suited to you. You may be quite surprised at how close the suggestions are! I know I was. It has advised me to pursue a literary or creative career - exactly the type of career I'm pursuing! Some may say that this makes the program a waste of time but I fully agree - it was an interesting hour spent answering the questions. Also, the results in programs such as these always make for a good read, especially where the analysis is being performed on your own personal characteristics.

The only drawback I can see to Aptitudes is that after taking the test, analyzing the results and printing the graphs, the program becomes pretty useless. I suppose you could test friends and family and compare results - that would be interesting! Anyway, if you look closely on the disk, you'll find two bonus programs which increase the value:

THE REVERSE DOCUMENT EMPLOYER 2 is a good test file displayer and **MIKE'S PERFECT CALENDAR** is a useful calendar program. These two programs complement Aptitudes and altogether they make for a very good disk.

I'M LATE, I'M LATE!

The final application program for review in this issue's ST Public Domain Roundup is **ST ALMANAC V1.0**. This shareware program (reg. \$10) describes itself as, "an easy to use, all-purpose calendar and planner to keep track of holidays, special events, birthdays, appointments and anything else you want to keep an up-to-date record of." Now, if your life is as unorganized as mine, you may find ST Almanac to be very useful indeed!

The documentation provided is very good but, again, you don't really need it. ST Almanac is very user friendly with lots of click on selections available. You can increase a month or year, select a mark a day for appointments or special events, read about worldwide holidays or the birthdays of famous people, etc.

The disks featured in this review are all available from the Page 6 ST Library. Check the latest ST catalogue and updates or phone 0780 213026 for further information.

ROUNDUP conducted by Stuart Murray

You see, load and read information in three separate modes: Holidays & Special Events, Appointments and Almanac. Appointments made starts by the year, e.g. 14th April 1994. Almanac mode starts by the date, e.g. the several Saturday of April. You can save one special event entry per date on the calendar and ten appointment entries. Special events are marked in blue print. Appointments are marked in red.

Other options available are Print, Month

Year	Month	Day	Event
1994	April	14	Special Event
1994	April	15	Special Event
1994	April	16	Special Event
1994	April	17	Special Event
1994	April	18	Special Event
1994	April	19	Special Event
1994	April	20	Special Event
1994	April	21	Special Event
1994	April	22	Special Event
1994	April	23	Special Event
1994	April	24	Special Event
1994	April	25	Special Event
1994	April	26	Special Event
1994	April	27	Special Event
1994	April	28	Special Event
1994	April	29	Special Event
1994	April	30	Special Event

Scan below all appointments. Your Year follows the variety of events that have occurred over a year - these can be edited with a word processor and Editwiz lets you edit the date for a particular date in any of the three available modes. As you can see, ST Almanac will cover almost all of your needs for a calendar program. Also on the disk are two auto-load programs which show messages upon loading the disk. **RESENDER** is for general messages. **ALMSHOW** is used in conjunction with ST Almanac - it scans the files created by ST Almanac and displays any special events scheduled for that day.

The ST has a wonderful wealth of quality application software! With these resources in this volume you will be able to succeed generally in print, an award for a successful aptitude test (grin).

ROUNDUP RATINGS:

ST921 Award Maker	87%
ST713 ST Almanac	84%
ST701 Aptitudes	82%

SPACE CRUSADE

Great abandoned space ships float aimlessly through space infested by the forces of Chaos. Only the legendary and heavily armed Space Marines can purge the evil forces from these hulks.

That's the story but what about the game? The game will be familiar to those of you who have played Games Workshop games before such as Warhammer 40,000 or Warhammer. There are three separate "frags" of Space Marines which you can choose from, they are "Blood Angels", "Imperial Fists", "Ultramarines" and "Plucky Dunny Foot" (I don't think that last one is quite right, do you?) - Oh! You have at your disposal up to 5 Marines in each team lead by a Marine Commander. You must lead the space hulk and destroy the forces of Chaos that permeate them. The game allows you to choose your team and what weapons they carry. (Remember big heavy weapons may be incredibly powerful but you can't move very fast with them and vice versa with light weapons.)

You can set up your commander with his personal weapons and give him special orders for double movement per turn, or fire, or any number of other options each specific to each chapter. You can carry more and more special orders as you begin to complete missions. You must also equip your marines with such things as plasma grenades, melta grenades, fraggers, combat weapons, digital weapons and all manner of destructive things (no mention to mention here). Once you've fully equipped your team, and you must otherwise you can't go any further, you begin the first of 20 missions and progress to the hulk itself. That's where the fun really begins.

During the docking phase you move your team out and you soon discover that you can move, fire, fight (and to fight, use a backpack weapon, open a chest, wait for enemies and issue orders. You move your team and issue fire orders for each team. The firing is usually a very complicated matter involving numerous multi-sided

dice, weapons tables and rules but this is all done for you by the computer. Selecting a number will highlight those characters that he can fire at and then the computer takes over and rolls the appropriate number of dice for each character. It then works out whether the turn was a hit or a shot into the face or nothing. The same thing happens when the fighting is hand to hand where you can only fight the thing next to you. The forces of Chaos range from Devildolls through Dak, Chain Marines, Bombardiers, Androids and the formidable war machine, the Devastator.

All movement, scans, backpack weapons, orders and fire ordering takes place on a 2 dimensional view, much like Counter. All the light scores take place in a 3D isometric perspective, which has the character firing their weapons and the hit on the character being seen. This may result in a satisfying explosion or a burning as the hulk rumbles off the amount of the enemy and vice versa. You may move all of your characters and those of the other's teams and then your turn is over and it's the turn of Chaos. At this point you will see a message that informs you of a mission incident that affects you such as one of your marines being out of ammo or that Chaos has experienced a fire-freak. These can sometimes be bad or good and it's only down to luck as to whether it helps you or not.

The missions that are available are wide and varied with rescue, seek and destroy and supporting missions that keep you interested for a long while. There are 30 missions available in this game and there is a facility to load up separate mission decks that broaden the appeal of the game. The ability to save your teams status after each mission is a nice feature and the fact that you can save many different games for each of the three teams allows for different teams with different missions from each of the chapters.

Now for the game is actually not too bad. You get a nice team while you're



selecting your team and equipment and the game continues throughout the game. It is varied and written well enough as to be not too tedious. The sound effects are those normally associated with a game like this, sporadic gun noises and explosions. The gun noises are not actually that convincing because the same noise is made for a small ball pistol as for an anti cannon. That said, the sound is appropriate and doesn't get on your nerves as some other games do.

Graphics for the game are nice and detailed and even when on the small scale overhead view of the hulk you can still work out what is the commander and the various Marines. The game holds true to the Games Workshop style of design and graphics. The graphics hold your interest and make it more interesting. When on the 3D view you see all the details of the marines uniforms including the insignia and tank harness.

This game scores very, very highly on the playability and usability matters and this is what you'll probably buy the game for. This is not game that I am personally going to be playing for many months to come. The playability is perhaps down to the fact that the game shows you to and makes you want to think like a Marine and show what you are doing. Your score playing this is measured in hours rather than minutes, there's no such thing as a short game of Space Crusade. It's all or nothing! Many months from now you'll wonder what sort of fat the strategy game you ever played before this came into your life!

Time for me to get back to the game and flush into hyperspace the evil and scary forces of Chaos. It's going to be a long time before I fire of Space Crusade.

Title:	SPACE CRUSADE
Publisher:	Greenline/GHM Gold
Price:	\$9.95
Developer:	Nicholas Baxington



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