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### SUBMISSIONS

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## NEW ICD DISTRIBUTOR

Grain International have announced that they have taken over the UK distribution of the ICD range of 8-bit products. They include the MS Printer Connection, Jetmail, MISC ICD, Sparatouch, iPS (Socket), P.B. Connection and several other products.

Most of the products are freely available but certain items such as the P.B. Connection are difficult to obtain at the moment due to shortages in supply of components from the Far East. Apparently the P-B Connection has not been available in the States for several months due to these problems.

Grain promise that they can provide after sales support "normally expected direct from the manufacturer" as they take all of the products and have a close liaison with a major User Group where problems can be ironed out. Unfortunately a telephone help line is not available at present.

Another line that Grain have taken over is the Computerised Controller Card which has been advertised in New Start Users in past years. This allows the user to use two different Operating Systems, something between which is required. A full set of details for use with this expansion is available. Grain can be contacted at 11, Whiffin Road, Parkstone, Poole, Dorset BH12 2JG.

## SHOPPER SHOWS

The Computer Shopper Show takes place at the Wembley Conference Centre in London from 6th to 8th December and the organisers promise a host of entertainment as well as a host of bargains. Unlike last year, when they were forced to close the doors, the new venue should provide ample opportunity to walk around and pick up some Christmas bargains.

There are a number of new product launches promised and Monitor Software will be showing off new extensions to ELOS as well as having many demonstrations. The Show is also the venue of the Computer Football Association's Challenge Cup Finals of which you can see 8-year knockout soccer game in the best. Points have been taking place all over the country and the final is coming from the UK and overseas. You can watch the European Cup Final.

So confident are the organisers of the success of this event that they have already begun to organise the Spring Computer Shopper Show at the same venue from May 1985 to 12th 1985. It is expected that many companies will use this show as a major springboard for new product launches as well offering the public the chance to actually buy the product, a feature rarely missing at the recent Computer Entertainment Show.

## ZEP DISKS ... 1020 SUPPLIES

Prize Better Software in Canada, have announced that they have secured the rights to produce disk versions of all of Zappella's games which are normally available only on tape. Prices will be reasonable, check their advert or give them a ring on 0942 400077.

If you have a 1020 printer then contact Derek Pees at Micro Discount for supplies. He has replacement pens and can supply large rolls of paper together with details of a modification to the printer to accept them. This consists simply of a wire frame that can be made from a wire coat hanger) and a full drum is supplied with each roll of paper. Paper costs £2 per roll plus postage. Contact Derek on 021 232 5750.

## LOW COST 24-PIN PRINTER

Citizens have a new 24-pin printer available in time for Christmas making an £279 plus VAT, an excellent price for this quality of printer. The Citizens 12444 prints at 100 characters per second and has all the usual features of a 24-pin. It comes with a comprehensive two year warranty on all parts and labour and should be available from all Citizens stockists. Call Citizens on 0995 72921 for details of your nearest stockist.

## A FANTASY?

Fantasy Productions have set in a demo disk of their new game FOC and very impressive indeed it is the graphics look. Unfortunately we don't have space to describe screenshots but take our word for it they are quite impressive, in a style similar to Zappella's best games. If the gameplay matches the graphics then you are in for a treat!

Fantasy are now promising release of this game in early 1981 with further games scheduled throughout the year. We do hope that they can succeed but, given the total lack of support from the trade for £1/50 games, we feel the chances that they will be able to sell the game in reasonable numbers are slight. Harlequin recently tried and found that the going was a bit harder than they expected. Sell we wish them luck.

In the meantime Fantasy are looking for other Atari users to join them in this and future projects and are seeking people with skills in music, graphics or pen-writing software. Contact Robert King at Fantasy Productions, 52 Brookstone Fields, Harlow, Essex, CM20 2XT if you are interested.

## SAVE ON THE SHOPPER!

Your discount voucher for the Computer Shopper Show courtesy of NEW ATARI USER. Just take this voucher along to the show and present it at the door for a discount of 50p off the individual ticket or a maximum £4 off the price of a family ticket.

Unfortunately, you'll have to cut the coupon (and ruin a great magazine) as the organisers won't accept photocopies. Pity!

The Computer Shopper Show is at the Wembley Conference Centre and runs from 6th to 8th December. Times are shown on the voucher.

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# Mailbag



in



*Must remember to write to Mailbag*

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ST16 1DR*

## MACCLESFIELD CLUB

I am writing to tell you and interested users about our User Group, Macclesfield Computer Club.

The club has been going for 7 years and caters for all interests and computers. All the members are very helpful, particularly to new users. Club funds are used for show trips and buying equipment for members etc. We are hoping to organise a special "DESIGN YOUR NEXT" for children charity where all the best designs from around the world will be shown on a giant projector screen with full show laser support.

Anyone interested in supporting us can write, or better still just come along during a machine if you like, or just come any night for a drink and a chat. The club meets every Tuesday night at Harrogate Wine Bar, in Clontarf, Macclesfield, Cheshire.

**J. Bradley**  
Club Chairman

## PASCAL UPDATE

In issue 49, E.L. Laidlaw asked if any version of PASCAL had been produced for the IBM PC/XT. Yes, it is!

DRAPER PASCAL is 320 complete with software, manual and registration from the author and has received good reviews over here. I believe it is now in the public domain as shareware. The author can be contacted at Draper Software, 507, Forest Grove Drive, Richardson, Texas 75080, U.S.A.

CLM PASCAL was released in August 1988. I haven't

yet seen it reviewed. Available from CLM Software, 18 Arlington Place, Soerby, NJ 07001, U.S.A. Telephone number is (201) 999-1854.

NEAN PASCAL is the one I own. An excellent full-Java version with no beginners and advanced programmers.

Optimized 80386 machine code compiler, easily configured for use with a 386 disk, excellent tutorial style manual in small format ring binder. Price \$69 from E.L.N Software, 1650 Union Street, #100, San Francisco, CA 94123, U.S.A. Telephone number is (415) 626-2880.

If you can't get these from the above companies they are all available from BMC Computer Vision, 3327 Keller Road, Santa Clara, CA 95051, U.S.A. Telephone number is (408) 748-1000. FAX number is (408)

340-0890. Lightspeed-C is also available for \$99-99. That should be Mr. Laidlaw busy!

**Michael Beaman**  
Orlando, Canada

## DIFFERENCE?

Please could you tell me the difference between an Atari 600X and an Atari 1300X. I have a 6000X and wish to purchase one of these two computers.

**Dean Richards**

The only difference between the two is the amount of memory. The 600X is 64K, including the Operating System, and the 1300X is 128K. Although it may seem that the 1300X is twice as powerful this is not really the case. The extra disk in the 1300X is not available to normal programs and can only be accessed through something in and out software

besides of 16K memory. Very few commercial programs have been written to take account of this extra memory and writing your own programs is not very difficult quite possible. If you are not a programmer then I would go for whichever machine you can find at the cheapest price.

## ON THE BACK

I have had a few years experience of amateur electronics but am fairly new to the world of computers. I have a 600X which I am much enjoying learning to use but one thing puzzles me. On the back of the computer is a 7 pin expansion port which is not mentioned in my owners manual, nor is it shown on the layout drawing.

What do I use it for? Is it necessary to buy a plug in accessory to know how to use it? Your advice would be much appreciated.

**E. D. Arnold**  
Worthing

We have touched upon this subject in previous Mailbag columns but your queries may not have been answered. The port on the rear of the SE is a cut down version of the Parallel Expansion Bus that appeared on the SE models.

Atari did not make public the details of this expansion socket and so certainly nothing has been produced commercially to take advantage of it. When the SE was made, Atari cut down the expansion bus to the 7 pins you see now but still did not acknowledge it. It is possible to build devices to use this port but as the technical information is almost impossible to come by, very few people bother. The American magazine *BYTE* did publish a first part article on this expansion bus several years ago but you will have to track

down the appropriate items and obtain them second hand. If you are persistent enough to follow this through, it may be the Contact column might do the trick.

## IT IS CALLED ...

I am writing to ask if you know the name of a game I am looking for. It involves shooting space ships and at a certain point you have to 'lock onto' another (like ship making your own spaceship a bigger and better one. It is quite a simple game and it is in a bit of an oddie. It used to be an arcade game.

Steven Richardson  
Coatham

Yes, I remember that one, great game, but I can't remember what it is called either? Someone knows, and someone will write and tell us. What's the space?

## WHICH IS BEST?

I have owned an Atari 8000X, since 1988 when they became very competitive in price. I now own a 5000XE which is superb, however I don't want to see the 8000 die so I will own a 1200XE with disk drives.

As a serious computer the 87 walks all over the XL/XE with its 800 column screen and huge memory plus its fast high capacity disk drives. When it comes to games however I feel that the XL/XE offers much better value for money when you can pick up excellent budget games for \$8.99 whereas 87 budget games are \$10 each and I have yet to be impressed. Yes, the graphics and sound are superior but playability wise there's no gain. In fact they tend to be slow to start and very complicated. I still play *Mosbauer*, *Encounters*, *Dragonage*, *Star Wars*, *Blue Blax* and *Zyben* all of which I will enjoy on my 8-bit Atari. My only regret is that there is no version of *Blax* which is my all time favourite game. I know it would be easy to convert and that the Atari could produce a version second only to the BBC disk version on the 8-bit.

So don't knock the Atari

8-bit. It only makes itself known in the XL/XE owners who have no need to feel insecure at all.

M.R. Wilson,  
Yusid

## MINI OFFICE BOTHER

I recently purchased Mini Office II for my XL. In this connection I have no for need primarily the label printer appears to be top-performing some problems with this option. In order to obtain the label which I require (which is not that high have to expand the menu length.

Also I note that the manual indicates that a copy of the manual is also held on disk however I have been unable to locate it. Have I purchased a poor copy?

Please do you have any additional information regarding the printer code strings especially in relation to the label printer option.

Peter Searlight,  
Sussex

We have included this letter for the benefit of many owners who have experienced similar problems. There is a bug in the Label printer which has been there since the program was written and, unfortunately, there is nothing we can do about it since we do not have access to the source code. When using the Label Printer with the Database it works fine, printing as many labels as you require on the correct width and length. Used to print individual labels however it is virtually useless since the problems described occur. A single label can be printed if the page length is not much longer than the standard label size of 8 lines but that means that you cannot print more than one copy of a label and your labels will appear out of the printer if you could for it, we would. If any one else has found it please let us know. The manual is not on the disk since there is no room for it. Maybe at the moment it was included but it is

not on the current version and, in any case, would only duplicate the manual you receive when you purchase the original version.

The printer control strings are determined by your printer and vary from printer to printer which is why they are not included in the program. You need to check your printer manual for the format you wish to use and insert the appropriate code. The manual will tell you which ASCII codes activate the features such as bold, condensed, etc. etc. on your printer.

## APOLOGIES

### TO CONTRIBUTORS

I have a complaint about submissions in that I have not received any acceptance or rejection details of my submission apart from a letter confirming the receipt of my program.

The program in question is called *Pass in Black* written in Basic. I sent it in over a year ago and have been patiently waiting for some news. With the Editor complaining about the shortage of submissions it makes me more concerned. Is the game not good enough or have you simply lost the disk? In either of those cases can you try and get the disk back to me?

Please reply to this letter because I would like to submit some more of my programs in machine code game, a quizable and a Trivia one! but I am just off doing so because of the situation with this, my first, submission to your magazine.

Daniel Lee,  
North Hantside

Sorry, sorry, sorry! I have said it before in the editorial but we are beginning to accept contributing contributions. It is simply that it takes so long to look at contributions and there is no time to reply to them all. Daniel, thankfully, was not deterred and sent in his further contributions and will be pleasantly surprised to find his excellent machine

code game on this issue's bonus game. Like everyone else seeing the program in print will be the first indication that it has been accepted. An indication that is not satisfactory that it gives contributors a real boost when they open the magazine! Daniel's 'quizable' is also very good and almost made it into this issue (only lack of space kept it out). The *Pass in Black* game, by the way Daniel, is too long to get in the magazine.

We would, please do not give up if you don't hear anything. If you believe your program is good keep on sending them in and one day you may open up the magazine and get the check of your 'hit'! That happened to Bill Holwell a while ago and has been one of his programs ever since published since. *Star Wars* and *Phonax*.

## TOURS DISGUSTED

Dear gentleman Page 8, 'What do I have to do to get my letters printed?' do I have to climb Mount Everest? For the past few letters that I have written and asked to be printed, now this is very friendly. In the next I am in at the moment! I wonder how many other Page 8 Atari fans get ignored? Now, is there any chance of you actually printing this letter? or are you going to shove this up and through into the bin?

Thank you respectfully put  
Mister J.G. Mansford

All you have to do to get a letter printed is dialling in to write about something interesting, preferably that codes questions that other users might be interested in knowing the answers to or which they would like to see if a few more people would write to Malting. If your letter is interesting it stands a good chance of being published. Most of us are sometimes a bit up and get a load of old rubbish!





# ZORK II

# Tales of Adventure

**I** am always amazed by an image I have of myself as the adventurer: "swimming around endless caverns and rooms, a bit scruffy, always with a frightened countenance, carrying the obligatory sword and lantern, possibly with the odd bit of flitting rusty armor, trying to carry every object, treasure and useful or useless bit of junk I have found in my pockets. I end up with every pocket stuffed full, a few, suitcase or backpack overflowing, if I have, in one adventure carried a bag in one hand, onto which I found I could keep insubstantial objects, a tool box equally full in the other hand and pulling a sort of trailing, piled high with more junk, behind me with what must have been my third hand! And yet, these ladies, I have climbed mountains, waded through rivers like a demoted Tarzan and tramped through narrow fissures in the bowels of the earth.

This adventure is always lost, half blind, utterly, extremely aggressive, totally dishonest and consumed by an overpowering curiosity. It will try to tell anything that moves, and any thing that glitters and absolutely nothing is left from its playing and probing. Fortunately, for it and me, it can be retroceded here and there again so it can show the way, signal, and together we have survived, compared and thoroughly enjoyed many adventures in many different worlds and hopefully do so in many to come.

## ZORK AT THE TOP

The Zork trilogy is at the top of my favorite adventure league. Zork I has always been well documented in past editions but Zork's II and III hardly get a mention, so I thought I would fix a little by writing of my experiences with Zork II and offering some simply coded clues and a map of the caverns to help any who have floundered with this adventure.

The aim in Zork II is to defeat the Wizard of Froboes and thus to take over his power. To do this you need to collect 10 treasures and 3 crystal spheres. With the spheres you can summon a fiendish demon, who when suitably bribed 110 treasures worth will then grant you ONE wish. With the right wish the Wizard is destroyed leaving his mind for your use. Up till then the wizard is a class one nuisance, popping up where-ever and pinching your hand earned treasures which he then stores in his trophy case. I have found no way of entering them, thus frequent saving of your position is advisable.

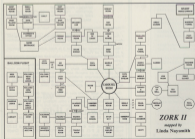
Zork II starts fairly enough where Zork I left off, but now there is a second and a lamp left for your convenience. There is no need to bang your shin or even fall down a crevice in your untimely death in the search for a light. The sword remains both the aggressor and coward in your adventures apart.

At first the path is straight and offers nothing to explore or examine, then you find yourself in a garden with a pretty tuxedo and you catch a fleeting glimpse of a Unicorn, it has a gold key around its neck and you know that you have to get it! Somehow. Trying to follow the Unicorn can bring you to the Topsy garden, where things are not so pretty ... and these clipped animal hedges look rather menacing ... better not.

You could be in the Garden of Broom now, and after a while you realize that this room is constantly re-rolling, so you cannot be certain where you are going to end up when you leave it. This doesn't help the map much.

A bit more (considering may bring you face to face with a minotaur the Dragon ... GULP ... about here, you can think, if you are like me then you will obey the first rule ... and try to kill it!

To start your collection of treasures you have to get the letter of this league, although killing it may not be the correct solution. The League is holding a beautiful





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# by Linda Naysmith

## ZORK II HINTS

The following hints may answer some of those questions or simple ones. Read the hints backwards and it may give you some ideas, but please, help me to help you!

1. Can I get the Dragon? — NO! NO! NO! (I'm sorry, I'm not a dragon, I'm not a dragon, I'm not a dragon...)
2. How do I get the key from the wizard? — See hint 10.
3. How do I get the key from the wizard? — See hint 10.
4. How do I get the key from the wizard? — See hint 10.
5. How do I get the key from the wizard? — See hint 10.
6. How do I get the key from the wizard? — See hint 10.
7. How do I get the key from the wizard? — See hint 10.
8. How do I get the key from the wizard? — See hint 10.
9. How do I get the key from the wizard? — See hint 10.
10. How do I get the key from the wizard? — See hint 10.
11. How do I get the key from the wizard? — See hint 10.
12. How do I get the key from the wizard? — See hint 10.
13. How do I get the key from the wizard? — See hint 10.
14. How do I get the key from the wizard? — See hint 10.
15. How do I get the key from the wizard? — See hint 10.
16. How do I get the key from the wizard? — See hint 10.
17. How do I get the key from the wizard? — See hint 10.
18. How do I get the key from the wizard? — See hint 10.
19. How do I get the key from the wizard? — See hint 10.
20. How do I get the key from the wizard? — See hint 10.

Efficient prisoner in its fat and to rescue her should be your first objective. Pay attention to her and follow her every move and you will be well rewarded for your bravery.

Then you need to find a way to stop the Carousel Room from turning so you can go in to the dragon you wish. This is an intriguing puzzle which has more than a slight touch of Alice in Wonderland. A friendly feline will help you to turn off the machinery that runs the Carousel room and will also help you escape a dragon trap, but to get there you will have to learn how to operate a ladder in a well with the aid of a tripod full of water, needless to say it is a magic bucket!

Freedom lies behind a door with a handle head embedded in it, which prevents you from trying to unlock it. The first rule doesn't work here either so you may prefer to be kind instead. In these chambers you will also meet a baby fire dragon. Bring it an apartment of yours. There is something else in the apartment that you need, how to get it without the baby fire dragon getting you is a problem that for more events, heretofore, will be.

There is what appears to be a maze laid, as Indiana's maze are always out of the ordinary, there is no need to wander around until you, hopefully, arrive at something useful. The maze has a logical solution and a number of pointed clues in the way. It helps if you are a sporting enthusiast, which is where I was at a disadvantage. The tunnel I got to sport is in turning off the wily whenever it is on. So the Gully Angled Room had me lost for quite a while. My course is that Zork II was written by Americans, and I know even less about their sports than I do about our own! Finding the maze opens up a secret stairway which leads you to Catherine the three-headed dog. Catherine's path to indignation against the beast.

The next delight I found was crumpled at the bottom of the volcano and for the first time in my life I went up in a hot air balloon. You must take care not to get too adventurous now, you may let your hat blow out. There are a couple of steps you can make on the way up, one is a library which provides some interesting reading, the other room contains a locked rusty box. Now this box obviously contains a vital object, but how do you get into it - blast it - the lock is raised and the key won't turn.

The book contains a treasure which you can pick up easily and if you investigate the curtain of light, thoroughly enough you will find another treasure, but you are also trapped, the Grimoire of Balthar can live you but he demands a price... now you may think you cannot pay and still complete the game.

One puzzle which I really enjoyed solving, was how to get the Blue Crystal Sphere. It is behind a locked door, what else. The door can't be opened as it is on your own side of the sphere is there, but where is the key? Examining the keyhole will reveal that the key is in the lock - but on the wrong side of the door! You have the means to get the key to your side of the door - you only have to walk out!

If you should have collected all the treasures and spheres you need to summon the Demon and live. Place the three spheres on the appropriate stands in the Wizard's work-room and they will combine (magically) together to form a Black Sphere. Put the Black Sphere into the Pentagram and the Demon will appear. Now is a time for bravery and to take your time to make the correct walk. If successful the wizard will be vanquished and his wand and powers will be yours. But the adventure is not finished yet! You still have to find your way out of Zork II and to the beginning of Zork III.

What about that Merlot, obviously blowing a passage, and what about the Brave Chimera, can he be tamed? What happens in the topiary garden if you finger too long and how can you catch that elusive Unicorn?

Will you ever need to see that rat of Great Balthar and if so how long will it be effective?

XL/XE TYPE-IN

# SANTA'S REVENGE



BY  
STEVE  
WILLIAMSON

It is Christmas Eve and the evil Baron Morkhausen has threatened to destroy the spirit of Christmas. His plan is to manufacture boring Christmas presents then, on Christmas Eve, he will follow Santa's sleigh and swap his boring presents for all the good presents that Santa gives. On Christmas Day the world will be filled with the means of disappointed children and this will extinguish the spirit of Christmas forever.

Santa's genius spy Gerald hears of this plan and locates the site of Baron Morkhausen's secret factory somewhere in the Arctic circle and Santa sets out on his sleigh to rescue Christmas.

## THE GAME

The game is controlled with a joystick plugged into port 1. There are 9 levels. If Santa finishes level 9 then he has neutralised the Baron's factory and Christmas is saved.

In Level 1 you must guide Santa's sleigh and land safely. Blocking your way is the Baron's giant snowball defence system. At the bottom of the screen is Santa's 'Jolly' meter. Each time a snowball is touched the Jolly meter shortens. If the Jolly meter is empty then Santa is too sad to carry on and the game is over.

On Levels 2 and 3 Santa must find his way to the exit at the bottom of the screen. If he touches a boring Christmas present then the Jolly meter goes down. The boring presents are underwear, socks and aftershave. The joystick controls Santa and joystick up causes him to jump. The Fire Button fires an ice missile from Santa's ice gun. Hitting the boring computer symbol or a Jason Donovan record scores points.

Finishing a level gives bonus points. The quicker it takes to reach the exit the more bonus points you get. Hanging around too long and points will be deducted from your score!

On Levels 6 to 9 avoid certain sections of the floor as they will reduce the Jolly meter.









# TYPO 3

## NOW RESET PROOF!

Here is an enhanced version of our TYPO 3 program which we recommend that all readers use when typing in programs. This version is fully compatible with earlier versions (but is more "Reset Proof" so that if you press the System Reset key you will not loose the TYPO facility. If you have already typed in TYPO the changes are shown in the panel below and can simply be added to your original program.

### WHAT TYPO IS ALL ABOUT

The program listings in NEW ATARI USER are prepared carefully to ensure that they can be typed in as easily as possible. Before typing any listings ensure that you are familiar with the use of the Shift and CONTROL, and OPTION keys as outlined in your computer manual. The listings are prepared to match exactly what you see on screen. By using TYPO 3 you can ensure that you type in the programs EXACTLY as they are printed. Remember, a single typing mistake may mean a program will not run.

### WHAT ARE THOSE CODES?

Each line of a program printed in NEW ATARI USER begins with a special two letter code. THESE SHOULD NOT BE TYPED IN. They are used by the program TYPO to check that you have typed each line correctly. If YOU WANT GOOD ATARIOSH TYPED IN THE TYPO 3 LISTING PLEASE DO NOT COPY. The program can be used as you type in each line of a program or to check an already typed program. The code for each line will match but if you have problems check the control characters shown in your manual; you are most probably typing a CONTROL character incorrectly. TYPO 3 cannot check whether a line has been missed as it has the TYPO codes match and you will have problems in running a listing about the lines in the program and errors come up. However, if the TYPO codes match, the program will run. If you are using the program list-down and run, LIST IN to cassette or disk using LIST TO or LIST to cassette, switch off the computer, list-down and then ENTER the program using ENTER TO or ENTER to cassette. Save this version in the normal way.

### HOW TO USE TYPO 3

1. Type in the listing carefully for although you can use TYPO 3 to check itself (see 6 below) it may not work if you have made mistakes.
2. SAVE or OSAVE a copy of the program.
3. If each time you want to type in a program listing from TYPO 3 first: This program will match a machine code listing in memory and then delete itself. Then type in a line as shown in the magazine (excluding the first two letter code and press RETURN).
4. A two letter code will appear at the top left of your screen. If this code matches the line in the magazine carry on and type the next line. Note, the code will not match if you use abbreviations. If you prefer to use abbreviations, LIST the line you have just typed, insert the cursor in that line and press RETURN. The code should now match.
5. If the code does not match, use the editing keys to correct the line and press RETURN again. Repeat if necessary with the codes match.
6. To check a line you have already typed LIST the line, place the cursor on that line and press RETURN.
7. When you have finished a listing just SAVE or OSAVE it in the normal way.

You can type in a program without using TYPO 3 and then check it by BANNING or CANNING a copy of the program, running TYPO 3 and then LOADING or CLODING your program and proceeding as in step 6 above.

Always SAVE or OSAVE a program before running it and always use TYPO before listing so that a program will not run.

## HOW TO TYPE IN THE LISTINGS AND GET THEM RIGHT FIRST TIME!

### OUR UNIQUE LINE BY LINE CHECKER WORKS ON ALL ATARI XL/XE and earlier 8-bit machines

00	0	0000	0000	0000	0000	0000	0000
01	0	0000	0000	0000	0000	0000	0000
02	0	0000	0000	0000	0000	0000	0000
03	0	0000	0000	0000	0000	0000	0000
04	0	0000	0000	0000	0000	0000	0000
05	0	0000	0000	0000	0000	0000	0000
06	0	0000	0000	0000	0000	0000	0000
07	0	0000	0000	0000	0000	0000	0000
08	0	0000	0000	0000	0000	0000	0000
09	0	0000	0000	0000	0000	0000	0000
10	0	0000	0000	0000	0000	0000	0000
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77	0	0000	0000	0000	0000	0000	0000
78	0	0000	0000	0000	0000	0000	0000
79	0	0000	0000	0000	0000	0000	0000
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81	0	0000	0000	0000	0000	0000	0000
82	0	0000	0000	0000	0000	0000	0000
83	0	0000	0000	0000	0000	0000	0000
84	0	0000	0000	0000	0000	0000	0000
85	0	0000	0000	0000	0000	0000	0000
86	0	0000	0000	0000	0000	0000	0000
87	0	0000	0000	0000	0000	0000	0000
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94	0	0000	0000	0000	0000	0000	0000
95	0	0000	0000	0000	0000	0000	0000
96	0	0000	0000	0000	0000	0000	0000
97	0	0000	0000	0000	0000	0000	0000
98	0	0000	0000	0000	0000	0000	0000
99	0	0000	0000	0000	0000	0000	0000

### TYP0 3 - IMPORTANT

TYP0 3 now has improved error checking routines when typing the listing in. When you first run the program most typing errors will be indicated on screen. Amend the line shown and save the program again before running it. This is important since TYP0 will delete itself when successfully run and you will lose the program unless you have saved it!

# THE TIPSTER



At last, this is the all new Tipster writing for the first time. I'll bring you all the best hints 'n' tips for your favorite shoot 'em ups and adventures alike just as before. This time round though I'll start off by apologizing for any mistakes and misadventures which will probably happen in this first column but please bear with me as I'm only small!

The first complete solution of this new column is for *GUNSLINGER*. I haven't had many solutions (none in fact) for *Public Domain adventures* or perhaps *The Domain of Wu* or *The Jade Stone* (they can't be that hard can they?) so get writing as the your help that keeps this column going and therefore helps other people. But enough of this chit chat and on with the show.....

## UNIVERSAL HERO

Firstly I must put to rest the controversy that surrounds *UNIVERSAL HERO* from Mastertronic. I've had mountains of letters about how to finish the game and the answer is - YOU CAN'T. When you try to enter the I.D. on the computer it comes up with an "ERROR 164" and crashes. This is because it was ported across from another computer but doesn't work. Nice one Mastertronic!

## TAKE MY TIP YOUNG MAN

## 'THIS IS THE COMMANDER'

*WOT-COMMANDER!* should no longer pose a problem for you people who like to die; with death thanks to Richard Leggs of Aberdeen. To search nuclear missiles without having to ask for the commander's permission change line 8241

From: 8241 IF SUB OR VP=8256.....  
To: 8241 IF SUB OR VP=8256.....

This will allow you to search nuclear missiles in any part of the game.

## COSMIC PIRATE

Also from Richard are these additional tips for *COSMIC PIRATE* and *Winter Olympiad*. In *COSMIC PIRATE* if you're in debt because you have to select missions, then on the options screen press **CRAT** and you will then be paid up. This works even though you have completed some missions so you can carry on from the mission which you left.

When you choose the option to load the next event in *WINTER OLYMPIAD* select it and the medal table will appear. Press **RESET**, then have another go. Your medals will increase showing you to have infinite medals if you repeat this process.

## WINTER OLYMPIAD

## SPEED ACE

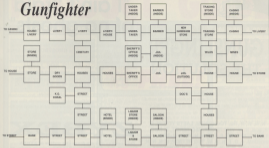
From across the water comes the Grand Prix team arrival, as Andrew Scuse from Belfast gives all those teams and turns from *Supper's SPEED ACE*.

Brands Hatch R-R-L-L-R-R-R-L-L-FINISH  
Daytona L-R-L-R-L-L-L-L-R-L-L-L-L-FINISH  
Jama R-R-R-L-L-R-L-R-L-L-R-R-FINISH  
Misaki R-L-L-R-L-R-L-R-FINISH  
Paul Ricard L-R-L-R-L-R-R-L-R-FINISH  
San Marino R-L-R-L-R-L-R-R-L-R-L-L-FINISH  
Silverstone R-L-R-L-R-L-R-FINISH  
Anderstorp R-L-L-R-L-R-R-FINISH





# Gunfighter



## DON'T BE SHY!

Now comes a clutch of tips from an anonymous tip provider from Naxxon to Meltis (he all right you'd get your budget). Firstly the gamecode for screens 3.0, 1.0 and 1.0 of **COLLIES FOLLIES**. They are F0000, F0000, F0000 and 000000 respectively. For all you Bruce Lee's out there here is how to complete the second level in **KARATEKA**. Position your player with just your feet touching the shadow of the door, then either kick or punch and the door falls down, after a few moments it will go up so pass over. If you touch the door you will lose some health points. Also if you arrive near the princess, run towards her otherwise she will lock you and kill you. Press the SPACE BAR and B and the player will bow.

**I**s there something wrong with cars? Do my feet smell or something? Because here is a trilogy of tips from another reader who wishes to remain anonymous. One line from Youglad, County Cork.

**DEATH RACE** - keep your speed to around 200mph. Keep to the left hand side of the track and only change cars when you have to.

**STAR WARS** - on any of the trenches stay as low as possible and then blow a couple of shots down the tube or wall!

Last but not least comes ...

**PANTHER** where if you get down low and only shoot when the aliens do, so they only shoot when they are on the same level as you.

## MORE OVERLEAF 020

### PRICE OF MANK

Deep from the depths of Telford comes the spells for **PRICE OF MANK** from Craig Wright. He says it helps incredibly that you know the spells but don't take too much for it have a go yourself!

FOCUS	SPELL	FOCUS	SPELL
Crystal ball	ESP	Chimaine	MAD
Pandulum	DOW	Broom	FLY
Prism	DAM	Trumpet	BOB
Foldpaper	IMSEE	Ashes	ZAP
Staff	HYP	Crone	DET
Candle	SPY	Axe	K.L.
Wheel	DEO	Box	BM
Claw	SAN	Valerian	PIE
Minot	ITZEH		

## AND THE WINNER IS ...

This issue's prize goes to Bob Davidson as Skipton Meller will soon be adding to the sound of those magic **AM** (SIBS). Apologies to Bob's team and staff!

For the next lot of hints and tips we have an offer of a **25-GAME COMPANION SET** which gives you the chance to play all your favourite board games wherever you are - includes Backbit, Backgammon, online Drags, Chess, Draughts, Pool, Mark Jack, Collings, Dominion, Chinese Checkers, Straight MUD and Shrewton. It's all packed away in a special presentation box. You'll probably never touch your computer again!

To stand a chance of getting this prize you must send in your hints, tips, solutions or maps for the next issue. Get moving!



# GUNSLINGER THE SOLUTION

And now, as they say, for something completely different. Saddle up your boss partners and mosey on out with Benji Laniada from Atari. Inseal as he gives you the solution to GUNSLINGER. As normal the commands have been written backwards so that OROP ALL = FORD LLA.

N, N, W, N, TG, TOONS NAM, LAETS YENOM, S, E, S, S, S, W, YUB TERKIT, TEG TERKIT, E, EVO TERKIT, TEG THLF, E, E, N, N, W, U, W, TEG RORRIM, S, D, E, N, N, W, TEG RETSOP, E, N, N, N, N, TEG GEX, S, S, S, S, S, S, S, S, S, PORD GEX, THOS, ESUF, N, TIAM, D, N, TEG PMAL, THGL PMAL, N, W, N, TEG EXA, S, E, N, E, THGLNU PMAL, N, GID, TEG LATSRC, S, THGL PMAL, W, S, OG RAC, TIAM, TIAM, TIAM, EKANS, TIAM, TIAM, PORD THLF, PORD PMAL, PORD EXA, U, U, NMOD PFLC, S, S, S, S, S, S, S, E, EVO LATSRC, TEG XOS, W, W, W, HCRAS DLOG, TEG TEGGUN, E, E, E, EVO TEGGUN, TNUOM ELUM, W, N, N, R, N, N, N, N, U, E, D, N, N, N, N, N, EVO RETSOP, EVO RORRIM, S, S, E, E, E, TNUOMSID, OG EONAC, TIAM, TIAM, KOLD, BMLC HENARS, E, E, N, N, N, W, W, TEG ESUF, RAEW ESUF, (TA SHY EGATS, CUY DLUOHS TEG THOUAC RCF ONLAETS EHT EPOR, TSLU KLAW DRUORA RCF TUORSA YTRNWT SHRUT, LITNU UOY DMF PLESHUOT NI A ROBRP LLEC), TIAM, TIAM, TIAM, TIAM, TEG HOOPS, TEG LWOR, KNEB PUOS, TIAM, TIAM, TIAM, TIAM, TIAM, TEG ETTERAG, U, GID LLAM, OG DMNEPO, BIT ESUF, D, THGL ESUF, N, E, OG NIART, U, TIAM, D, NEPO ROOD, E, E, E, N, N, N, N, N, N, E, E, KLAT NAM, W, S, S, S, S, S, W, TEG ELPIR, THUCH EPORH, E, E, N, TNUOMSID, NIAGA, UOY NAC EKAT A KLAW, TUB YU DLUOHS HRUTER OT SHY TELLA SA NOOS SA UOY RAEN EHT SULED ONORIN), W, N, E, E, KOLD NRETSW WODMFW, TOCHS EPOR, OG NREHTUOS WODNR, SHY SI TIT!!! UOY EVAH TSLU DETELPMOC "TEGDMLSHUC"!!!!

**QUICKIES ... QUICKIES ... QUICKIES ...**  
A quickie from Steven Backbuck of Lightlight Beeslight for TIMESLIP. If you relax an orb, dash and get the orb again, this saves you going over the same ground twice.

# "I ain't 'fraid of no ghosts"

... because Rob Denton of Stephen Mallet has also given us a few keys that are underestimated in **GHOSTBUSTERS**. SPACE yells "GHOSTBUSTERS" when you press it on the title screen. OPTION turns off the "pipe" on the fountain screen, and SELECT returns to the Vehicle Selection screen. Things aren't all easy in Stephen Mallet as Rob is stuck on **MOLECULE MAN**, he can't, for the life of him work out what to do. So if any of you out there know what to do then write to with the answer.

Masterpiece's **SPEED ZONE** is easier thanks to Rob Denton's (There also for the map of Kingdarter). He recommends that you stay roughly in the middle of the screen and move around accordingly with minimum damage being done.

# ZYBEX

One worker of a tip from the writer of **ZYBEX** himself, Brian H. Judding asked by पास truly, at the CBS show at Paris Court, in September. You can have all the weapons at any time by pressing the OPTION button but this only works if you've got an **OPTION** chip (sorry).

# HELP!!

There are a lot of stank people out there and they need your help! Ninja Cooks needs help on **LAPIS PHILOSOPHOREM**, especially with how to get past the guards and out of the city. Yasser Nade of Southend-on-Sea would like some help with **SPY HUNTER** and **GUNLAW GRAND PRIX SIMULATOR** from Codemasters in creating problems for Angel of Nightfly. He wants to know if there is a way to start on the level you fell off from.

This month's Tipster prize goes to Rob Denton for his map of Kingdarter and tips for Speed zone and Ghostbusters. Each despite as no-one can win the prize twice (I'll make sure of that). Well that's about it for this month, but cover for I'll be back next time with all your best hints and tips and with another solution to an adventure. If you've completed a game or have any hints on game play then send them in so in this your column, for your games.

We all write now to give these nasty adventures a little death they won't forget in a hurry so will send you, T.T.P.S.

Please send all your hints 'n' tips to:

**THE TIPSTER**  
New Atari User  
P.O. BOX 54  
STAFFORD  
ST16 1DR

# THE 1990 ATARI ST PRODUCT GUIDE

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## DEAD-RECKONING FLIGHT

ALAN PAGE SHOWS YOU HOW TO COPE IF YOU KNOW

**F**light Simulator II by Bala Legler needs no introduction to readers of *MONITOR* 1982. For leading articles see issues 21, 25, 40 and 43-45. For the simulator, FSII is a real-time flight simulator, i.e. a flight of 45 minutes actually takes 45 minutes at the key-board, it faithfully reproduces the flight characteristics of the aircraft in use, which is a Piper Cherokee Archer on the 8-04 Altair, or a Cessna 182 on the ST, and is as near as most of us are likely to get to piloting a real aircraft.

The manuals provided are very thorough, especially in the 8-04 version, including a basic grounding in flight physics and a series of flying lessons. The one real gap though, is basic navigation by dead-reckoning, and this is a gap which I shall try to fill.

In real life the speed and direction of the wind varies at different heights, and in FSII this too can be proved from an easy to use editor. But strong winds can drift an aircraft way off course, and even with the excellent radio navigation included in FSII, the serious one-chair pilot likes to know in which direction to point his nose in order to obtain the correct course from A to B. In this article I shall try to demonstrate a reasonably straightforward way of doing this by a time-honoured graphical method, and also provide a program listing which will do it all for you. After all, what else is the serious one-chair pilot's computer for?

## "DEAD RECKONING"

This method of navigation makes use of the "triangle of forces", which may well be found lurking in old Maths and Physics text books. To try out the examples for yourself, you will need a sharp pencil, a protractor for measuring angles and a ruler with an accurate centimeter and millimeter scale. I find that a pencil-rubber also comes in very handy!

Now, how does the wind affect the flight path of an aircraft? Suppose that you wish to fly North from A to B at 120 knots for one hour. After one hour you would expect to be exactly 120 nautical miles North of your starting point. But suppose that there is a 30 knot wind blowing from the West. The body of air through which your aircraft is flying is itself travelling West at a speed of 30 knots. The actual course followed by the aircraft will be the combination of your northerly heading and the westward movement of the air, as shown in diagram 1, ending up at C, some 90 nautical miles to the East of your intended destination.

By drawing accurately to scale we can build on diagram 1 and use it to predict what heading to fly the aircraft in order to end up at our intended destination, B.

Choose a convenient scale, such as 1cm=10kts. First, draw your desired course from A, as the South, to B, to the North. Pencil length is not important for this line, but make it about 10cm long. Now draw a line to represent the 30 knot wind,



FIGURE 1

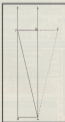


FIGURE 2

starting at A, show it to the direction from which the wind is coming. Draw this line exactly 3cm long to represent 30 knots. This is line AD in diagram 2.

From point D draw a line DB, exactly parallel to your desired course, AB. Now place a ruler so that the zero on the ruler coincides with your starting point A. Always keeping the zero at A, rotate the ruler so that it crosses line DB. At the point where 1cm on the ruler to represent your airspeed exactly crosses the line DB, stop rotating the ruler and draw a connecting line from A to it. Where it crosses the line, we shall call P, as shown in diagram 2.

The direction of this line is precisely the compass heading which the aircraft must fly so that its track over the ground coincides with the desired course AB.

One more useful piece of information can be gleaned from the diagram. Draw a line from P, keeping parallel to the wind vector AD, so that it crosses the course, AB. Let's call this intersection C. The length of the line AC represents the actual speed, in knots, of the aircraft over the ground, i.e. its groundspeed. The groundspeed, which represents the aircraft's true progress, is the combination of its airspeed and the influence of the wind.

Well done. You have constructed a parallelogram of forces by adding the aircraft and wind vectors. A vector is a quantity which has both a magnitude and a direction.

# RIGHT NAVIGATION

## YOU KEEP ENDING UP AT THE WRONG DESTINATION

With angles other than 90 degrees the result will be a true parallelogram, rather than a rectangle.

Now measure the line AC. It should be exactly 12.05km long, which means that the aircraft's groundspeed will be 120.5 knots. The time required to reach your destination is then easily calculated, since flight time=Distance/Speed.

### THE PROGRAM

And now the good news for those of you who do not get their jollies from painstaking drawings: The Poly Logic Aircraft Corporation, with startling foresight, has equipped every crew room with an Atari computer, a copy of PSH and a copy of the navigation program shown in the listing.

On boot up, an appropriate signature tune is played. When you have heard enough, just press **START**. The program is designed to be easy to use and consists of a simple Graphics I screen containing the required information prompts, which appear one at a time, and the results of the calculations are finally displayed at the bottom of the screen. For greater convenience, there is an option to print out all the details included in the screen display. **NOTE:** All distances must be in nautical miles, and all speeds in knots.

You are asked to enter the compass bearing of the desired course and of the wind, together with the airspeed of the aircraft and the windspeed. Take care when entering the compass bearing of the wind. There is a long standing convention that the compass direction that is always quoted is the direction from which the wind is **COMING FROM**. Enter this where asked for the wind bearing. For example, an East wind is blowing from the East. How you would enter 09 degrees.

The compass bearing of the chosen destination can be found from the PSH aeronautical map by careful use of a protractor. Make sure that the 0 degree line on the protractor is aligned with 0 degrees on the compass roses printed on every VOR beacon. Alternatively, if the destination airfield is equipped with a VOR beacon, and is within radio range of the starting point, set as the start and time to NAV1. Then adjust the azimuthing indicator until the vertical line is exactly in the middle and the instrument displays '0'. The compass bearing on the instrument is the required bearing to enter into the navigation program, and the **DIS** displays the distance in nautical miles. Alternatively, a nautical mile scale is printed on

the aeronautical map for measuring distances.

What happens if the wind is travelling faster than the aircraft? Just enter the figures, and see.

### THE LISTING DETAILS

The essentials of the program are fairly short, ending at line 1120. Thereafter, the masses of DATA statements are only included for the mass, if this is of no interest, and you are looking for a way to ease those throbbing finger tips, ignore all lines from 4000 onwards. Alternatively, just type in some of the main data, including the sub-routine at lines 4000-4005, but make sure that the FOR loop at line 4018 matches the number of DATA statements which you have included.

Variable names are a bit long-winded but just intended, however, so that the calculations will be fairly straightforward to interpret. Lines 520-535 calculate the **ANGLE** to add or subtract to the **COURSE** in order to obtain the **HEADING** to fly. There follows much IFing and testing to decide whether to add this correction, or to subtract it. Just one of the complex parts of working with a 90-degree compass.

The calculations make use of the trigonometric sine function, however. Most basic discs do not include **ASIN**, which converts a sine back to an angle. Fortunately, it does include **ARCSIN**, which converts tangents back to angles, so two simple relationships are made use of:


```
sin(HEADING-COURSE)=VW/VAC  
or  
sin(HEADING-COURSE)=
```

where **W** represents the angle, in degrees.

No more chess - that should get you through the maths. Don't ask me for a rigorous geometrical proof, I can't do it. Why do you think I married a maths graduate, anyway?

### FURTHER READING

If you would like to know more about your navigation, take a trip to your local library. I was pleasantly surprised to find some full of books for budding pilots. Particularly good was 'Ground Training for the Private Pilot License', by R D Campbell, which comes in three main manuals, plus some advanced ones. Number 2, 'Air Navigation and Aviation Meteorology', will tell you all you ever wanted to know about Meteorological Properties, including the interwoven variety, and Landolt-Cornford Course Properties. Also, **Model** The set is published by Collins in the UK, and in the USA is distributed by Sturtevant House Inc.

**PROGRAM OVERLEAF** 

continued on page 30

# DEAD RECKONING

```

00 0 ADD .....
01 0 ADD WITHOUT MULTIPLYING CALCULATOR 4
02 0 ADD 4 FOR FLIGHT SIMULATOR II 4
03 0 ADD 4
04 0 ADD 4
05 0 ADD 4
06 0 ADD 4
07 0 ADD 4
08 0 ADD 4
09 0 ADD 4
10 0 ADD 4
11 0 ADD 4
12 0 ADD 4
13 0 ADD 4
14 0 ADD 4
15 0 ADD 4
16 0 ADD 4
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68 0 ADD 4
69 0 ADD 4
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74 0 ADD 4
75 0 ADD 4
76 0 ADD 4
77 0 ADD 4
78 0 ADD 4
79 0 ADD 4
80 0 ADD 4
81 0 ADD 4
82 0 ADD 4
83 0 ADD 4
84 0 ADD 4
85 0 ADD 4
86 0 ADD 4
87 0 ADD 4
88 0 ADD 4
89 0 ADD 4
90 0 ADD 4
91 0 ADD 4
92 0 ADD 4
93 0 ADD 4
94 0 ADD 4
95 0 ADD 4
96 0 ADD 4
97 0 ADD 4
98 0 ADD 4
99 0 ADD 4

```

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00 000
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02 000
03 000
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85 000
86 000
87 000
88 000
89 000
90 000
91 000
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96 000
97 000
98 000
99 000

```



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# DEAD-RECKONING

continued

## GET FLYING

Now load up P&P and log in to the New York and Boston ATX scenery. Try the following:

Martha's Vineyard to Sea. Edward Lawrence Logan 10107-national  
 Bearing 357 degrees. 82 nautical miles  
 wind: 30 knots, from 287 degrees.  
 airspeed: 105 knots

Try to fly direct on a compass heading of 357; you should find that you are blown off course, to the East. Now, using the navigators program, if you fly a heading of 343, you should arrive at your destination without further mishap.

Now work out your own examples. Try some notoriously high winds to prove that it really works.

## FURTHER REALISM

I find that a good road map of the USA fills in much of the detail that cannot be included in the scenery disk data. I like to imagine the whole panorama spread out before you like an



aerial photograph, glimpsed occasionally between the following white clouds, floating in the air like bumps of cotton wool. The map is also useful to determine the maximum safe altitude at which to fly. You should not fly below 1000 feet above the highest ground on your route. That is, if you want to avoid frightening livestock and old ladies, and getting wrapped round high voltage cables. If you want to prove to yourself, ask yourselves, will P&P ever be down? No - NEVER!



# ACE DRIBBLER

Take a couple of croquet balls, a handful of playing cards and mix well with some of the delights of watching and you have a truly game to test your will and patience.

All you have to do is knock down the men with the yellow ball which is manoeuvred by hitting it with your joystick controlled blue ball. To complete each of the 32 screens simply knock over the Ace of Hearts. Unfortunately, you won't be able to do this until you have the

penalty of all the Clubs which have a nasty habit of turning into impervious little wallpaper! Meanwhile, look on the screen, the Spades are digging potatoes which have conscious appetites for yellow-croquet balls! Diamonds can be bonuses but don't forget as you'll have to move fast. The trouble is that you can't speed up until you hit the 'two-ball' sign on the pattern. If your ball gets stuck in a raffle, hit your coin-sliver press START to get out of it. And by doing so you'll lose your ball! You'll just have to be a careful dribbler won't you?

You have three croquet balls to test the game and up to 4 players may compete in turn using a joystick plugged in Port 1. Press SELECT to obtain the required number of players then press the joystick button to commence play.

## SCORING

Ace of Hearts - 1000  
Ace of Diamonds - 500  
Ace of Clubs - 100  
Ace of Spades - 10

## TYPING IT IN

Cassette and disk users should type in Listing 1, SAVE or COPY a copy, then RUN the program. The program will check each line of data and inform you of any errors. Correct any errors and RUN the program again until all errors are eliminated. When this is done answer the cassette's questions accordingly to create a boot tape or binary disk file.

Cassette users should load the boot tape created by firstly removing all cartridges and then turning on the computer while holding down the START key (XL and SE owners should hold down OPTION as well). Press RETURN and the tape will load and run automatically.

Disk users should type in Listing 2 and save it on the same disk as the binary file created by Listing 1. Run the Listing 2 program with the disk in the drive and the game will load and run automatically.

# AND THE ROADHOGS





# 1020 PLOTTER ROUTINES

## Ray Allen provides a couple of utilities for the unique little 1020 printer/plotter

The 1020 printer/plotter will continue popular with re-evaluated units now being readily available from one of our current advertisers. It is a handy little printer for program listings and many owners will have tinkered around trying to program it but few realize that it can do full screen dumps just like any other printer.

The program presented here will dump any Graphics II screen that has been saved as a standard 62 sector file. It is not particularly fast but it certainly works! Using standard start basic a full screen dump will take an incredible 50 minutes but this can be shortened to around 30 minutes by using Turbo Basic and to 23 minutes by compiling the program with the Turbo Basic Compiler.

The several short listing won't take nearly as long! It is a simple directory printing routine that you could add to any of your programs and it produces a neat four column printout of any disk to drive 1.

### THE 1020 SCREEN DUMP

The main use is to print out a GRAPHICS Mode II screen. The program will print screens from KODAK from the PAGE 4

```

00 1 REM
00 2 REM | DIRECTOR'S PRINTER FOR IBM |
00 3 REM | New Way 1020 |
00 4 REM
00 5 REM
00 6 REM
00 7 REM
00 8 REM
00 9 REM
00 10 REM
00 11 REM
00 12 REM
00 13 REM
00 14 REM
00 15 REM
00 16 REM
00 17 REM
00 18 REM
00 19 REM
00 20 REM
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00 22 REM
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00 89 REM
00 90 REM
00 91 REM
00 92 REM
00 93 REM
00 94 REM
00 95 REM
00 96 REM
00 97 REM
00 98 REM
00 99 REM
00 100 REM
    
```

Library) and it can print Atari Affix screens but they don't look that good to me either.

The dump features bi-directional printing but is still fairly slow. One tip is to tear off the paper before each print as the printer will advance the paper to see if you have got enough and add equal amounts of paper at each end of the finished print. If you print a lot of screens the change should then be on the same size of paper.

### HOW TO RUN

The program will first ask for the name of the PIC file you wish to dump. When entering the filename you don't have to put "D:" as it will be done for you if left off. If the PIC to print is called PICTURE then press RETURN only as this is the default filename.

You will next be asked for the colour to print the picture in. It only prints in one colour as Graphics II is only one colour but you can choose which of the four pens to use. The picture will then load in with the screen white to represent the paper and then change to black. This will show you what the finished print should look like. When the print-out is finished go and make a cup of tea! It will ask if you want to run again.

The print sub-routine can be used in any program that does Graphics II screens such as SPED in an earlier issue of the magazine. Just add the routine after the screen has been drawn.

### 1020 DIRECTORY PRINT

This simple little routine will print the directory of a DOS 2.0 disk and should work with other DOS's but I have not tried any.

The directory will be printed in four columns across the paper and this can be put in the jacket of the disk so you will know what is on each disk. The routine could be added quite easily to any program.

I hope that you continue to enjoy using the 1020, mine still gets re-used a lot!

```

00 04 000
00 05 000
00 06 000
00 07 000
00 08 000
00 09 000
00 10 000
00 11 000
00 12 000
00 13 000
00 14 000
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00 16 000
00 17 000
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00 90 000
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00 92 000
00 93 000
00 94 000
00 95 000
00 96 000
00 97 000
00 98 000
00 99 000
00 100 000

```

```

00 000 0000
00 001 0000
00 002 0000
00 003 0000
00 004 0000
00 005 0000
00 006 0000
00 007 0000
00 008 0000
00 009 0000
00 010 0000
00 011 0000
00 012 0000
00 013 0000
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00 090 0000
00 091 0000
00 092 0000
00 093 0000
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00 095 0000
00 096 0000
00 097 0000
00 098 0000
00 099 0000
00 100 0000

```

# SOUND RECORDING

## Part 2

**A**s discussed in the last issue, an ordinary domestic stereo cassette recorder can make perfectly acceptable recordings of the music you produce with your Atari computer. But if you get really serious about creating recordings you soon discover that a stereo machine has many limitations. For instance, once a piece of music has been recorded there's not much more you can do to it - except play it back. If you've looked into the subject at all you find yourself drooling over the creative possibilities available to professionals, with their multi-channel sound mixing desks, multi-track tape recorders, and electronic effects generators. Then you realize the astronomical cost involved puts it all permanently beyond your reach. Don't despair though, as once again technology has come to the rescue! It's now possible to set up a "home studio" utilizing many of the facilities of a professional studio at a surprisingly low price. Obviously, everything is on a smaller scale and you won't get full professional quality, but the results can be amazingly good.

The big breakthrough was the invention by Tascam of the cassette based multi-track recorder, complete with its own built-in multi-channel sound mixer. During one to five houring you own portable recording studio, hence that awful term "portastudio" now used to describe machines of this type. Other manufacturers soon jumped on the bandwagon and now companies such as Denon, Fostex, Sennheiser, and Tascam also have models available.

Competition has caused prices to tumble and you can now buy a portastudio for under \$200, but for this amount you'll only get a very simple model. You probably really need to spend at least \$200 to get something you won't quickly outgrow. Sounds expensive? Perhaps, but it's a tiny fraction of the cost of professional equipment, and will give you a creative freedom just not possible with a normal stereo machine.

## MULTI-TRACK

The typical stereo cassette recorder always records and plays back two audio tracks at a time, i.e. the left and right stereo channels. Most portastudios have four tracks, but more expensive models may have six, or even eight, and can usually record consecutively on any combination of them. More significantly, they can record on some tracks while simultaneously playing back others, allowing new sounds to be added alongside those already recorded. The tracks cover the full width of the tape and operate in one direction only (side B), cutting cassette capacity by half. Also, the latest portastudios run at twice normal speed for improved sound quality, reducing capacity by half again. Thus, a C90 cassette might only hold 15 minutes of music, and this together with the need to use only good quality chrome tape, means running costs can be quite high.

The portastudio's microphone and line inputs permit the recording of acoustic sounds or directly connected live or MIDI

**John S Davison concludes his exploration of direct recording from your Atari**

synthesizer, drum machines, and yes, even the humble Atari sound chip. The portastudio and MIDI sequencer therefore naturally complement each other. For instance, you could use MIDItoMIDI on your Atari II bit machine to build a synthesizer based multitracked backing, and record it onto one of the portastudio's audio tracks. Then, as separate overdubs, you can later add other sounds to this using the other tracks - acoustic instruments, solo or backing vocals, sound effects, or anything else that takes your fancy. You can then replay all tracks simultaneously to create a complete musical performance.

## STEREO MIXDOWN

There's a snag if you want to give your multi-track creation its moment also to hear. The portastudio's track layout (two tracks versus two, recording speed @ 9.5 cm/sec versus 4.75), and noise reduction system (dbx or Dolby C) versus Dolby B usually means your cassette can't be played on ordinary cassette machines. You must first convert it to standard stereo cassette format by performing a "stereo mixdown". During this process you can also extensively manipulate the sound on each track, and it's this aspect which provides those additional creative opportunities.

The mixdown is achieved using the portastudio's built-in sound mixer. Its basic function is to take any combination of recorded tracks, mix them together, and route the result into two outputs, i.e. the left and right stereo channels. Additionally, you can use the mixer's "level" controls to independently boost or cut the volume of each track to achieve a good subjective sound balance - for example to ensure the vocalist on track 4 was heard above the drums track (3).

You can also use these facilities to perform "track bouncing", a technique permitting playback of up to three existing tracks and re-recording their combined sound onto the fourth track. You can also add new sounds live as you go, so the fourth track could carry four different sound components AND you've freed up the other three tracks for reuse. If you repeat the procedure with three tracks, then two, then one, you can actually record 1024 different sets of sounds onto just four tracks without bouncing any of the sounds more than once! Clever, eh?

## THE SOUND STAGE

There's more. You can create your own stereo image layout by using the mixer's 'pan' controls to laterally position the sound from each track anywhere on the stereo 'soundstage'. For instance, you could position the vocal and drums in the centre, with acoustic guitar to the left, and synthesised sounds to the right. You can even create moving sounds if you wish. You can also change the tonal balance of each track using the mixer's 'equaliser' facilities. In their simplest form they're similar to the bass and treble controls found on hi-fi amplifiers. They allow you to cut or boost the high and low frequency content of each track, for instance to keep up a bass guitar sound, or add more 'edge' to a singer's voice.

Finally, most poststudios are fitted with at least one 'effects loop'. This enables you to feed the sound from any track to a separate 'effects unit', then mix the resulting sound back in with the original at any required level. Effects units are separate accessories which enable you to create electronically generated reverberation, delay, echo, chorus, and a host of other special effects. They're not essential, but do help you produce more 'professional sounding' results.

The market is flooded with different effects units, priced from about £25 upwards. The impressive one we offer designed as an 'effects pedal' for electric guitar, but are usually adequate for poststudio use. The most useful one is undoubtedly a reverb unit. With my Yamaha MTX poststudio I use a Yamaha RE10 reverb unit I bought secondhand for £20. It's this which added that 'spacious' ambience to my voice on Page 8's World of Computer Music Making cassette. The RE10 has 58 different preset reverb, delay, and echo effects, each of which can be edited to produce an 'effects patch' to meet any particular requirement.

Taken together, the poststudio mixdown facilities provide you with endless creative possibilities. With so many variables to play with it's easy to spend far more time doing the mixdown than re-creating the original multi-track recording! You need to listen carefully to what you're doing at this stage, as a good pair of ears and a decent monitoring system are essential. Headphones, even high quality ones, are virtually useless for monitoring - you really need to hear the mix via loudspeakers to get it right. You can start by connecting the poststudio to your hi-fi, but you can buy specialised monitor amplifiers and speakers if you're really serious.

Once you've got the mixdown sounding right you can record it onto an ordinary stereo recorder connected to the poststudio's stereo outputs. Now! It then has a standard stereo cassette playable on any domestic closed to machine.

## ATARI IN THE STUDIO

Did I hear you asking where your Atari fits into all this? Well, I've already mentioned its obvious role - in MIDI sequencing to produce some of the music you ultimately record onto tape. However, there are more exotic uses, such as controlling effects units and extending the capabilities of your poststudio.

It may surprise you to hear that many effects units now come equipped with MIDI! This allows you to hook them into your MIDI system and control them from your Atari. For example, using MIDI System Exclusive facilities you could save and load customised effects patches, you're produced for them, or auto-

manually switch from one effect to another using MIDI Program Change commands. Using an appropriate sequencer on the ST you can create a separate effects track alongside the sequenced music tracks. This can carry MIDI Program Change commands aimed specifically at the effects unit. Sounds - as discussed earlier - between different effects, at precisely the right point in the music!

Sometimes even a poststudio's four recording tracks can seem limiting. One way of expanding its capabilities is to synchronise it with a MIDI sequencer running on the ST. You can then record or play back tape tracks with the sequencer locked accurately to step with them. This makes all these sequencer tracks behave like extra tape tracks, so you don't need to record the music they represent onto tape at this point. This frees up tape tracks for additional acoustic recordings, while the sequenced synth and drum machine sounds are played 'live' from the sequencer every time you run the tape. The latter don't get onto tape and the final stereo numbers, where they can be mixed in with the sounds from the poststudio's tape tracks. For this technique to work you need a sequencer which can generate and respond to timing signals, and a poststudio which can record them correctly onto tape. Not all have these capabilities.

You don't get something for nothing, though. You have to dedicate one tape track for use as a sync track. In the simplest form this involves a recording of a stream of MIDI clock signals. Unfortunately, these are unsuitable for recording directly onto tape, so first need converting into audio signals. Known as Frequency Modulated (FM) tones, similarly, as playback the FM tones need converting back again before any MIDI gear will respond to them. This two-way conversion is handled by a special piece of hardware called a MIDI/FM converter, available as an optional extra for the poststudio for around £60.

In use, the sequencer is used to generate the clock signals for recording onto the tape as the required tempo. On playback from the tape, these signals may be thought of as kind of high speed metronome. The sequencer listens to its ticks and matches its own tempo precisely to them, resulting in tape and sequencer running exactly in step. You can now record accurately onto tape as the MIDI into the sequencer tracks. Knowing that the time are running as one, effectively you've turned your humble four track poststudio into something much more powerful. For example, if using the Steinberg Turbo sequencer you now have the equivalent of a stereo track recorder - neither as the sequencer and live on the poststudio.

Well, that's out of space again and I've barely scratched the surface of the subject. However, I hope you've read enough to want to begin recording your own musical creations. Who knows, it could be your first step to stardom!

## THINKING OF MIDI?

### PAGE 8'S WORLD OF COMPUTER MUSIC MAKING

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# WORD MAZE

*Peter Dean presents a challenging arcade adventure that will require logic and careful thinking to solve*

**W**ordman is an arcade adventure that combines logical puzzles with a testing program.

In a quest to find a missing vase there are sixty-four rooms to explore, with hazards and obstacles to overcome. Help is available in the shape of several objects scattered throughout the maze. Furthermore, a teleport system will enable the player to get round much faster.

The program is written mostly in Basic, although machine code is used to set up the screens. One aspect of the game - a feature not always found in commercial offerings - is the ability to save your progress at any time. This can be done not only to tape or disk but also to memory. Using these functions will avoid continuously starting from scratch since all times have been lost.

## HOW TO PLAY

Your goal in Wordman is to retrieve a lost vase and return it to the start. Along the way there are problems to solve, skills to avoid and a puzzle that needs unravelling.

Getting around the maze is simple enough, just point your joystick in the direction you wish to go. To take or negotiate an object, position your man either side of the object in question and press the joystick button.

The following keys can also be used:

- 5 - save the game at your current position. A further keypress will then be required the option being shown below the depicted room.
- 1 - load a saved game. Again a further keypress will be required.
- q - quit the game; with the option of starting again.

At the outset your man has five lives and these will be reduced each time a skull is encountered. Hidden somewhere further on, however, is a bottle of life-restoring liquid. In addition to various objects scattered around the maze, the nine individual letters of a password can also be found. These must be collected in their proper order, so the temptation to take the first letter you discover must be resisted. The rule is, work out the program before making your collection. Drawing a map is essential.

Good luck and remember ... try not to get involved in too much shillygagery!









# WARGAMES

# U.S.A.A.F.

**Norman Davies relives the Daytime Bombing of Nazi Europe by the USAF**

**W**hen Lord Beaverbrook gave the Soviet government his memo "Be Prepared" he was probably thinking of his war experience. Thus it is with this war game from Strategic Simulations. With its attractive packaging the first inclination is for the player to load up the drive and "go to war", but this is a game for the tactician and strategist, a game to be played at Command level no to be won and "The Prepared".

It is recommended that the potential player first study the well prepared and somewhat numerous rules on such time will be well spent and is essential for maximum pleasure from the game.

With twelve three-column pages of instructions to read any would be player will be hard pressed to assimilate enough information to play even a short game, but with the opportunity to choose a computer v. computer mode of play it is possible with the manual to hand, to just sit and watch a short game being played through automatically, if only the producers of this game had thought to give a short step-by-step introductory game in the manual it would, I'm sure, have been a big help to a laic understanding of the play. As has been said, however, the manual is very detailed and with study it is possible to pick up the basics of the game fairly soon.

The graphics consist mainly of a map of Europe with all the main cities accurately shown with orange fill in. Switzerland is shown as a white striped area. The numerous airfields are shown by a small green cross which becomes white when the airfield is an active one. Besides this map being shown on the screen the kit also includes two printed versions of the full map divided into six weather zones, one for each player.

If playing a first game it is recommended to set the delay factor, which slows down the various information flashes which appear at the bottom of the screen to the maximum value 99, even so, this



does not leave a lot of time to read the display and makes the information almost unobtainable when in combat mode. A "freeze" button would have been handy on these occasions, unfortunately, the only way to stop the game is to press the "break" key, but this means starting the game almost every time!

The number of elements involved in playing this game is truly remarkable, from choosing your main's destination to deciding the type of aircraft and its fighter support, assessing fuel load, weather reports

and their restrictions on all fronts, where to cross the coast, secondary target, type of industry to attack. From the German side - where to place your flak, what type should it be - heavy or light, where will the enemy strike, which fighter group to send up, what type of aircraft do we want to build? Both players must also take into account the fact that phase game they are playing, there being three phases: 1 August 1942 - 1 February 1944 - 1 October 1944, which means of course that certain types of aircraft were not available until later in the campaign.

Taking into account the tables for industrial production levels at the back of the manual, the calculations for bombing results and loads lost out, printed in a lighter colour and intended for the very advanced player, it is obvious that this game was created for only the highest caliber of wargamer! As such I can recommend it to them, but for the average wargamer I think that the necessity to study such a mass of instruction for what in the end will only be a resulting calculation would not give enough game satisfaction to make it worthwhile.

A little more graphic animation, for example separate logos for fighters and bombers for status would I believe make the game a little more acceptable, but all in all it is really for the hellfire to play. If you have one or two wargames under your belt then you might just be well enough prepared to do battle with this one.

This program, along with other wargames is available from Miles Better Software of Corvallis who kindly supplied the review copy.

Title: **U.S.A.A.F.**  
Publisher: **SSI**  
Price: **XL/XE**  
Retailer: **\$16.95**

# TUTORIAL SUBROUTINES

## WHAT'S A MODEM?

Ian Finlayson takes a break from programming to tell you a story

**I**n the last magazine I promised to tell you a story, and this month instead of a sub-routine I am going to recount a tale of my short exploration of computer communications via the telephone. I hope that this will be as instructive as a tutorial sub-routine, but I do not promise to reveal all - I have heard a lot, but I have really only dabbled in telecommunications. You will see as the story unfolds that there is a lot to discover.

It started back in May when a friend asked me if I would like to borrow a modem. Well, like most computer hobbyists, I had read about the wonderful world of bulletin boards and databases existing out there and wondered whether it would be worth pointing to, and here was a chance to try it out. In seeking me out, of course, I accepted the kind offer.

## THE EQUIPMENT

The first thing to do was to find out just what I was borrowing and see if that alone would enable me to go on line. The equipment was as follows:

- Fax: Lanier F211/V25 Modem complete with power supply
- Datatar Serial Interface
- Multi-UserTerm software
- Long telephone extension lead

I reviewed the manuals and found that this was indeed all I needed to get started. The long telephone extension lead was connected to my phone in its domestic hall and the computer in its spare room, really upstairs. I wondered a little about the Datatar interface as I already have an 850 interface but the user guide suggested that the Datatar would be better as it can handle 1200/75 baud while the 850 can not that was later discovered. I connected all up and was ready to start.

## OFF-LINE START UP

The first time I switched on without the telephone connected as I wanted to get used to the various commands and functions contained in the multi-screen software before connecting to the telephone line and incurring telephone charges. At first I found the use of multi-screens rather difficult. The manual is terse and although it tells you how the various screens work it does not tell you anything about how to dial a number and other such basics that a newcomer needs to know. The software seemed to be heavily orientated towards use with Windows systems (Fintel, Mosaic etc) which was disappointing as I did not really want to get involved with screens you have to subscribe to so much as the hobbyists bulletin boards which generally use 8086 terminal mode rather than Windows. To be fair to Fintel's Technology, I have since discovered that part of my initial disappointment with this software was due to my own ignorance, and part was due to the fact that the user guide did not have any reference to the fact that the software has had a radical update. More recently I have discovered a file on the internet called W300.MTE, which describes the changes. It makes ordinary communications with a bulletin board much easier and includes important features such as the ability to upload and download files with Xmodem error checking.

## GOING ON LINE

Having played around with the software in an off-line mode for a while while I was here to go on line, I found out how to dial and access other facilities of the latest modem from its comprehensive manual and with some excitement dialled for the first time. The modem carried out the dialling sequence, making the telephone think as it were. Then, almost, there the engaged tone, there is the first disappointment. Although there are now quite a number of bulletin boards in the UK they spring up and die off quite quickly. Only the best survive and they become very popular, so when you dial you will often get an engaged tone from a popular board or a number unobtainable from one which has been discontinued because the Sysop has grown up. You just have to be persistent. The first time you get a connection is exciting. Usually the first thing that comes over is a string of garbage as the computer or modem exchanges information to ensure both ends are working at the same speed. Then a request for the user name (USERNAME) and the bulletin board will announce itself and go into a log-in sequence. Most boards will only give you very limited access on your first visit, but you can come away with your own login name, e-mailer and password for future visits where you will be given more privileges.

## BE PREPARED

The first thing you will find when you get connected is that you have forgotten all the preparations you had intended to make. Where is the paper and pencil you were going to have ready? Is there a blank sheet of ink anywhere to save data or files? At the same time you are connected you are sitting to your telephone bill before a long distance meter so it is as well to be prepared.

## 40 COLUMN SCREEN

I now found that there is another problem with the Atari when it comes to talking to bulletin boards. Many of them are set up for computers with 80 column screens so on an Atari screen all the lines wrap at the 40 column limit and nothing seems to line up. This can make menus and text screens very hard to follow. One way to improve matters is to have a printer on line so that you can see the text as hard copy 80 columns wide, but this has the disadvantage of slowing things down unless you have a large printer buffer and using large quantities of paper. An alternative is to keep saving your data buffer to a disk file which can be looked at in slow time after you log off. This can speed things up but can only be used when you know your way round the particular bulletin board as it does not help the clarity. If you are accessing Viewdata screens there is no problem as they use a 40 column format which will display correctly on your TV screen.

## MINI OFFICE COMMS AND ARK SOFTWARE

The Multi-Viewterm software does handle Viewdata satisfactorily, but my initial disappointment with this software package led me to try and find others. I had a copy of Mini Office II as I tried the Communications Module. This seems at first to be more user friendly than Viewterm, but having used both more extensively I would now choose Viewterm - it does not have as powerful a Macro language system as Mini Office but this is outweighed by its Xmodem file transfer and Viewdata capabilities. I have tried downloading using Mini Office and because there is an error checking there always seems to be a flaw in the received file.

Finally I went off to the Ark Communications disk from the Page 6 library, and for general use this is the program for me. It also provides a capability for communicating at the split baud rate 1200/75 via the 950 interface. All the programs on the disk were supplied by the Ark BBS as they are 'supported' by a regular user. Unfortunately since I received the disk, I have not been able to raise the Ark - it seems to have gone off the air, and I have not yet found another Bulletin Board with a bit software to download. The Village used to have some but their 8 bit machine seems to have been deleted.

## A CHEAP MODEM

All this time was lost with a borrowed modem, but the loan did not go on for ever so I took out and buy myself a modem? Well, that is another story! I was late I thought very lucky. I was offered a Linnet 1200 modem for £35. It no longer had the borrowed Datamat interface, but as I already own an 850 interface all I needed was a connecting cable. I ordered the

parts from Maplin and made one up myself. When I connected up and tried to get going I was a bit suspicious as several of the lights on the modem came on before I started to dial, and there I could get no communication between the computer and the modem let alone with the telephone system. Of course I checked my own cable, but after extensive checks I decided that it had to be the modem itself. I thought that the sensible thing to do would be to go to the manufacturer (Pace) for a quote for a repair. They are a British company so this was feasible. I was given a quote for a routine service of £20 plus VAT, a sum that was on the limit of what I was prepared to spend, so I sent it off by postage about £20. A while later I had a letter to say that the modem was badly damaged and the repair bill would be £75 plus VAT. My hobby will not stand this and so I have reluctantly asked Pace to send the modem back. But was several weeks ago and I have yet to see the machine, but it does not really matter. This has been quite a disappointment as the Linnet modems are intelligent and therefore only need simple software to drive them. They have a 1200/75 capability and buffer memory so they can talk to the host computer at 1200/75 whilst talking to your terminal at the highest speed that your software will allow (in my case 1200/1200) thus getting round the limitation of the 950 interface. Still the experience has not been all wasted. I have made up a real modem cable to connect my Atari to my PC so I can use the same software to pass data back and forth. Will I ever be allowed to write for New Atari then again if I admit that this article was written using Word Perfect on a PC and then downloaded to an Atari disk?

## DEFINITIONS

There is a great deal of jargon in the computer industry and the telecommunications area is no exception. When you start to try and find out what it all means it can be very obscure as those who have more expertise tend to assume that others will understand all the time. Below, there then are some of the more important terms I have come across, and what I understand them to mean.

**MODEM** - A modem is a Modulator/DEModulator. That is a device which will take the output of the computer and change it into a form that is acceptable to the telephone system and also take input from the telephone line and convert it for the computer.

**BAUD** - A BAUD is a measure of rate of data transfer - one bit per second. There are 8 bits per byte and some added control bits making a total of approximately 10 bits per byte. Thus 10 baud is approximately 1 byte per sec. We have to take account of the extra data that has to be sent to overcome errors and accurate data transfer (block protocols, checksums etc) this can be up to a 20% overhead. At the very best then 1200 baud is then 120 bytes per second / 7200 bytes per minute on a 32 Kbyte file will allow 4.5 Minutes of 1200 baud or 18 minutes at 3600 baud.

**DUPLEX** - This term describes the way the computer gets an 'echo' back from the receiver. It is quite disconcerting if you type things in and see nothing happening. Full duplex is the normal and this expects an echo to be received. Half duplex is occasionally required to provide a local echo. Do not worry if you select half duplex when full duplex is needed all that happens is you get repeated lines on your screen.

**ASCII/ATASCII** - These terms are probably familiar to you. The normal standard character set is ASCII but Atari 8 bit computers use a slightly different one called ATASCII. Nearly all communications are made in ASCII, but some Atari Bulletin

continued overleaf

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## TUTORIAL SUBROUTINES

continued

boards use XTASCII so that any graphics characters etc. in a file which is to be transferred come across correctly. If you are only doing plain text, numbers and punctuation it should not matter which you use.

**PARITY BIT** - An extra bit in each data package is error checking, but is just a guess you know that the received bit is the other end is not different.

**PROTOCOLS** - You will see systems described with code numbers beginning with a V. These are a shorthand which describes the capabilities of the modem against a set of standard definitions. The most common are:

- V21 Dual rate of 300/300
- V22 Dual rates of 1200/75 or 75/1200
- V22bis Dual rates of 1200/1200

In more expensive modems there are further facilities for error correction and data compression which are incorporated to get the maximum data transfer rate from the telephone system without loss of accuracy. These are normally far too expensive for the amateur user. You may see modems such as V35 Data Answering and V42 - Error correction protocol.

**VIEWDATA** - This is the terminal mode which is right for accessing information systems such as Prestel. It is like the Teletext information systems available on some television sets and can contain both graphics and colour. It is not generally used by amateur bulletin boards. Viewdata services usually operate at 1200/75 split baud rate.

**ANSI** - This is the terminal mode used for most text communication such as used with amateur bulletin boards. There

are many other types of terminal simulation in the computer world that you will probably not come across them in Atari 8-bit console packages. ANSI terminal mode is sometimes just called Terminal mode to distinguish it from Viewdata mode.

**Spellers** - A file transfer method which includes a simple error checking algorithm, this was one of the first error checking systems and is still widely used. There are many other such systems including variations and developments of Xmodem, Ymodem and Zmodem. For file upload and download you must use the same version as the terminal you are communicating with.

## AND LASTLY

If you have never tried telecommunication and are thinking of getting started I would say get the best modem you can afford, preferably with 1200 Dual and Hayes compatibility. There is a lot of fun in exchanging ideas with others via electronic mail and BBS and it is not difficult. Many BBS run sessions for special interest groups (SIG) where you can exchange information on your hobby or other specialist subjects. Availability of software for downloading is quite another matter too, don't expect to be able to find masses of free 8 bit programs.

If you already use an Atari for communications I would be interested in hearing from any of you. Who knows, if there is enough interest I may get my modem repaired. You can write to me as follows:

Ian Pinyanov, 60 Roundstone Crescent,  
East Preston, West Sussex, BN16 1DG

# GRAND PRIX SIMULATOR

**W**ill Ayres finish with the "championship" title? Nigel Mansell change his mind and drive for Williams again? Will Murray Walker commentate through an entire race without getting "intentional"? As the Formula One drivers line up at Monza for the start of the Italian Grand Prix, these questions, and many more, remain unanswered. By the time this magazine reaches the newsstands the championship will have been decided but my experience of World Cup football says Kick-Off is more 450 than insight and to make predictions "Whatever happens, if

you can't wait for the new season to come around then you could do a lot worse than obtain a copy of Codemasters' GRAND PRIX SIMULATOR.

Developed by Johnny Damon, an up-and-coming driver who is best known for his contribution to Jaguar's victory at Le Mans in 1988, the game is a one against one racing game reminiscent of the arcade hit *Superdrome*. After the rather lengthy loading sequence (and having manually swapped the tape drive motor since this doesn't occur automatically) you're welcomed by a lively musical composition and an attractively opening screen depicting two artificially dressed Formula One cars. Select a car or two player game and the scene switches to an overhead view of the first in a series of twelve curiously designed racing circuits. Although restricted by the size of the playfield (around ten



blocks of the circuit), the tracks are liberally equipped with bends, bridges, oil patches and other obstacles to really test your driving skills.

Controlling the vehicle car isn't easy but after some practice you can proceed with the main business of trying to complete the specified number of laps before your opponent. A rather peculiar sounding digitalised voice counts down to the start of the race - later, you'll hear it announcing the winning car's position and warning "game over" (but marks for effort). Stating

through corners, negotiating bridges with some reliability and ending your opponent off the track are just a few of the options ahead of you in the battle for driver supremacy. It all adds up to an exceptionally exciting challenge, especially if you can find some human competition.

If you enjoyed Codemasters' *BMS Simulator*, there's little doubt you will find this game equally addictive. With excellent graphics, interesting sounds and intensive playability, it's possibly more fun than the real thing.

**Title:** GRAND PRIX SIMULATOR  
**Publisher:** Codemasters  
**Price:** £1.99 cassette  
**Pages:** 1/2  
**Loading:** 1W40  
**Reviewed by:** Paul Dixon



**R**eviewed in MAM issue 28, the ST release of BOMBFUSION received less than a glowing recommendation. It was described as no comparison to the award winning single or an 8-bit budget game, so I was quite excited when the generic budget-priced version arrived on my desk. For review? Would it prove to be the ultimate underachievement to ST owners and the best XL-demo ever? Alas, not both programs are actually rather similar and although I wouldn't attribute all of the ST

owner's comments to the 8-bit game, I can't avoid mentioning its complete ineffectiveness and appreciation. Obviously featuring numerous bits of bad logic, the plot involves terrorist bombs planted at a Nuclear Powering Plant and your efforts, as an ex-super hero whose mode of transportation was apparently designed by that innovative life scientist, to avert a global catastrophic fiasco. Not only are you required to defuse the dangerous devices but you must also collect wandering fuel capsules from the presen-

# BOMBFUSION

ting area and return them to a storage container. Unfortunately you have a limited number of fuel tanks to be depleted rapidly if the countless lines of a printed explosion reaction area or you collide with a certain object, characterized with a further explanation as "The Bomb".

Bombfusion is a platform game presented as a series of single-screen levels and the graphics on each consist of blocky edges set against a black background with single colored PMGs defining the terrain. Bad logic and the usual obstacles. On the plus side, the joystick control is very responsive making it pleasantly simple to negotiate the platform. Music accompanying the increasingly monotonous action seems reasonable at first, but once you've heard it repeat for the umpteenth time you begin to wish that the weather had, in his wisdom, re-

membered to include a facility to turn it off! There isn't a pause option either, so if the phone rings as you're battling through the twenty fifth level (assuming there are more than the three I've noted) then it's just too bad!

Bombfusion's continued presence in the 8-bit market is certainly to be encouraged, but I hope that their future offerings will be of a standard dictated by hardware capability. Bombfusion may be a good buy for younger players in view of its simplicity, but anyone who wants to see their Atari's ability exploited will have to look elsewhere.

**Title:** BOMBFUSION  
**Publisher:** Molehillonic  
**Price:** £1.99 cassette  
**Pages:** 1  
**Loading:** 1W40  
**Reviewed by:** Paul Dixon

# BATTLEZONE

Long-term arcade addicts will recognize **BATTLEZONE** as the classic tank shoot 'em up. Despite its considerable arcade popularity, the home computer version has not quite appeared - possibly a consequence of the game's use of vector graphics rather than the usual raster-screen variety. Paul Whaley's brilliant *Exorcistator*, licensed by Novagen (and recently re-packaged by Atlantis) was the first game to offer something close to the *Battlezone* concept, although it substituted flying saucers for tanks and utilized the conventional form of graphics. Atari

finally produced the official 8-bit conversion in 1987 and this has since made it over the Atlantic (albeit virtually unannounced) as an XE System ROM. At last you can experience the real thing!

It's the year 1999 and after years of negotiation, the world's principal nations have agreed on a formula for lasting global peace. All seems well until a rabble of military crack-pot theorists to upset the balance. They plan to unleash robotized weapons across the globe in a merciless bid to reduce the Earth to a lifeless wasteland, and the only hope (as if you hadn't guessed) is for you to save the world by valiantly destroying the enemy's deadly array of super-tanks, missiles and saucers - it's no Sunday game!

Your view of the proceedings (in vector simulated 3-D) is from the turret of a vintage



tank tank. A gunight is awarded in the centre of the screen, and above, a stat as panel displays your score, remaining lives and a weapon. Your objective is to pin-point enemy units using the scanner, line them up in the sights and then blast them into obscurity with a squirt of the joystick trigger. Accuracy is the important factor since you can't fire again until the current shell has landed. Your tank is highly manoeuvrable and can turn through 360 degrees with ease - this is rather fortunate as the battlefield is so strewn

with pyramids, craters and other objects which serve both to hinder your progress and as useful obstacles against return enemy fire.

There can be no doubt that the colorfully shaded backdrops of *Exorcistator* are infinitely more appealing than the drab outlines in *Battlezone*. The use of standard graphics modes and default text styles gives the latter program a rather out-of-date feel by modern-day standards, but I can't deny that the satisfying game is **EXCELLENTLY** and truly addictive!

The **BATTLEZONE**  
Publisher: **Atari Corp.**  
Price: **£14.95 RDM**  
Players: **1**  
Loading: **N/A**  
Reviewed by **Paul Stone**



Adventure! The all-generous British computerists give the *Monkey King* - great title of all times - to travel to India and collect the holy scriptures. It may sound like the introduction to a Sunday afternoon television movie but, in fact, this is the plot of **MONKEY MAGIC**, a re-released arcade-style title from Alternative Software.

The game is divided into five scenarios, although curiously each one seems to involve the religious script once mentioned in the original story! Following

a mutually accompanied credits page, the journey begins in the Sacred Fruit Garden where the Monkey King (who, incidentally, doesn't look anything like a monkey!) must pick the magic fruits from a gigantic peach tree. This forms the basis for a straightforward ladder and levels screen in which the graphics are detailed, vibrant and nicely animated. As you might expect, the tree is guarded by demons, snakes and other spiritual inhabitants so your character must be careful to avoid contact as he leaps and

# MONKEY MAGIC

slides across a variety of branches, ladders and ropes. It's easy to lose a life since the jumps demand great precision accuracy, but eventually you will learn the necessary tactics taking you on to the next stage of the mission.

The second part of *Monkey Magic* is set high above the clouds where - all told - you engage in battle with the evil creatures of the Universe. The screen view switches to a largely blank, horizontally scrolling display and your aim is to shoot down swarms of swooning winged adversaries whilst avoiding missiles. To succeed you must eliminate a specified number of the nasties, but the main difficulty is that the joystick controls are so painfully unresponsive that your character can drift helplessly into their path. This problem makes the whole thing seem a pretty pointless exercise and even if your last

dash hold-out long enough to complete this task, the game simply returns you to the original platform screen the another round of the same.

**MONKEY MAGIC** swings off on a promising note with its atmospheric music, neat graphics and popular platform theme, but from here on things move rapidly from promising to hopelessly mediocre. Had the author developed his initial idea into a full-blown arcade adventure it might have been a major success story, but in its present state the game appears rather bland and, on work, its lasting appeal is probably non-existent.

The **MONKEY MAGIC**  
Publisher: **Alternative Software**  
Price: **£1.99 cassette**  
Players: **1**  
Loading: **15/30"**  
Reviewed by **Paul Stone**





# ONE-ON-ONE BASKETBALL

This game was published in the States by Electronic Arts over seven years ago and imported to Britain about two years later. Its subsequent appearance on cartridge is a welcome sign of Atari's recent efforts to promote their XE Games System Console, by re-releasing a series of hits from the past decade.

**ONE-ON-ONE BASKETBALL** is a sports simulation involving, as the title suggests, two players in a head-to-head battle on the basketball court. You can challenge the computer or a human opponent, and in both cases the participants

assume the roles of Larry Bird and Julius 'Dr. J' Erving - two real-life American basketball stars who are said to have assisted the game's development. Before you start, you must choose a difficulty setting (ranging from 'Park and Five to Two' - this determines how easily you are able to carry out shots and blocking moves. On higher levels the referee makes a regular appearance to penalise any player who isn't sticking to the rules! Other options allow you to select a team colour even on a night match, quarters of play to a specified score, and you can opt to have either the winner or loser receive the ball after a successful basket. The smart packaging is complemented by a glossy instruction sheet explaining all the features, tactics and legal moves in detail.

The basketball court - as one



end of it - is represented by simple line-drawn graphics on a black background but the players themselves are very well designed and carry out deft, fluid, jumps and spins with realistic animation. If the free-throw action time, cut your computerised player (indicated by a fatigue bar at the foot of the screen, you can call a 'time-out' to regenerate. There are numerous touches too - a particularly noticeable one can shatter the backboard, prompting the arrival of a cleaner to sweep up the

panels! The physics even matches take some getting used to but, once you're accustomed to the moves, the controls are pleasantly responsive.

Although not a 'real' basketball simulation, **One-on-One** is streets ahead of the only real alternative - the aptly named **Basketball** - which Atari themselves released in the good ol' days of the 480/580 series. It's fun, addictive and above all, refreshingly different from the usual run-of-the-mill arcade games.

Title: **ONE-ON-ONE BASKETBALL**  
 Publisher: **Atari Comp.**  
 Price: **£14.95 BDM**  
 Players: **1/2**  
 Loading: **N/A**  
 Reviewed by **Paul Stone**



Now, this isn't a political judgement of Bradford's classic 'World War' about two up! **RED MAX**, unlike **Blue Max**, is actually a sporty jet motorcycle and Codemasters invite you to use it in another opportunity to save mankind from the evil intentions of those overworking slaves! What else?

It had to happen eventually... the time has become a Supermax and, in escape, the survivors calculate the route, construct anti-gravity jets and attempt a run to save part of the Universe. The plan works

well - that is, until renegade Death Lords decide to sabotage the power plants and seal the fusion mines over the land, as the people sleep helplessly in hibernation. Only one person can possibly save the fate of the entire human race, and that person is... well, you don't really need consulting do you? The dangerous mission ahead of you comprises three major objectives. First you must de-activate 17 mines by locating them with your super-eyes, then find a lift to take you down to an Engineering Level where eight back-up

# RED MAX

cooling systems and four power plants must be dealt with. Finally, you're required to descend into a hibernation complex in which nine other survivors are awaiting rescue.

The top third of the screen provides you with a birds-eye view of the laser landscape, and the top **Red Max** meter-like. The window scrolls in the direction of the joystick control as you manoeuvre the bike across the cratered ground, avoiding barriers, walls, laser gates and buildings. Hitting through windows shatters the laser's temporarily as you are able to reach the objects beyond. Unfortunately, the numerous placement of the **Red Max** is equipped with shields and indicators for speed, fuel, revs, shield strength, temperature and oil status etc. You'll need to keep an eye on the fuel gauge and collect additional supplies when re-

quired, but otherwise the dash is largely redundant and, although it clearly adds a realistic sparkle to the game, a larger playfield would have been preferable.

David Whittaker has proved, once again, that **Red Max** isn't the only music maestro in the computing world and James Wilson's graphics are of an equally noteworthy standard. The quality of this game is unfortunately reduced by the excessive loading time but, if you're looking for a game that will keep you occupied for a long time to come, your patience will be suitably rewarded.

Title: **RED MAX**  
 Publisher: **Codemasters**  
 Price: **£2.99 cassette**  
 Players: **1**  
 Loading: **2/30"**  
 Reviewed by **Paul Stone**



# PAGE 6's WORLD OF COMPUTER MUSIC MAKING

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## contact extra ... contact extra ...

### PENPALS/HELP

**BOBBI 2880E:** I would like to hear from any 800 users in the Netherlands/first class I can attract. 28483 disc, XCI 20 and want to visit at 4 years interval in the area. Write to Karen Macquay, 41 Queen Queens, East Greenock, West Durness, FF7 9 7DZ

**CONTACTS WANTED:** New Macintosh with 800K, 1000 and 1000 program installed in all areas of California, also Illinois. Will do BT and computer graphics. Please contact Jim Conway, 111 Valencia Park, California, Foster, New York.

**YANISER (dial) 41:** no name in Portugal. I live in Turkey. I have an IBM, 1000-000 disc. Phonetics tape and contact wanted. Send any free cards. YANISER, Beas, Trafalgar Road, Istanbul, Turkey. (0090) 1510 1510

**WILLIAM (dial) 41:** wanted a pen pal in Canada whose name I can't recall. Must be aged 14-17, live in a small town, anyone interested write to Bruce Connor, 215 Elmington Road, Ottawa, Ontario, K1G 1L9, Canada (001) 613 282 282 (preferably Saskatchewan area)

**LET FRIENDS WRITE:** I need an 800K and 1000 disc drive and would like to hear from anyone interested in swapping notes, tips, ideas etc. Write to Mark Hunter, 30 Woodstone Road, Greenwich, SE18 7JL

**WANTED/HELP:** I have a 100K, 1000 disc drive and a Kenner Keyboard Controller. I have a lot of programs for the 800K. Someone, I am asking for programs for playing on the 100K. I am looking for someone with experience with Kenner's B. Kenner, Indianapolis, IN, 46204, Indianapolis, IN, 46204, Indiana, USA.

**INTERNET:** I'm looking for a pen pal who has a 1000K and XCI 2000 unit. I would like to play a lot of software. Write to Steve Brown, 10000 Woodway, Houston, Texas 77055-1101

**SEEK USER:** I have a 1000K and would like to swap notes, tips and games with anyone who gets in contact with me. I have a large bank of information games. All letters answered. Write to Steven Brown, 10000 Woodway, Houston, Texas 77055-1101

**SEEK HELP:** I have recently bought a 1000 printer and I require information on using the software with commercial software. For example ProFont. Any help would be appreciated. CONTACT: James Conway, 27 Tinsley Road (Bally), West Yorks WF17 8JL

**WANTED:** Someone who can help with Kenner hardware. Get in to me, telephone 07936, 643434, or write to Mike, 41 Queen Queens, East Greenock, West Durness, FF7 9 7DZ

**SEEK PRINTER:** I'm looking for a pen pal of the original introduction (not professional) to the Atari 1000 printer! I would appreciate your help. Ring me on 07936 44878

**SEEK HELP:** I've been a 1000 printer which has failed up. I may be able to repair it for you. Write to Alan Connor, Tel: 01 553 4134 1/2/3/4/5/6/7/8/9

**SEEK PENPALS:** Calling a pen pal in Scotland and I would like to swap notes and go with you to a number of pen pal events in the UK. I have a number of pen pal cards to give. All letters answered. Write to Andrew Chouhrouz, 14 Woodside Road, Glasgow, Home COO 1LJ

**SEEK HOME:** I'm looking for a pen pal in the USA. I need to find someone you're a teacher/manager, if you remember me (Paul) then please contact me on 0091 400 000

**HELP:** I have just bought a 1000 disc drive and would like to hear from anyone who has a 1000-000 disc. Could anyone please send me any specific software disks for the 800K, 800 printer, Kenner Keyboard Controller, Kenner's B. Kenner, Indianapolis, West Durness, FF7 9 7DZ

**ADDITIONAL:** For a full address, I am looking for an introduction to the world of computer pen pals. I would like to hear from anyone who has a 1000-000 disc, all letters answered. Write to: Jim Conway, 111 Valencia Park, California, Foster, New York. Tel: 001 415 282 282

**CHICK GARDNER:** I'm looking for a pen pal of the following categories: do you know your top three for each one and if you know the national team? 1. All time best? 2. All time worst? 3. Most difficult? 4. Most interesting? 5. Best? Send me 5. Write to: Chick Gardner, 2, Colchester College, Colchester, Essex, CO1 1JL

**PENPAL:** I would like to hear from anyone from the Americas who writes in Asia 800E who would like to swap notes, tips and games. I have a pen pal who has a 1000-000 disc, all letters answered. Write to: Jim Conway, 111 Valencia Park, California, Foster, New York. Tel: 001 415 282 282

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FOR SALE ... WANTED ... PEN PALS ... ADVICE ... HELP ...

# THE ACCESSORY SHOP

## ISSUE 47

### MORE ATARI SOFTWARE!

Whilst reworking the titles from our last published list we managed to pick up a whole host of extra titles from the depths of Atari's warehouse. Here you will find some of the all time classics and some programs that many of you will not have seen before.

There are good supplies of some titles, whilst others are now becoming collector's items. Several are available only in small quantities and represent the very last time these will be offered - use them purchased off remaining stock of some very rare classic titles. Act now or miss out forever! As usual these titles are all offered at a fraction of the original price or the current price where items are still available.

## Let's Learn!

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### JUGGLES RAINBOW

A fun computer learning experience for children aged 7 and that teaches the concepts of above, below, left and right plus letter recognition allowing the child to enjoy learning with colors and words and generally get their mind and play themselves.

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An exciting educational program that helps to teach music by using colors instead of notes. Change the colors supplied using to create different instruments, make the notes longer or shorter at times or the prior note ending. No music or keyboard knowledge required to make your own great music. 7 children or adults alike will get great results from this being able to create their very own music.

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### TYP0 ATTACK

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ROM  
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ROM  
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### SKYWRITER

A learning game for children from 6 to 14 that helps to expand capabilities by teaching common words. Words fly through the clouds and the player has to enter the main words that can be linked together to create the definition given. The 1000 words focus on the common and descriptive of our definitions as well as spelling and reading skills.

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### TOUCH TYPING

It's easy to learn a computer word to learn up on their typing and more you can learn to make this a professional to get with this complete home kit. Touch Typing provides a self paced method of learning by hitting one practice typing letters, word lines and paragraphs. The complete dictionary will be your words, number 10 or more and your word picture. Random words are generated to add even to these areas. Includes two manuals and instruction manual.

Previously £19.95

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# Let's Play!

Atari have had some real classic arcade games and originals either written themselves or specially commissioned. Some of these titles have not been available for some time and all are top quality programs to bring you fun and excitement with your Atari!

**ALL ROM CARTRIDGES WILL PLAY ON ANY XL/XE SYSTEM INCLUDING THE XE GAMES SYSTEM**



## RALLY SPEEDWAY

A different kind of racing game that gives you an overcast view of your car as it flies the straight side of several tracks. Great skill is required to keep on going as your car wavers round bends and starts on the road at high speed. A nice game that requires a bit of skill. This game has not been available for some time but use the cartridges have been here to support the new special offers.

ROM  
CARTRIDGE

**OUR PRICE £7.95**

## MISSILE COMMAND

Member of the all-time classic arcade games that for its defending title from outside attack. Controlled the defense gun in classic missions, take down from space to attack your cities. Low score enables and features will appear making the action more and more frantic. For use on five planets.

Normally £14.95  
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ROM  
CARTRIDGE



## STAR RAIDERS

Nothing needs to be said - rated the best computer game of all time and still more playable than almost every game that has followed. Before all other ships throughout the galaxy, check long range scans, look at starbases for refueling, stop at different planets and all the time check out possible dangers from Debris fields. Never has been made it to Commodore level. The Atari original is a great play. Requires keyboard.

ROM  
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Normally £8.95  
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## STAR RAIDERS II

Black version of this follow up to the greatest computer game. Your mission is to pilot the fastest fighter in the galaxy - the Liberty Star - to destroy the entire Jihad Mission Force. Your weapons are: Pulse Cannon, Ion Cannon and Particle Star Bomb. It was featured on systems, providing friendly, have added dropping your bonus on the money. More great action than other Star Raiders left it.

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## CAVERNS OF MARS

Member of one of the first Atari programming and graphics, this was one of the first vertical shooters and retains a much sought after original game. Escaped through the caverns avoiding mines and picking up fuel. Highly playable and reliable, only one or two from a couple of to the feature of the cavern to discover the secret that exists there.

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## DONKEY KONG

Member of the classic arcade hits to which you guide Mario the carpenter up the ladders and platform to rescue his sweetheart from the clutches of Donkey Kong. It's challenging and addictive game to which you must avoid many obstacles and fight back to achieve the objective. For use on two planets.

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ROM  
CARTRIDGE



## SUPER BREAKOUT

Breakout was the original single and totally addictive game and this enhanced version will provide you many additional fun. Several variations on the basic theme are available for use to their pleasure up to the difficulty. 100% fun this game requires little maintenance.

ROM  
CARTRIDGE

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**OUR PRICE £3.95**

## TENNIS

Great sports fan either against the computer or another player, enjoy it double. Forwards and backwards, driving opponents down, rapid rallies, overhead smashes and tricky shots - they are all here. You control your position on the court and return the ball to hit the ball. The computer will reward the player the results. All the action without the court!

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**OUR PRICE £6.95**



ROM  
CARTRIDGE

PENGO™



ATARI

ROM  
CARTRIDGE

## PENGO

You're not loaded in America. Your mission is to help PENGO, the penguin, fight killer OWLS-ARMS on a battlefield of ice blocks. Just so is in the arctic zone. PENGO must evade or freeze the deadly creatures before they devour him. You know he's never seen you. He's never played you. An original game that requires a little more thought than the standard shoot 'em up. For one or two players.

Normally £12.95  
**OUR PRICE £8.95**

## MILLIPEDE

Crabs are the original. This is the enhanced and faster version in which the bug walks the floor! Crabs are like jumping spiders, boxing bats, leaping lizards, mosquitoes, dragonflies, locusts and all carryy critters in the field. You've got to shoot 'em to get rid of them. One player or twohead.

Normally £12.95  
**OUR PRICE £8.95**



ATARI

ROM  
CARTRIDGE

MOON PATROL™



ATARI

ROM  
CARTRIDGE

## MOON PATROL

Your goal, Space 'Nee, is to fly through tough-on-things in the galaxy. You have the finest ground car on the face, complete with anti-gravity, jump buttons and laser engine. But you'll need more than a hot car to save the fate of Sector Nine. That's it! It's. Keep your headlights. Headlights make you jump huge pits and enemy rocks. You'll survive. You'll get an award and good money paid to the recipient of the official arcade champion.

Normally £12.95  
**OUR PRICE £8.95**

## HARDBALL

American League baseball is 27 years old. A highly regarded game - check out the cover in issue #118 - has sports simulation on the line! Look over the pitcher's shoulder as he throws the ball on the winding into of batter, catcher and umpire. In HardBall you can hit, run, steal, throw and also change the batter and the way playing you can do in the real game. For one or two players.

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**OUR PRICE £7.95**



ATARI

ROM  
CARTRIDGE

DESERT FALCON™



ATARI

ROM  
CARTRIDGE

## DESERT FALCON

A version of the classic Blue Sky that finds you flying across the desert landscape. Jump right over the topography obstacles in the desert scene. You need to turn for long enough to destroy the hovering targets. The longer you survive and the further you proceed, the more points you receive. If you destroy the targets you get to gain the bonus - and the even higher points. For skill level.

Normally £14.95  
**OUR PRICE £7.95**

## ARCHON

A chess-based game with the forces of Light and Dark doing battle on each square. For quick and exciting play requires and stimulates your strategic skills. From simple chess and adds with the board's business, it's yours. As the light changes, so does your power. For more than updates and use your strength effectively. It's original game that is original to explore in a different space than at two players.

Normally £14.95  
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ATARI

ROM  
CARTRIDGE

MICROSOFT BASIC II™



ATARI

ROM  
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## MICROSOFT BASIC II

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ATARI

ROM  
CARTRIDGE

SILENT BUTLER™



ATARI

DISK  
ONLY

## SILENT BUTLER

The all round personal finance planner that keeps track of three bank accounts, maintains income records, reminds you of birthdays and various and important dates and generally keeps you up to date on your financial status.

**OUR PRICE £6.95**

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The Home Filing Manager system keeps together that chaotic notes card-up mess. You'll change from all around anything together with the Pay-Off Advisor - your chance to manage an administrator in-house notes. This two disk set goes include some top class graphics demos.

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### PIRATE ADVENTURE

"To be the best at being at sea ... You'll start up with the pirates and be duty free at being a bit more at sea. Although you attempt to go home your function that is. However, Island 1 you can locate or Long John Silver's last treasure? Major sailing master, Royal British Navy, full victory 23 for you a report. Major... level adventures complete with graphics and sound for all ages.

DISK  
ONLY

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The Crown of Thorns Crown appears in a castle in the voodoo castle, creating an able water from you to control the water that think this is one life. In the story for the Crown for good, or you can help? Further you voodoo's thousand program to use through the power of voodoo castle? Royal British Navy, full victory 23 in a Master's level adventure that for those who have had a little experience.

DISK  
ONLY

Original price £19.95  
**OUR PRICE £7.95**

### THE COUNT

If that's the best that you can do in an antique forested in a dark, dimly lit castle? If your answer is "Yes", you're in for the right place! This marvelous 3D-like adventure will escort you into the wondrous world of a castle with four-dimensional space. Your choice is Royal British Navy, full victory 23 in a Master's level adventure that for those who have had a little experience.

DISK  
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### BASIC CARTRIDGE

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## FIGHT NIGHT

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## GALAXIAN

Another arcade conversion that retains all of the excitement of the original and still stands as one of the all time classics. Shoot the galaxians as they advance in formation and get off to start. With one or two players and 12 skill levels you'll be entertained for a long time. Includes an easy option for beginners.

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American Football is now a big name in the console and you can now play at home. Master the defense, pass with cunning precision, 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 nine team game of your own in a packed stadium. All the thrills of the gridiron.

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## RESCUE ON FRACTALUS

It's all hands that run one of the best games ever for the Atari and a good proportion of them is still out there on Fractalus. This game from Laserlight is one standard in computer games consisting a quest through a maze with a maze solution. Super, ever changing, 3D worlds in your fly through the maze to beat on the planet and rescue stranded pilots.

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## BATTLEZONE

Another exciting arcade conversion that set new standards. You command a tank on the battlefield under attack from enemy tanks and flying saucers. You can maneuver through 3D terrain as the enemy attacks from all directions. Watch your radar, score and blow on the enemy opposition of speed. It takes seven or ten. The player has 100 tanks.

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Another classic, you face the best of all platform games. You are a highly trained Lode Runner who must dig to enemy territory. Your mission is to infiltrate all 25 of the enemy's subterranean levels to recover every last piece of gold. You are equipped with a laser drill pistol but you'll need cunning, speed and agility. Lode Runner includes a unique mine that allows you to create your own levels.

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# ST FILE



French company MINDSET have recently set-up a 3D office and promise to release some classy games over the coming months. PICK UP PLE is an unusual one in which coloured balls fall from the sky and you have to make them disappear by shooting balls and controlling each column with other means. Before in 3D SPACE is a typical French production in which you battle against monsters, or rather items against the negative side of your mind. You control the evolution of the Great Pyramid and find yourself on the island of Yambur where the magician must get to have the ultimate test in chess - then there it starts getting complicated. Others printed include U.A.F. which comes complete with a plug in sound board and BACK TO THE FUTURE AGE adventure in the stars. On the education front Play and Read have released the best new program in their library in Read with Pup series complete. HOW TO LIVE AT 200000 and HOW TO LIVE IN 100000. Both expand upon the original and have been developed along established educational guidelines. Also having spent a long time re-releasing most of their titles as the budget label Discore, are now set to release some brand new games among which is TURBO.

At 100000 which looks to be an extremely good combination along the lines of the famous Ludo board, and FROM A CHAMPIONSHIP OF SOCCER which also uses team play on the title 'vector' missing from other soccer games. Not on the list of their new recent completions. Smart have RELEASED OF VHS the definitive driving computer that includes Super Driver, ROAD RAY, TURBO, 3D Drive and POWER RIDE 4 - produced from Ocean and also as well as Smart's own. Plus will reach at 100.00. From Infogrames comes CATRAX, a new game by the British Brothers, an adventure packed with puzzles, traps, adventures and smart action in over 70 rooms. If you want your games cheap, check out Electronic Arts new budget titles under their 'low performance' banner. These are priced at 10.00 and include such well respected titles as HULKAN CRUISE 4, DR. MARIO for educational purposes, and GARDEN OF EDRAN. Having finally released DAMOCLES you are going to wait another few years to follow it up and have already released the DAMOCLES REMIXED ONE 1 with a second to follow in January. Each offers another five minutes for 25.00. Back to Smart, they set for 5.000. 500000, a 500 mile per hour future vehicle that has to race through tunnels in an endless repeating maze. About 100000 to which you must take credit about your other cars in a longer race game with eight different courses. Look out also for ROAD RAMPAGE it also set in time for Christmas. Infogrames are the other French company with the Gallic flair and they have a number of re-releases to 100.000 first up. These include FUTURE WAR in which you get to design your own 3D strategy game, CITY, FUTURE CRUISE into your world that new cockpit on wheels, and in 100000. Smart's power and 100000 100.000 are further titles to avoid all the thousands of other users they setting up titles all over the world that's not all for you can also get 400000 400.00 in which you have a little history to guide you, 100000 100.000 which contains a little night and night with rolling the land and SEA BIRTH where you can see out your history backwards. Infogrames also have a new Doctor Adventure' get plenty of material in which you must save the head of the crew after a number of traps, holes, sound, riddles enough. 100000 100.000. Others are 100.000 100.000 in which you control a robot as high as subduing with a destruction force beyond your imagination. MYSTICAL an arcade game in which you play a wizard at the end of the world who is set to go on his way and on his way with the many that his way always seem to flow and finally 100.000 an action game which requires you to use magic to influence a gang and avoid the head of a dog ring. This game uses sound as the basis requiring you to find carefully for fear of detection.



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## TCB TRACKER

**W**ant to start making music with your ST but can't afford a MIDI setup? If so, this unusual music product written by Anders 'Ah Cool' Nilsson of The Core Beats team could be just what you're looking for. It's basically a four-track sequencer which plays digitally sampled sounds, effectively turning your computer into a complete sequencer, synthesizer, and drum machine setup without adding any music hardware! It should interest programmers too, as the music files it creates can be incorporated into your own programs.

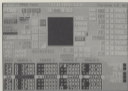
The software comes on just one DD50 (5.25-inch) disk, which is very naughty of MPH considering the price of the package. It runs on ST and STE machines, and requires at least 512K memory and a colour monitor or TV display.

Samples are like digitally recorded 'sound snapshots' of specific sounds, such as snare drums, bass guitar, saxophones, orchestral hit, etc. Each sample can be played over almost a three octave pitch range (in semitone steps), allowing melodies to be constructed from just a single sample. The disk contains many individual samples, including assorted drums, spirals, and solo instrumental sounds. If you need more you can create them with MicroSoft's Playbar cartridge, which you have to buy separately.

You can load up to sixteen different samples into memory at once and play them directly from the ST's keyboard or a separate MIDI keyboard, or sequence them from the program's integral sequencer. The sequencer has four independent melodic tracks, so it can play up to four notes simultaneously.

Each track can be playing a different sample too, making for setup-free three-note melodic lines in your browser. Stereo channels and bass and treble tone controls are also supported on the STE.

TCB Tracker is currently advertised as having 'full MIDI compatibility', but this is NOT TRUE, at least not in my copy! MIDI is used for input only, and the program will NOT drive separate MIDI instruments on playback. Also, MIDI input is only monophonic, i.e. can only handle one note at any one time, and



response is so slow from a MIDI keyboard that the benefit of using one is almost negated!

## PATTERNS AND STEPS

Each track is built up from a sequence of 'patterns', where a pattern is a series of up to 64 'steps'. Each step contains the details needed to play a particular note - basically, which sample to trigger and what pitch to play it at. Note duration is implicitly determined from the sample length and the position of the triggering steps within the pattern.

Each pattern can be recorded in real-time or one step at a time using the ST or MIDI keyboard to input the notes. You can hear each note as it's entered, and you can also watch the software take playback notes at any time to hear what you've recorded so far. You only need to build the unique patterns in a song once as you can reuse them as required, stringing them together in whatever sequence is needed to build a complete track. The principle is similar to that employed in many MIDI sequencers and drum machines.

There are various editing facilities available too. You can cut and paste patterns, sections of a track, or complete tracks within a song or between different songs; combine tracks; replace, delete, insert, or extract selected samples within a track; stretch a track; and even reverse a track, although this didn't seem to work in the review copy. In addition, any sample can be transposed in pitch anywhere within a one octave range, and during playback you can apply 'pitch bend' effects to smoothly vary its pitch

up or down. There's also a 'looping' facility to increase sample duration, but it seemed to have a totally unpreferable effect on the sound!

## BUILD A DRUM MACHINE

Any sample can be triggered from any step on any track, so you can create some fairly complex sounding music. The program is particularly good at

creating strongly rhythmic music using percussive samples. In fact, many of the supplied samples are of different drum sounds, and you can even map a different drum sample onto each key of your ST to build your own drum machine!

One disappointment with TCB Tracker is its sound quality. Its samples are only a 16KHz sampling rate at 8 bit resolution, making the replay quality little better than a portable transistor radio - even when played through a good quality hi-fi system! However, higher sampling rates significantly increase memory requirements, so MPH is to probably a reasonable compromise to allow everything to fit into a 528K.

Other niggles include the inadequate instruction manual, the program's fragility to hardware too often for my liking, and the author's insistence on using hexadecimal notation on the program's main screen!

I also think it's overpriced, but don't be put off: TCB Tracker works surprisingly well, is great fun to use, and provides an 'attractive' introduction to music making on your ST. The program is advertised in the mainstream ST magazines but if you want to see what it is like before parting with nearly £40 you can get a demo version from the Page 8 Library disk, ST 3075.

Title: TCB TRACKER  
 Publisher: MPH  
 Price: £39.95  
 Reviewer: John S Dobson

# BACK TO THE GOLDEN AGE

**Y**et another Joystick-Driven, Horizontally Scrolling, Beat-'em-up (and Zap-'em-up) Arcade Adventure into the Mangled Past presents this French offering in a little above average and aimed slightly more at those who like some thought in their games, as opposed to the usual instant slaughter!

The scrolling is flip scrolling, i.e. you search all the screens to the left or right to find new territory to explore; many locations also allow you to climb up or down ropes or stairs to new areas or go through doors at the front and back of the screen to enter castles, houses and shops. There are also a few pits which are one way only - you have to find a different route back once you have gone down them.

When you are in the open the minor bad guys keep appearing to shove them back onto the screen to attack you with clubs, axes, throwing stars, spears, arrows and other instruments of mayhem. The major enemies, however, like dragons and herds of fast flying spirits, may drop once you have defeated them. This gives you time to explore the rooms more fully, searching for levers to manipulate doors and for trying to work out how on earth you open that secret door that you saw closing when you entered the room!

There are lots of goodies lying around for you to pick up by walking over them. The most important are the spell books -

I've found some so far - each with a couple of spells which can help you defeat the monsters, solve the puzzles or just enable you to survive a bit longer! The enemy often leaves behind a useful item when killed, like a gold, potions, boards, swords, arrows, etc. and there are shops in various parts of the land for you to spend your hard-earned gold on food, potions and weapons. You need to keep both your vitality points and your magic points up if you hope to finish the game.

Thankfully the game allows you to SAVE your position to climb in case you die; you can enter the main menu without having to replay the whole game. I wish more people would put that kind of facility into arcade games! Unfortunately my review copy didn't have this implemented - on the other hand the right shift key on my copy gave me invisibility! With 64 colours to map including a few transparent you need all the help you can get to find the three magical artefacts which you need to complete the game. These over-throwing the evil prince and making yourself the ruler of this fantasy land.

As long as you have enough magic points left you can throw the spells you have found. Some are fairly obvious from their names, e.g. KILLAR and PARALYS. Some, such as MERUS and ANTHUS, are explained in the ancient books scattered around the place; the books also give some pieces of advice such as "There are no problems, only solutions!". You can determine the purpose of these spells by trial and error as well - and because of this sometimes the chances are you will have worked out what they do before you get to the relevant book! Other spells, such as PROSPER and OBSCUR, you will need to work out for yourself (I.E. I was playing in French - the spell names may be different in English).

You move, turn, jump, duck, shield and fight with the joystick - fighting consists



**“ great fun to play ”**

of hacking high or low with a sword, shooting an arrow, or casting off a spell. The space bar gives you access to your inventory - icons at the bottom of the screen - in order to select spells, drink potions, drop bombs, toggle between bow and zap, and toggle between sword and bow. If you are prepared to stretch a little further then you can use the F keys to do all these things directly. Apart from a slight frustration with the scrolling of the location, other than you to cast two spells or fire two arrows when you only want to use one, the game is very well implemented and great fun to play. Finally a note to those with old machines: I couldn't get it to load on my very old S&W and my review copy was a double-sided diskette - check before buying.

- **OVERLAP** - Excellent Fantasy Arcade Adventure with a little thought and mapping as well as a lot of fun!
- **GRAPHICS AND SOUND** - Superb Graphics - Fantastic Animations - The Just Visual Effects! It says in the book, and yes, it is pretty good! (Though the 'purple' is probably a slight exaggeration!)
- **VERDICT** - Great fun - thoroughly recommended



The: **BACK TO THE GOLDEN AGE**  
 Publisher: **UbiSoft**  
 Price: **£24.99**  
 Reviewer: **John Sweeney**

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# EDUCATION

# FUN SCHOOL 3



**T**he three Fun School 3 packages I reviewed in Issue 38 were the best educational software I'd seen for the PC. Now Fun School 3 has arrived, but does it match its illustrious predecessor's high standards? The basic formula is the same as before, but this time the program conforms to the National Curriculum relevant to the age groups covered. Here I bring the reader 5's pre-school children, the 5's 7's infant age group, and the over 7's junior group. Again there's a different package for each age group, each one featuring an amusing "theme character" to add interest and reinforcement to the basic subjects covered.

Each package contains an easy-to-use program which can operate at a wide range of difficulty levels. They will adjust to the ability level of the child, but you can manually set them to suit yours. Correct answers result in a small audio or visual reward, while incorrect answers may cause the program to proceed with hints and clues. Completion of a level usually triggers an amusing animated sequence, and these are usually well worth seeing! For added flexibility, many of the programs can be customised using your own problems, so you're not just limited to using those provided.

The programs are designed to be educational AND great fun to use. They're also

interactive in the use of the computer itself, helping to promote computer literacy from an early age. It's worth remembering that most benefits will be obtained from these programs if an adult sits with the child, to provide guidance and encouragement as necessary.

## UNDER-FIVES

As in Fun School 3 Teddy is the theme character, but for now looks even more appealing than before. The programs in the package are as follows:

**MATCHING** - requires the child to match pairs of items by colour and shape, with Teddy going on encouraging you of each choice of the level depending on whether the answer was correct or not.

**ACTIONS** - my favourite in this package, just an hour's worth of appeal alone. The child gets Teddy to perform various animated actions such as sitting, standing, hopping, and leaping, by selecting those from a simple menu. Even if the child can't read, he soon learns to associate a selected flashing word with its action, thanks to the clarity of the graphics and excellent animation.

**GALLERY** - Teddy's been very naughty and removed all the labels from the pictures hanging on the gallery wall. The child has to put them back in place using the Arrow keys and Return key. Although the program doesn't expect much precision in label movement and location, it does seem more suitable for older children.

**COUNTING** - Teddy is having a picnic with his friends, and the child has to count various items appearing around them. At lower levels it's a simple item

counting game, but it becomes quite challenging at higher levels. Each picture currently completed allows Teddy to think some stars to reach a final of honey. The program helps with the counting if an incorrect answer is given, and at higher levels this can happen frequently as the picture becomes quite congested with items!

**LETTERS** - Three Teddies watch the reader very carefully as the child enters it to match a displayed letter with one from a menu. Getting several right results in one of the Teddies receiving an ice-cream to celebrate! The animation in this is quite delightful.

**PAINTING** - is a relaxing game offering children a choice of colours, and an opportunity to use their imagination by creating a landscape scene. Much fantasy can arise from some of the choices, for instance by selecting pink for grass and green for sky!

## FIVE-TO-SEVENS

This package is aimed at the five to seven year olds. It's devoted towards Key Stage 1 of the National Curriculum with some elements of Key Stage 2. The theme character here is Freddie the Frog who, like Teddy, appeared in Fun School 3.

**JOURNEY** - guide Freddie around roads on a map to visit various places using F forward, B for backward, L for left and R for right keys. The maps may look simple to start with, but when travelling North to South can YOU easily work out which way to turn at a road junction without turning the map upside-down? A great test of concentration is needed at the higher levels.

**COLLECT** - once Freddie's saved his pond to collect the parts needed to solve his basic problems. Level 1 is simple addition, and has three numbers, a + sign, and an = sign scattered around the pond. Freddie has to collect them in the

**SPECIAL OFFER**  
**ON FUN SCHOOL 3**  
**SEE PAGE 54**



# EDUCATION

correct order to make up the sum and its correct answer. Level 2 is subtraction.

Levels 3 and 4 are addition and subtraction, but include a remainder number. Levels 5 and 6 are similar, but have two remainder numbers and can take some peeling out!

**TOTSHOP** - Level 1 involves reading the word at the bottom of the screen, finding the relevant toy on the shelf, and dropping it into a bag. Level 2 involves reading the price and finding the toy. In Level 3 the child has to think about which toys he can buy for a given amount of money, which is developed in levels 4 and 5 to use amounts involving 50p and 5p coins. Some of these involve adding together four cash amounts to form the correct total.

**ELECTRICITY** - this one's really good! It's a demonstration of a simple battery powered electrical circuit that can either light a bulb or ring a bell. The circuit contains switches, conductors and insulators of various kinds and the child has to determine whether the circuit shown will work. He may then choose anything in the circuit except the battery, and has to determine whether the circuit will still work. This program is an excellent aid to understanding the basic concepts of electrical circuits and the knowledge gained can easily be applied to simple practical work in the classroom or at home.



Electricity concepts are very quickly learned!

**FUNTEST** - involves using the computer to search for information. It allows the loading of data on a given topic area and then searching through it to find the answers to questions asked. The program presents a series of questions or a timed challenge, and the child uses revision and an index to page through the information to find the answers. It is possible to create your own Funtest files and questions too, making the program a very flexible learning aid. One slight flaw is that it seems to repeat the same questions rather too frequently.

**TIME** - helps a child learn to tell the time to whole hours, half hours and quarter hours, with some enchanting animation to reward successful completion of a level.

## OVER SEVENS

Three character like mice in *Hidden Words Fun School 3*. The game's six programs are suitable for seven to eleven year olds, and are aimed at Key Stage 3 of the National Curriculum, with some elements of Key Stage 4.

**WORDSEARCH** - is based on the familiar grid based word search game.

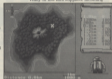
Hidden shows a list of words to be used and then hides them in a grid of letters. In Level 1 the words are written vertically and horizontally. Level 2 adds diagonals, and Level 3 can also reverse them! You can customise the program by changing the supplied word lists or create your own.

**ROBOT DRAW** - is a version of Logo with on-screen turtle graphics (ie, not the teenage mutant hero type), as well as producing colourful pieces of graphic art the child also learns how simple computer programs are constructed, although the commands are more selectable, the child still needs to understand them to be able to fully use the program.

**PLANETARY MATHS** - an all-letters maths game complete with high score table! Correctly answering arithmetic problems makes the spaceship destroy the alien invaders - the quicker the answer, the higher the bonus score! There are five levels of addition, subtraction, multiplication and division, and any combination of the four can be used at any time, with each at a different difficulty level if required. The problems move across the screen, and the child has to key in the correct answer before it runs into the hoverfield. Higher levels use problems involving money, and these have almost crossed the screen before the whole problem has appeared, making quick thinking (and keying!) a necessity.

**TREASURE HUNT** - follow a list of directions using points of the compass or

degrees, along with relative distances, to find the treasure at the end of the trail. *LANDMANS* - a 'real' computer application! You can use it to create a file containing your own data, then search, sort, and print it as required. There are several ready-to-use files supplied, including



Fun on Treasure Island

comes with data on Europe, Historical Dates, Shopping, and general relating to numbers and maths. They can also be used as the basis for a test or quiz on the subjects.

**SENTENCES** - displays a sentence containing mistakes of various types, including spelling, voice, incorrect punctuation, incorrect use of capital letters, and other grammatical or syntactical errors, which the child has to correct. I'm not sure I agree with all of the program's 'correct' answers, but perhaps they sound things differently now compared with when I was at school! You can provide your own sentences anyway, if you don't like the ones supplied.

## SUMMARY

I thought *Fun School 2* was fantastic, but *Fun School 3* is even better! The clear, colourful graphics are a joy to behold and the animation is excellent. The software got the word right too - a mixture of inspired and internally generated sound that always seems to complement the graphics without becoming intrusive. The programs are friendly, motivating, and really capture the attention and imagination of the children (and parents!) using them. If you're looking for educational programs you can do no better than these - and *Fun School 4* arrives, of course!

Title: **FUN SCHOOL 3**  
Publisher: **Delabore Software**  
Price: **£24.95 each**  
Reviewer: **John J. Davison**

# MAKING MUSIC WITH YOUR ATARI

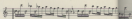
*John S Davison's  
regular guide to  
all the ways  
of making music  
on your favourite  
computer*

**O**ne area of music making that doesn't seem to be particularly well served with software is that of composition. Oh, there are dozens of MIDI sequencers available that let you quickly record the musical ideas you get, but they

don't actually help with the composition process. I was therefore very interested to see a new product which actually creates music, or alternatively transforms existing music into something sounding entirely different. It's called *Fractal Music* and was written by Chris Saunders and Laurence Clarke of Delamare Ltd.

Chris is a professional composer with many works to his credit, including a string quartet and a trumpet concerto which have been broadcast on BBC Radio 3. He's also written some 40 pop songs and has been involved in just about half the music. Like many modern composers he uses mathematical techniques in his work, but his interest in this area was boosted through his association with Laurence, who introduced him to the concept of fractals and their graphical visualisation via computer. This led him to look for a musical analogy, and after much research he and Laurence eventually developed a suitable algorithm, which now forms the heart of *Fractal Music*.

The program also incorporates some of the mathematical composition techniques Chris was already using, extending these further than currently possible with manual use. It handles up to sixteen independent musical parts, each recorded on its own track with its own MIDI channel, allowing the generated music to be played on a multichannel synthesiser. Note - the music can only be played via MIDI; the program



## FRACTAL MUSIC

does NOT use the AT's sound chip.

On loading *Fractal Music* you're faced with a complex looking screen. Actually, it's not so bad as it looks as most things on it appear obvious these days - once for every track. Each track has a set of control parameters, concerned mainly with directing the cyclical mathematical processes used to generate the music.

### THE FRACTATION PROCESS

This is where the going gets a little heavy! The numerous parameters control iterations through a three dimensional process using fractal mathematics, which generate time, pitch, and MIDI velocity (note velocity) values used to define a musical note. Other parameters determine such things as initial pitch and velocity, acceptable limits for generated values, and the degree to which note pitch and volume is allowed to vary from note to note. The result of this "fractation" process is a series of notes of different pitch, duration, and volume (i.e. music), which can be stored on one of the chosen tracks for playback or further manipulation.

It's in the area of transformations that a computer system comes into its own, as all but the most basic operations would be very tedious to do manually. The easiest to understand are *invert*, which simply turns the music upside down, and *retrograde*, which reverses the music - both tricks which composers have used for centuries. Mathematically, these reflections in horizontal and vertical axes respectively. The program extends reflection to the general case, allowing you set any origin point and angle for the reflection axis. Similarly, rotation processing permits you to rotate the music around a selected point by any chosen angle. The complexities of visualising and using these transformations have been neatly solved by making them mouse driven, and using a graphical display to illustrate what's happening.

Other transformations include moving a track forwards or backwards with respect to time, and up or down with respect to pitch. You can also stretch or squash a track horizontally or vertically. I.e. to get the music to play over a shorter or longer time period, or to expand or compress the pitch range over which it plays. There's also a quarter-note style similar to that found on equal sequencers, but this one is far more flexible than most.

Instead of using fractation to generate the music you could instead load a standard MIDI file containing music created with a separate MIDI sequencer. You can then apply transformations directly to this, as they work on the contents of

L

any track, regardless of its original source.

Clever processing algorithms are all very well, but what does this limited music actually sound like? Well, to categorize an old saying, "music" is in the ear of the listener - music to one person's ears is just a noise to someone else's. My ears have a very wide musical tolerance and found *Practical Music's* output ... ermm ... interesting! I don't think I'll ever make the Chords though! It depends very much on your starting point, the parameters you specify, and the transformation you perform, but generally the music has a melodic, unstructured, amorphous feel to it that some people won't like at all. However, the program could eventually be used to generate musical ideas you could incorporate into any style of music. Don't expect it to do the whole job for you, though.

My main criticism is the program's reliance on MIDI files to input your own music data. Not all sequencers including the one I normally used support them, so it would be nice to have an alternative method of entering your own data on a starting point. I hope *Datamusic* add this to the list of planned features, as its inclusion should give the program wider appeal.

In summary, *Practical Music* is a unique software tool, likely to appeal to anyone seriously experimenting with musical composition or computer generated music. It costs £25.00 from *Datamusic Ltd.*, 4 Station Court, Alexandra Grove, London NW2 5NL. You can phone Chris Simmons on 081-895-5056 for further details. If you want to actually hear what the program can do, you can get a demo version of the program from the Page 8 Library.

## NEW PD MUSIC SOFTWARE

Let's face it, you've added a couple of new music related disks to the Page 8 PD Library. Both contain excellent programs written by David Henry of Anchorage, Alaska. Designed to consistently enhance the musical repertoire of your ST.

The first disk contains two programs. One is called the *Universal Music Player (UMPL)*, and plays music files originally created by various music programs on different makes of computer. These include *EE-Track* on the Atari ST, *Advanced Music Systems* on the Atari 8-bit machines, and *MDPlayer* on the Commodore 64 ([janng@ukdsk](mailto:janng@ukdsk)).

The files have to be ported to an ST first of course, but once they're on an ST disk the program will play them via MIDI on playback. It converts the raw music data into MIDI commands and sends them to an attached MIDI synthesizer.

After telling the program the type of file you want it to handle you can select either a single file or a group of two or more of them to play back one after the other. It's rather like the programmed play list you see on a CD player. An added bonus you can set the program to play your music either in multitrack mode, using your choice of synth voice on each channel.

The program works surprisingly well. In fact, it's happily playing a very pleasant set of Commodore happy, radio wowed 48KHz MIDI files on my 1560-5000 synth as I write this. The only criticism I have is that there were only five 48KHz files, four MIDI files, and an *EE-Track* files on my review copy of the disk. There are thousands of these files in the public domain apparently, so perhaps *UMPL* could get a few more ported across for use by this program.

Also on the disk is a demo version of *Nickelodeon Pro*, which seems to be a nearly updated commercial version of *Universal Music Player*. It's much slicker looking, plays the ST's sound chip as well as MIDI instruments, has a large

selection of entertaining graphic displays which move in time with the music, and handles ST Music Construction Set and ST Music Studio files as well as those handled by LMP. It's a superb program, but you have to buy the full version for £10.00 to be able to play any more than the few demo files supplied. It's worth having, as it comes though.

The second PD-disk contains *MIDI Music Maker*, a software program that takes the LMP and Nickelodeon 3 concept even further! This one handles files from *EE-Track*, *Music Studio*, *Music Studio 64*, and *Music Construction Set* on the ST; *Advanced Music Systems I and II*, and *MIDI Music Systems* (you know what this is!) on the Atari 8-bit machines; *MD Player*, *Enhanced MD Player*, and *Music Composer* on the Commodore 64/128; *Cherubs*, *MS/MS*, and *Lyris 1/2* on the Tandy Color Computer; and finally *MIDIfiles* (Formats 0 and 1) on all computers. What's more, it automatically recognizes the type of file on loading, and handles it appropriately for playback via the ST sound chip or MIDI. Amazing!

It has a host of useful features too. For instance, it can analyse and swap which voices and degree of polyphony are used on each channel's music stream to different channels, covers any type of file from the list above into MIDIfile Format 0 for transfer to other ST music programs. It also has excellent help facilities and disk based documentation. It doesn't have the flashy presentation of *Nickelodeon 3*, but functionally it's a terrific program - one that every ST music enthusiast will want to own.

Please note that *MIDI Music Maker* is a shareware product. If you like it you're asked to send the author \$10 to show your appreciation and to encourage him to continue supporting it. It's worth every penny.

The documentation includes a list of possible sources for thousands of music files in various formats to use with this program. They're all in the USA unfortunately, but it may be possible to get hold of some of them for the Page 8 PD Library. I'll investigate this and let you know the outcome in the next issue.

## PSS VOICE PATCHES

Remember I mentioned all you *PROSD* and *Patched* users a few issues back about not wanting to give PSS voice patches you've created? Well, at last someone's taken up the challenge! Simon Lloyd of Albany, Longley, Herts sent me a disk containing seven new patches he's created with *PROSD*. He's named them Christmas Organ, Transient Bass, Harpsichord, Resonant Organ, Glassy Strings, Crystal Bell, and I Like This. It's all but the last are reasonably descriptive of their sound.

Now, if Simon can do it, so can the rest of you. To encourage you to get cracking with your patch editor I'm willing to act as a distributor for all patches sent to me, and what's more I'll make ALL the patches I receive available FREE to anyone who wants them! To get your copy just send me a disk containing at least FIVE new patches you've created in either *PROSD* or *PROSD* format, plus a stamped self-addressed envelope so I can return the disk to you with the extra patches on it. Make sure the tape is big enough and strong enough to hold the disk, and don't forget it needs a 23p stamp too! You can reach me via the name of Page 8 Publishing, P.O. BOX 54, Bedford, ST95 1DR. I look forward to hearing your creations.

With all this new software around there's no room for the usual *Pepperts* news section this time. I guess it'll keep all next issue, so see you then.

# NEODESK 3

**A great program becomes even greater!**

I reviewed **NEODESK** back in issue 40 and concluded that I could not recommend it highly enough. Now a new version is available that has all of the original features plus a great deal more. Before we take a look at **NEODESK 3** however let me clear up one point from the original review. I stated that the program was not suited to a single drive system since it needed to read back time but this is not the case. By converting the file Configuration menu you can have **Neodesk** memory resident at all times. It takes a little more but is well worthwhile.

So what of the enhancements? They are so many that it is difficult to know where to start. Some are quite minor, yet totally indispensable once you have discovered them, others are major new features. Let's start with the actual desktop itself. The first thing you will notice is that there is an extra icon on the default setup, a clipboard. The clipboard is used for temporary storage of files that you wish to reorganize, for example transferring files from several folders or floppy disks to other directories. Either then have several windows open at once, snapping between each, you can now simply open the window you want, copy or move files to the clipboard, and then open up the destination directory to transfer them all to one go. Such file reorganization can be achieved by other means but the clipboard saves a lot of time.

The second major difference to the desktop is that you can use the desktop itself for notes that can either be permanent or temporary. Any single line or text can be entered directly on the desktop in act as a reminder or provide information that you often need. If you wish you can now change the entire desktop background by loading in a NEO or DRAGON picture of your choice although you'll have to choose carefully if these messages are still to be legible. An extended feature of this is that you can view any NEO or DRAGON picture directly from the desktop so if you have a collection of pictures you can simply check on each one without the need to run another program. **Neodesk** also supports viewing of any text file, even a program as a text file, and you can specify an alternate viewer if you wish so that, for example, the **EDICORNT** text viewer could be run automatically by **Neodesk** every time you elected to view a program.

Let's turn now to the windows where those minor yet so convenient changes have been made. If you check the illustration you will see a few more icons around the edge of the window. In the bottom left hand corner is a single button, text and icon display with text to it, a button to select all items in a window. Minor enhancements that save a great deal of time. At the top of the window below the status bar is a double line which will enable the window to be split into two with each part independently scrollable, ideal if you have a large directory. Top left there is a duplicate window button which saves having to open the window again from the drive icon if you need to access another folder. Another key enhancement that could save you hours of despair is a small E that appears on the top right of the status bar if the disk opened contains an executable boot sector. This enables you to check whether a disk may have a virus and, in fact, name to the mouse is preparing this very issue! Brilliant stuff!

Previously **Neodesk** allowed you to select templates for open windows so that only files with a chosen extension would appear. This has now been extended so that you can select files with up to six different extensions to appear in the same window and you can even define and save your own extensions.

Other areas where **NEO** falls down are also addressed such as a routine to print a directory listing or send a file first to the printer to line it up prior to printing out a text file. There are also search routines that will enable you to find any file in a selected path or drive, invaluable for hard disk users.

And there are more improvements, so many in fact that there is insufficient space here to describe them all. Those described so far make the program worthwhile, anything else is a bonus. The only criticism I have to make is that I found it impossible to convert my previous **NEODESK-INT** file using the utility supplied and had to recreate the entire desktop layout from scratch. The manual could also be better in several respects and the tabs is atrocious!

If you haven't already bought **Neodesk** then buy **Neodesk 3** now. If you already use it, upgrade. **Neodesk 3** is even more indispensable than its predecessor, possibly the most worthwhile program any serious user will ever purchase.

**NEODESK 3** is now distributed by Electric Distribution and should therefore be readily available. Price is £89.95, for the full package but existing users can upgrade for just £19.95 by returning their original disk and manual to Electric Distribution.



As before all desktop icons can be customized but now the desktop can also be used for notes. **Neodesk** may also run in your **Windows** and the icons can be made any colour you wish!



A window can be split and each part can be scrolled independently. Notice also the icons of folders left identified by the icon and the letter E or top right which can indicate if a virus is on your disk.



Lists of preferences can be set and **Neodesk** can copy memory resident. The **FINDS** button allows alternate programs to be run when **Neodesk** loads a picture or reads a text file.



The duplicate window facility allows the same path to be opened in both text and icon modes. All of the items you can see have been customised so that this desktop is totally unique.

reviewed by Les Ellingham

## THE SPY WHO LOVED ME

**T**he second of John Barry reboots in the name of the prospect of yet another megacade of '800 on disk. Denmark have certainly set out to ensure that the loading times around the case of the film or at least the ride. A good rendition of the race between these two computers is a rare's outburst and a video tracking message.

The game seems to follow the film and treated Denmark instead of reimagining the film into several key scenes and former making playable scenarios of them. The controls are either keyboard or joystick with no mouse options at all, indeed the play is already standardised from the 5-disc since the instructions for those machines are included in the manual.

The game comprises five stages which mainly consist of guiding Bond in a variety of

vehicles, or via land through perilous situations and obtaining credits to repair other

low performance vehicles which have passed through your hands. The first of the scenes comprise of a sort of demolition that runs game, whereas it is your role to drive the Bond inside through ascending pedestrians and motor drivers to reach the next stage. As with all the stages the graphics are smooth and the sound effects loud and pervasive.

Gameplay is actually quite wrong and the initial run is not as easy as it first appears. It is very necessary to learn the controls and handling qualities of both the car and the subsequent speedster since they feature again later in the game. Indeed the manufacturer explains that this early level



is there to help the player master or the complexities of control.

Each part of the game has an effect on subsequent events, fail to obtain sufficient tokens and the repairs and upgrading to the Bond car will not be done and the screen will be more unmanageable to you.

As in all these types of game each part seems as though it could be a fairly reasonable budget priced game, but for this game the parts do hang together well and give the feel of continuity often lacking in such an open. I found the game fast and enjoyable. I also reimagined bits of the film coming through quite clearly.

A good show by Denmark and better than I expected!

### FACTS

Title: THE SPY WHO LOVED ME  
Publisher: Boman  
Price: \$24.99  
Developer: Boman Hawaii

### SIGHT & SOUND

Excellent loading and ending music, unusual graphics and strong plot effects

### GAMEPLAY

Smooth and fast, perhaps occasionally difficult

### VERDICT

Not bad at all, if you enjoy Denmark find this is their best yet!

### FACTS

Title: TURBO CUP CHALLENGE  
Publisher: BOMAN '84  
Price: \$4.99  
Developer: Danish Hawaii

### SIGHT & SOUND

Graphically well up in the standard of other comparable games, neatly set on road

### GAMEPLAY

More than adequate, fully set and the other cars great!

### VERDICT

An acceptable budget race game



## TURBO CUP CHALLENGE

Great and very smooth in their handling although the opposing cars seem to ignore the

**T**urbo Cup Challenge is another in a long road of car racing games.

Seen from the perspective above and behind the car. The game, I am informed, was a full price French game and it does show a certain Gallic flair. The controls are fairly simple and I found the keyboard option the more preferable to the joystick. As with the vast majority of these games the options only include fast/slow left/right and it is perhaps disappointing to note that all gear changes are automatic. There again it does allow the player to concentrate on the track.

Graphically the game is sound, the courses are well

road surface with few curve updates than the program allows the player. The cars also seem to have learnt their driving style in Paris since they seem to have an unstoppable urge to run the player off the road in a hail of smoke and quality spins too.

The race takes place on four lanes tracks and each race allows one lap of practice to obtain a grid position and a three lap race to lose your way and to allow your Porsche to be wonderfully fuelled by all the other road cars. While the action is fast and control smooth I was somewhat disappointed by the lack of tweaking abilities in the game. It is a very basic implementa-

tion of the right and while getting highly enjoyable I feel that the French model licence somewhat narrow offer a long session of playing. I was also dismayed that the game had to resort to cheating in order prevent the player winning! While I fully recognise that one of the great joys in motor racing is the art of passing an opponent I find it hard to believe that the sports car fraternity are going to accept driving tactics more often associated with the chess tables from New Year in order to stop you being first past the post!

Having noted the basic and sparse game content of the software it does still offer a good budget price bargain and for any new to the motor racing circuit it will provide a few hours of fun if shipped into your Christmas stocking.

# SHADOW OF THE BEAST

**S**hadow of the Beast has been long-awaited by ST owners since its release on the Amiga over a year ago. The conversion, apparently took over nine months to complete. On looking the game you are greeted by some simply stunning graphics. Accompanying these gorgeous graphics is possibly the finest sound ever heard on the ST. The use of sampled sound in the music has to be heard to be believed!

You play the part of a character who was abducted as a child from his home and taken to the temple Neuropolis of the Beast Land, there your body was slowly transformed into a creature of extreme power, agility, and strength. However, having now reached maturity, you begin to comprehend the awful truth and set about wrecking your revenge upon your evil masters. To do this

you must enter the Shadow of the Beast.

The game takes on the basic form of an elaborate scrolling platform and ladder type arcade adventure. The "adventure" it will take place within the domain of the Beast and will take your character to caves, strange levels, beneath the forest, and to the bottom of a well, to name but a few places. As with practically all games of this type, as your travels you'll find various things to add your cause. These items include keys, tokens, and the like. Also, predictably there are a number of hostile creatures who are also enemies of the Beast. The packaging boasts of "130 unique enemies", so there's plenty to keep you busy.

The graphics within the game itself are good and very profes-



sional looking, however they are overwhelmed somewhat by the amazing loading graphics and some of the "wails" between levels.

I do have one major gripe - the scrolling is awful. Now I can appreciate that the beast had "15 levels of parallax scrolling" might pose a problem on the S1000, but they could have done better surely! In terms of playability the game is a real pig. Due to the game's immense size many of the different locations are loaded from disk each time you cross from one zone to another. This slows the action down considerably and spoils the gameplay, but the presentation and quality of supporting graphics do make up for it.

## FACTS

Title: SHADOW OF THE BEAST  
 Publisher: Progress  
 Price: £24.99  
 Developer: John Davison jr

## SIGHT & SOUND

Stunningly stunning, but the overall effect is marred by poor quality scrolling. The music is the best I've ever heard, but the spot effects are on the edge.

## GAMEPLAY

I've played better the system or scrolling and/or loading spoils the fun of the game considerably.

## VERDICT

Like so many other games the very impressive presentation is at the expense of gameplay.

## FACTS

Title: THE LIGHT CORRIDOR  
 Publisher: Intergames  
 Price: £22.99  
 Developer: John Davison jr

## SIGHT & SOUND

Stunningly effective graphics with some great music and sound effects.

## GAMEPLAY

Great behavior if it doesn't end levels with a few hidden doors etc.

## VERDICT

A must for all scrolling ball addicts - well worth trying - highly addictive!



**R**emember Breakout? Trying to keep a bouncing ball in the air with a tiny paddle? Remember how someone had the brilliant idea of changing it up to take advantage of new technology and we got all these super games like Asteroid and Impact? Amazing how a bit of thought can transform new life into an old game, isn't it? Well, these French geniuses at Intergames have done it again! What's the new twist? Now the ball bounces AWAY from you down a tunnel that disappears into the distance!

Of course it eventually hits an obstacle (which may be so far away that you can't see it) and returns shooting back at

# THE LIGHT CORRIDOR

an unexpected angle. You have to react VERY quickly to send it back down the tunnel with your large square transparent hat! Then you must follow it down the Light Corridor either slowly with separate clicks on the left button, fast by holding it down, or super-fast by holding down the right button!

The simple obstacles are just panels of various sizes sticking out from the walls, floor and ceiling, some of them moving. If you get too close to these the ball bounces back so fast you have no chance of controlling it! Later you will come to ships which sprout arms with the ball so that they keep collecting it back to you, enemy bats which you have to hit the ball past before you can continue, and

moving force fields which send the ball all over the place!

To help you along the way there are letters which can give you extra balls, extra hats, double hats and so on. And some of the letters are really odd words you bet!

There are 80 tunnels to get through, with a code number at the end of each so that you can return anywhere you like. At the end of every fourth tunnel there is an extra problem to solve, like hitting a moving target a number of times, or working out which panel you have to hit while an arrow moves around the end wall.

As if this wasn't enough they also include a Corridor Editor so that you can create your own enemies! My only criticism is that you can finish all 80 in five or six hours using the codes to do them one at a time.

# BATTLEMASTER

**A**re you familiar with magic? Capable of intelligent strategy? Ready to fly, Levit and flatter with one single aim - to gather together a powerful force of men (or elves or elves or orcs), win back the four kings' crowns and restore the world-to-overliving peace?

Then this could be the game for you! You start by choosing your race and profession, then set off to explore 50 scrolling scenarios in your quest to save the world. The main playing area is a bird's eye view (from 90 degrees) of wilderness, castles, villages, mines and dungeons which scroll smoothly in every direction. Each scenario has to be completed before you can access the world map and travel on to an adjacent scenario, searching for weapons, food, gold and magical artifacts and slaughtering everything that moves along the way. Movement and fighting are joystick-style with the joystick - each scenario is basically a small arcade adventure - the complexity arises because there are 50 of these scenarios linked together! Many scenarios are completely hostile and the only way through is to slaughter everything - you can neither move on to avoid the scenario nor save your position, and if you have killed a high percentage of the local inhabitants as long as you have saved earlier you can of course try an alternative route and come back to this scenario later!

But mindless numbers is not the only misery: every scenario will offer you the chance to party. If you choose this option you can buy food, weapons etc. from the locals and, if they are of your race, you can hire some mercenaries to strengthen your army. Once you have finished trading you can choose to slaughter them anyway or you can pay for passage through to the adjacent scenario.

Once you have some troops they will fight as you die, in any formation you choose, though they are not always too bright and have a nasty habit of breaking ranks and getting themselves killed unless you KILL them regularly! A small "radar" screen helps you find the enemy in each area. Most of the areas are fairly straightforward and you will not need to close maps, just make notes of how to access hidden areas or solve puzzles and where to find the main objects.

There are dozens of objects to find, these fall into three categories, examples are: weapons, armour, food which you have to select in order to use, rings, gems which you just have to wear - they automatically do their thing, specific scenario objects, e.g. gold, chests. However, books - they are automatically used when you reach the right place on the screen.

Your inventory is a little limited to a couple of bags. For instance, how do you choose between Salmador's +40 Professor Magic Wand which shoots fireballs and an Orcish +40 Salmador Wand which shoots poison gas? And you only get limited statistics about your troops - their average health and skill - so you don't know whether one is about to die or not, or which ones are the most skilled.

You can choose between mouse, keyboard or joystick - I found the joystick the best for fighting, but the mouse best for trading and manipulating the inventory. You have to use the spacebar or left mouse button to get to the control face-



“highly addictive”

tion; if you wish to rally your troops, change their formation, switch between sword and bow or eat some food to boost you a bit more.

Battlemaster is a little annoying in a couple of ways: pits and rivers are instant death and it takes one and a half minutes to restore; you can't really see what is happening when there are lots of people in a close fight and one point can make the difference between whether you are hunting him or he is hunting you!

The mouse buttons are the opposite way round to the characterisation. There are also a couple of bugs (e.g. bank won't close pit in Wizard's but nothing that will prevent you finishing the game I am told - I'm about a third of the way through at the moment!) It also wouldn't load on my ancient 586 with its separate single-sided diskette drive.

So, fight your way through Ancestral Hall, track to Gullhorn, fight your way through Trollhorn and Ironstone to Maggot's Pit and see if you can save the world!

■ **GAMEPLAY** - Good fighting, complex, lots of variety, highly addictive

■ **GRAPHICS & SOUND** - Excellent graphics and animation, the sounds are a little limited but adequate

■ **VERSATILE** - You should get every degree of entertainment as you try to raise your skills and build a competent army



Title: **Battlemaster**  
 Publisher: **PSG/Microsoft**  
 Price: **£24.99**  
 Developer: **John Dorney**

# PD Paul Rixon's WORLD

## TIME TO PLAY - TOP CLASS GAMES COME THICK AND FAST

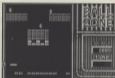
Commercial software houses are often criticised for over-pushing their products. Users may be prepared to dig deep into their wallets for a fairly sophisticated package like the latest version of *Printed Wreaths* (in at a whopping £299), but offered an arcade game with no guarantee as to the quality or loading speed, few would disagree that 600c price tags were a little excessive. The companies may argue that the price is a genuine reflection of the development, production and marketing costs, but users aren't easily convinced.

In April 1989 two enthusiastic ST prog fanatics - Cathy Matthews and Simon Kink - decided it was time to do something about the situation. They set up a company called Budget UK whose aim was to produce quality Public Domain programs as a service to the ST community. A year later they launched the 'boom-or-bust' concept - a mechanism by which user feedback distributions pay royalties to Budget UK on the disks sold, which are then shared by the program's authors. Budget UK has since grown into what they claim is, the world's most prolific source of ST games. All programs from the Budget stable (right) have several things in common. They are all of a very high quality, incredibly good value for the money, and are sold in the welcome absence of marketing hype or deceptive packaging. Even so, the company can reportedly boast yearly sales figures of up to two thousand disks! So what do Bud-

get have on offer? Answer: games, games and more games. A recent summary put the number of annual title entertainment titles in addition to several other items (mainly programming tools and demos) although the rapid release schedule means that this figure is bound to be inaccurate. Obviously there are far too many programs to review in one article so let's take a brief look at some of the best.

### GOLDEN OLDIES

If you parted with your 4 bit coin to buy an ST you probably long for the



THE BOMBASTIC BALLZ GAME

remembrance of those golden-olies of yesteryear. How about a good old-fashioned game of *Square Invaders*? Some would say that the ST has never seen a decent version of this ever-popular classic but Budget have put this right with **ACE INVADERS**. It's fast, colourful, exciting and just as addictive as the original. There's no need for me to mention, of course, that the game is all about nipping ones of levelling down as they descend ever more rapidly towards your laser beam (oh well, too late). Unlike some other Square Invaders games I could mention, this one features several nice tunes and a choice of either the author's original or enhanced versions. It could keep you occupied for hours but if you're still got an appetite for more then **BALLZONE** is the obvious solution. This one is a mouse-controlled Advanced zone which is arguably better than the real thing! As it is my favourite again all the aim is to accumulate rows of bricks by

manoeuvring a ball so that it troy destructive ball is presented from escaping across the screen boundary. Some levels this in *Ballzone* include a rousing row of base that follow your ball's position which permit you to make the odd mistake and also a timer to keep you on your toes. *Ballzone* scores with playability and the graphics are, needless to say, in a class above the rest. **MR DIO** is another favourite from the good ol' days - here you must guide the mysterious character through underground tunnels, and dig rare ores, in order to collect a specified quota of cherries. Avoiding the *Ballzone* in his pursuit isn't easy, but once recovering the bonus crystals, but small bonuses are provided as a last resort. It's an excellent conversion in regards to what you can do with STILES, although in my opinion nothing really comes close to 'Mr Dio' on the 4 bit Atari hardware of disengagement. You'll also find an added bonus on this disk - **TAKE BATTLE**, just as classic as the old MSX game!

### TRIVIA TIME

About 100 against your money? You'll be pretty about **MAKE A BREAK**. It's a very professionally

presented trivia quiz game which is loosely based on an old Radio One quiz once hosted by IBC. You are faced with a series of multiple choice questions covering various topics such as the arts, science, music and sport with each correct answer awarded a specific number of points. These correspond to the values of wackier balls and if you guess the right answer you're treated to an excellent audio/visual display of the ball being potted. The questions have been carefully thought out to challenge even the most knowledgeable of trivia aficionados - there's little doubt that the game's appeal will be long lasting as you endeavour to better your best.

What for those who'd prefer something more traditional, **SAFE AS HOUSES** can only be described as the 'ultimate' in computerised Monopoly. Up to eight players (either human or silicon) can participate in fast, madcap or slow modes on a board based on either the



th. With an American accent, he asks you're forgotten how to play the game, you can even sit back and watch the computer try to solve itself. As with other Budget games, the excellent graphics are a major selling point, but *State of Illness* is also one of the few really addictive games in which you can involve the whole family - maybe even call around the neighbour!

If board games seem a bit too energetic and what you really want is to curl up in the armchair with a decent crossword, Budget have just the thing: simply put the cheat up to your TV and boot up **CROSSWORDS**. This one will run on both mono and colour systems and there's not a lot else that can be said except that the program offers twenty-five different puzzles, ranging from easy to medium difficulty. Words can be entered, erased or altered as required or if you are really stuck you can also call up the answer! If you have *First Basic*, it's possible to create crosswords of your own but if not, don't worry as Budget have promised more puzzles in the future.

Clearly it wouldn't be difficult to fill the entire magazine with reviews of Budget software but that wouldn't be too popular with the in-lit-reading fraternity! I'm certain that we'll be discussing games again in future issues and Budget UK is found in future proceedings. In the meantime, why not check out the PAGE 9 reading (an updated **PAGE 9 CATALOGUE** is now available, priced at £11) and make a selection. You'll be impressed!

## CHRISTMAS TIME

Once again, the festive season is almost upon us. Mince pies, mulled wine, cards and cha-chins - yes, it's time to eat, drink and be merry! How about writing the cards with a compilation of Christmas pictures and some great topical music? **CHRISTMAS TIME** is an apt name for a disk which is chock-a-block with excellent graphics on the Christmas theme, presented as a continuous slide show. Amuse the relatives with the power of your ZIP! If you're looking for something to keep the younger members of the family occupied after the presents have been opened, the toy batteries featured and the crackers pulled, **COLOR**

**BOOK** could be the answer. The program on this disk is personally illustrated for children up to the age of six and aims to stimulate artistic ability, in a similar way to the popular 'painting by numbers' exercises. Apart from eliminating the possibility of ink on the carpet, the advantage is that pictures can be modified, erased and re-painted as many times as required. The disk includes a collection of the outline drawings which can be 'printed' - however the user wishes - using the



mouse to select from a list of fifteen colours. A very user-friendly interface provides access to forehead and line-drawing facilities so that additional artwork can be created. It can then be saved to-disk and retrieved at a later date. *Colour Book* is without doubt one of the best programs for young children in the Public Domain and is professionally designed so that all the features are so intuitively easy to use. There's only one small problem - you may become hooked yourself!



## SIGNING OFF

If I like to thank all those people who have written in with suggestions for future topics - but unfortunately, there haven't been any yet so instead I'll repeat the usual invitation to submit correspondence. If you have anything to say

Top to Bottom

**MAKE A BREAK** - the addictive brain game

**SAFE AS HOUSES** - an excellent version of Monopoly

**COLOR BOOK** - a delightful children's program



about Public Domain software, please write to PAGE 9 and let us know!

An exciting development on the commercial software front recently has been the release of the **TCB SOUND TRACKER** for the Mark II Commodore Entertainment System! By the exceptionally talented 'Cue Bears' crew, the disco session is now available in the Public

Domain and I must say that it looks to be a remarkable program in its own right. The fully featured package must be incredible! More details next issue when the contents will have a musical flourish. Until then, all that remains for me to do is wish all those embarking on a very Happy Christmas and a prosperous 1981. See you next year!

## HOW TO GET THEM

All of the disks referred to in this article are available from the Public 9 PC Library. Each has a unique reference number which you should use when ordering or enquiring about the software. Please contact Public 9 if you don't have a copy of their Anniversary Party Details and check the special requirements for each disk. P9L Page 9CATALOGUE (containing a full list of disk names and contents) is available from the library, priced at £1. The data contained in this article are:

0111 - **CHRISTMAS TIME**  
0112 - **SAFE AS HOUSES**  
0113 - **MAKE A BREAK**  
0114 - **MONOPOLY**  
0115 - **BOOK**

0116 - **SAFE AS HOUSES**  
0117 - **MONOPOLY**  
0118 - **CHRISTMAS**  
0119 - **TCB SOUNDTRACKER**

Prices for standard disks are £9.95 each or £29.95 each for fast service  
0116 to 0118 £ 9.95 each 0119 £4.95 each  
Telephone 0199 373333 or FAX 0199 343333 with credit card orders

# DAYS OF THUNDER

**D**oes the world really need another "Motocross" (sort of) computer game like *ST Thunder*? They are often not terribly good and often have very little to do with the film apart from containing the right characters. Well, this time you have the opportunity to pretend that you're Tom Cruise, and make all the little girls swoon!

As you'd expect, *Days of Thunder* is a stock-car racing simulation based on the film of the same name but does it, unlike many other "film" games, bear any resemblance to the movie? To say surprise, the realism and attention to detail which *Motorhead* have put into this game is quite astounding! All of the rules of stock-car racing are adhered to and the overall "feel" of the game is quite realistic. Your main aim in the game is to compete throughout the rac-

ing season, starting first at Daytona racetrack and working up through the various "wards" which eventually lead to the Championship race. This takes place at the Daytona racetrack at the end of the season.

In terms of presentation, *Days of Thunder* has been very cleverly created. The style of the game is very much in the mould of flight simulators and the graphics are very reminiscent of style to such titles as *Flight Simulator II* and *Jet*. Thus the game can realistically represent a three-dimensional environment. Your view of the action is mainly through the front window of your high-powered Chevrolet stock-car however, just as with the various flight simulators available at the moment, you have the choice of viewing



the race from a variety of vantage points. These enable you to watch the race from the stands, from an airship, and through the different windows of the car. This is a very original approach to a racing game and the only other game I can think of which employs the same method of perspective taken in *Hard Drive*, now available as part of Demarc's *TNT* games compilation. The game does suffer somewhat in terms of control, as in some places the reaction of the joystick is a little sluggish but this does not detract from the game overall as it is surprisingly playable. Compared to most other film tie-in games this one is particularly impressive.

## FACTS

Title: **DAYS OF THUNDER**  
 Publisher: **Microscope**  
 Price: **£69.99**  
 Developer: **John Davison jr**

## SIGHT & SOUND

The flight simulator-like graphics give the game a very distinctive look, second to none.

## GAMEPLAY

Generally quite playable, but it does suffer in some places from poor response.

## VERDICT

Surprisingly impressive.

## FACTS

Title: **GUARDIAN ANGEL**  
 Publisher: **Cosmic Masters**  
 Price: **\$4.99**  
 Developer: **Benson Howard**

## SIGHT & SOUND

The game is very strong in both areas and it's playability is enhanced by them.

## GAMEPLAY

Fast and furious, reminiscent of a good old-fashioned car chase.

## VERDICT

Great market set game, worth playing.



**G**uardian Angel is yet another budget offering and this time as the name may suggest the player takes the part of one of those vigilantes who visited from the U.S.A. a couple of years ago. It is the player's role to rid the streets of muggers and muggers (and one can't help wondering exactly what other Guardian Angels I worried about the quality of this product before it even landed since the disk promises it is made for Commodore Amiga ST).

The game is a joystick controlled martial arts beat 'em up with all the usual kicks and punches available. In a format it is very reminiscent of *Hig-*

hats if so far as the Angel must knock down several henchmen (being attacked by various oriental warriors and kick boxes and several Occidental leather chokers and has letters. This is not to mention the various kick lift strikes who attempt to flatter the hero. Bonus points are scored for completing the action inside a time limit and this is comprised of people incapacitated and time left on the clock. The game attempts to inform the player that if they get in between encounters their energy level will restore and that they may not die from severe damage if a break in the action can be found long enough. The sprites are big and cartoon like with a chibi character from doing your fighting for

# GUARDIAN

you. The action is smooth and very fast on occasion a bit too fast. There is plenty of colour splashed around the screen and the game feels as though it is an arcade re-creation. The graphics certainly do deserve a special mention since they are both expertly crafted and most entertaining to see. The sound effects sound reassuringly like a *Jackie Chan* movie although I am not sure that the battle with a boss should not be saying "BFF BFF" as he steps out from around the back of the head. There may be those of a delicate disposition who will find some parts slightly gory but they appear to have been included to test your adult-funny threshold and would hardly even merit a 13 certificate in the cinema. I enjoyed this and recommend the game to beat me up fans.

# THE IMMORTAL



**M**any years have past since you last saw Mordecai, the old wizard who took you in and patiently taught you the ways of the sorcerer. He was your master and your mentor, your guide down the treacherous path of wizardry, your friend. Until now you assumed that he was dead but a few nights ago he called you to a dream. You awoke feeling that Mordecai still lived, trapped in a bottomless cavern.

You set off on your mission to find your old friend and master, to uncover the secrets of the Immortal. You must enter the ancient city of Etrich, a city destroyed by the dragon's fire over 1000 years ago. From here you must go to the labyrinth which lies below the city, searching which Mordecai used to speak of often. Within the labyrinth you will find many adventures and many

gambles and traps which will hinder your progress.

All of the action taking place in this treasure-strewn adventure is viewed in through looking down on a room from above the corner. It gives the room a three-dimensional look, appearing to be a channel stage on your screen. You play the part of an old wizard who must move around the vast labyrinth of rooms, solving puzzles and defeating many of the hostile characters which you encounter.

Graphically the game is superb, the three dimensional view being very reminiscent of some very early classic games on the B-bit computers. The concept and graphics here, however, cause a long way since then! The animation of the characters is especially impressive as they walk and

simultaneously move around. It also shows flicker, green sparks and fire crackles, all giving the game a tremendous quality.

I truly enjoyed playing The Immortal. It isn't too difficult and some of the puzzles seem to be totally impossible to solve. The fight scenes are also worthy of special note. When you encounter a hostile creature such as a troll, you must defeat it in hand to hand combat before you are allowed to continue. These fight scenes are very well done and the variety of moves you have at your disposal are all easy to utilize.

There's only one set back - The Immortal will only run on a machine with a megabyte of memory. A pity.

## FACTS

Title: THE IMMORTAL  
Publisher: Benchmark Arts  
Price: £24.95  
Reviewer: John Gordon jr

## SIGHT & SOUND

The graphics are of superior quality, and the animation is wonderfully smooth. Sound is far from the usual clogging combination to the atmosphere.

## GAMEPLAY

Very enjoyable, a challenge without being frustrating.

## VERDICT

Superb, although it's a shame that not everyone can experience it due to its price. Note that it requires full and double ended drive.

## FACTS

Title: MAGIC FLY  
Publisher: Electronic Arts  
Price: £24.95  
Reviewer: Damon Howarth

## SIGHT & SOUND

Extremely strong and graphically excellent.

## GAMEPLAY

A simple concept that once mastered may amaze and fascinate.

## VERDICT

Buy it now!



**M**agic Fly has a pretty rare third dimensional guarantee excellence, conceived and written by two famous Lancashire lads it falls in the 3D shoot em up genre pioneered by Elite.

The concept is that a new space fighter the "Magic Fly" of the title has to be used to conquer a fallen metal planetoid and complete five tasks. These include mapping and scanning functions together with a couple of seek and destroy missions and finally destroying the asteroid. The mission is fairly complex but there are no in the crash and its variety of equipment.

The control screen has plenty of action points and needs the

# MAGIC FLY

mouse to activate much of the data. Sight control is best done from the keyboard even

though the joystick option is possible. It takes a well filled twenty seven page manual to detail all the features and techniques of the craft and any attempt to describe them briefly would inevitably be a patchy piece of games software.

Graphically the game is a combination of solid and wire frame 3D which seems to borrow their roots from Elite, and although the game is not especially colourful or strong in sound effects it provides the opportunity to try some armament and stage systems in involving CAD style displays. Flying and combat modes are fast and exciting since the various control modes are unobscured. It is perhaps un-

fortunate there is no opportunity to experiment with the craft's handling before the missions must be joined, but that can add to the precision and excitement of the game.

The game runs on two disks and the system allows for them to be rapid on to what ever set up suits the individual's preference. There are also extensive save facilities and managers to allow your craft an auto docking mode for those essential repairs.

This is a game that a short review cannot do justice to, I found it had a long term absorbing effect and it would certainly rate as one of my favourite games of this year. It has a strong tactical element and thus seems itself from being just another shoot em up.

A game that could achieve the same sort of status as Elite.

# STOS

## COLUMN

### OVERCOMING

### DISASTER

### PETER HICKMAN

### BRINGS YOU ...

### NEWS OF ...

### BETTER MUSIC

### A NEW

### SQUASHER ...

### AND ...

### A SOUND TO

### GRAPHICS

### ROUTINE

**T**was the night before Sunday and all was still, not a mouse, not a joystick stirred. I retreated on the STE to communicate with a couple of Bulletin Boards and to try unsuccessfully the computer did nothing, no power light, no disk drive whirr - it was that (space of shock and horror)!.

No that wasn't an extract from my latest attempt at hitting the best sellers list, it was all true! For the last four weeks I have been operating without an Atari ST, which of course means that I am four weeks behind on answering all your letters, contacting all the people who appeared in the last column, judging the STOS competitors (yes, I really am biased) and finally I haven't had a chance to read Page 41 my latest lot of STOS PD software. I have had my Amiga to work with but I haven't started or stopped! but I will haven't found any decent word processors on that computer at all. Still I have the good old STE back now (thanks to SCL, the trade arm of the Illinois Group), but I am short on time so this column may be slightly smaller than usual.

## QUALITY MUSIC

Talking of the Amiga, you may be surprised to know that even if it doesn't have out wonderful MIDI ports it does have a superb sound chip and has given rise to an awfully large collection of musical masterpieces created with various programs. What has that got to do with us? Well also on the Amiga is that wonderful language, AMOS which just happens to support such tunes you have to convert them to fit into an AMOS music bank, but that's no real problem. Anyway Francis Daniel has recently been working on a program that converts AMOS music banks to a format which STOS can use (with the help of a new extension he is writing), details are still sketchy but doesn't it sound excellent?

## WHAT REVIEWS?

I did have a couple of reviews lined up for this issue, the first was a new (and usually) budget release by Adams Software, the game is *Shyrtles* (the which I originally reviewed quite a while ago). I'm not sure of the price or what sort of packaging has been done (as they don't seem to copy yet but I can't be sure about that) Got Money games which's well priced yet, turning up their apples and pears can really make you pay for knowledge! The second release is a new set package by Terry Manney and Kevin Henson, but this is currently being re-stamped (a tiny bit so we will leave that for next time) it should be out by the time you read this.

On the subject of Terry Manney (another link in this issue, he's but has been working hard on a new disk based magazine for programmers called *ST PROGRAMMER*). At the time of writing I have yet to see an issue but he promises lots of STOS programs so it may be worth a look. You can contact Terry through Mail Box Software on 0703 508322 (that's in Devon for all you phone freaks). We will have a Machine Code routine from Terry in the next issue, I cannot tell you what it is yet it's a surprise but sure in next issue the first thing STOS owners have had since STOS September.

## CUE SQUASHER

As you are all aware STOS Squasher this is really good! I think it's one of our best to the most essential thing any STOS owner should have, and if you come along to the European Computer Entertainment Show you would have been lucky enough to see it's authors, Darren Kell and Robby Earl. Darren has just sent me a lovely little routine which

continued on page 72

```

10 rem #####
20 rem # SOUND_D version 3 #
30 rem #
40 rem # The SOUND editor #
50 rem #
60 rem # By Daniel Spooner #
70 rem #####
80 rem
90 rem *90
100 rem
110 rem ==> LOAD MUSIC FILE
120 rem
130 rem file select@("*.MID", " CHOOSE MUSIC FILE TO PLAY! ")
140 if #="" then end
150 erase 3 : load #,3
160 rem
170 rem ==> CHECK MUSIC AND GET NUMBER
180 rem
190 if loadstat@()<0 then print : print "This is not a MUSIC bank!"
: print : print : and
200 key off : cur off : hide on : mode 0
210 home
220 input "Enter Music To Play : "M#
230 on error goto 290
240 music M# : music off
250 on error goto 0 : hide on : palette 40,40
260 rem
270 rem ==> SET UP THE SCREEN
280 rem
290 cls : scroll off : locate 0,0 : auto back off : under on : centre "SOUND_D"
: under off
300 locate 0,2 : centre "By D.Spooner in STOR!"
310 ink 1 : box 0,10 to 40,10 : locate 0,20 : print "1 3 3 VOLUME"
320 box 60,30 to 300,100 : locate 20,23 : print "WAVE FORMS" : locate 7,6 :
print "1" : locate 7,12 : print "2" : locate 7,18 : print "3"
330 def scroll 1,00,33 to 303,179,-2,0 : palette 40,0777,0700,070,07
340 rem
350 rem ==> MAIN LOOP
360 rem
370 music M# : 3>pag@1,7 : plot 200,30+0 : repeat
380 rem
390 rem ==> WAVE FORM READINGS
400 rem
410 3>pag@1,7 : 2>pag@2,7 : 2>pag@1,7
420 ink 1 : draw 270,30+0L001 to 270,30+01 : ink 2 : draw 270,00+0L002 to
270,00+02 : ink 3 : draw 270,130+0L003 to 270,130+03
430 0L001+01 : 0L002+02 : 0L003+03
440 scroll 1
450 rem
460 rem ==> VOLUME READINGS
470 rem
480 3>pag@1,10 : 2>pag@7,10 : 2>pag@10,10
490 ink 0 : draw 0,107-0L004 to 0,107
500 ink 1 : draw 0,107-05 to 0,107 : 0L004+05
510 ink 0 : draw 16,107-0L005 to 16,107
520 ink 2 : draw 16,107-05 to 16,107 : 0L005+05
530 ink 0 : draw 32,107-0L006 to 32,107
540 ink 3 : draw 32,107-05 to 32,107 : 0L006+05
550 until inkey@="" : default : and
560 rem
570 #####
580 rem
590 print : print "====> Music Not Defined!"
600 print
610 resume 220

```

# STOS

from PAGE 6

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is compatible with the Unispeech command in Squash and packs samples with a much better compression ratio than the ordinary Squash command. I'm not sure what is going to be done with it at the moment, so I'll let you know next time (it's going to be really busy in the next issue).

## JUST ONE PROGRAM

Before we look at the only program for this issue (sorry but I have deadlines to adhere to, Richard), I'm not a cat lover - Vassar (Mascara's Development Manager) has reminded me to tell you about the new STOS upgrade which is now available. It adds compatibility for the very latest TOS revision (1.6B) I believe. It also means that for those of us who have written PD software and have a computer will now go and re-compile and re-queue our programs (oh, eh, another two hours gone).

Oh the only program for this issue is from Daniel Sposito, a regular contributor to this column. Daniel has come up with a way of producing a 700-Block type display from a piece of STOS music using the PDC's facilities. It's quite short and really easy to follow so here goes...

## HOW IT WORKS

**Lines 10-100** - tell you that Daniel is a pretty amazing person.

**Lines 110-150** - load a piece of music into the music bank, I used the music from the STOS associative disk when I first tried this program.

**Line 160** - looks at the beginning of bank 0 for the first four bytes in long-word, if the number found is different to \$1400157 then the bank which has been loaded is not a piece of STOS music.

**Lines 200-250** - let you pick the piece of music you wish to play.

**Lines 370-390** - set up the initial screen display, including a scroll area for the

waveform generator (you it does that too).

**Line 410** - passes the waveform information into the variables X1, X2 and X3.

**Line 430** - draws the current part of the waveform and scrolls the zone.

**Line 450** - passes the volume of each sound channel into the variables SA, SA and SB.

**Lines 490-500** - generate bars on the screen depending on the volume of the channel.

Oh what do you think, cat, huh?

## HOW ABOUT ADDING MORE?

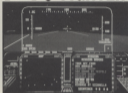
Now you know how to find out the volume of a channel how about writing a similar routine that uses drawing sprites? Or perhaps some form of light effect that increases the brightness of the colours displayed if the music gets louder?

## NEXT TIME

Oh well, I'll have to go now. Before I do let me remind you about a couple of events coming up, first is the Computer Shopper Show 880-980 of December, Mascara have their usual single event with local stores, gigabyte monitor and laptop deals, I'll be there, and so will Aaron Falkowitz showing off lots of new stuff. Richard Vassar says there will be demonstrations of STOS/AMOS-30 as well as Fun School 3 and a new program which could set the educational world alight I signed a non-disclosure agreement so I cannot say more than that. Also coming up is the third 16 bit Computer Fair 480-580 of January 1991. I'm not sure about Mascara but I'm sure you will still spot the hanging around anybody selling STOS stuff. The last 16 bit Fair was a big improvement on the first one, with a lot of the larger companies back on Programme exhibiting, for you Steve folks.

# FLIGHT SIMULATION

## F-19 STEALTH FIGHTER



**I**t always had a soft spot for Microprose flight simulations, so I was delighted to receive F-19 Stealth Fighter for review. It seems expensive at \$29.95, but after seeing the contents of the instruction box, the price seems reasonably justified.

The package contains three single-sided disks, two large sheets of full-color maps showing the operational areas, a large keyboard overlay to help with the simulator's complex controls, a booklet supplement showing 57 specific details, and finally, a superbly produced 180-page instruction manual. This really is excellent - as well as the basic operating instructions it's stuffed full of hints and tips, and uses lots of pictures and diagrams.

The simulation structure is similar to Spectrum's Hobby's Tactics and Digital Integration's F-19 if you've seen these, in that you're taken through mission selection, pre-flight briefings, and mission selection stages before you get to fly. You can also choose training or operational modes: air-to-air or ground strike missions, cold war, limited war, or covert.



tional war scenarios, operational area - large regions in Libya, Persian Gulf, North Cape, or Central Europe, and the skill level of your opponents. The program tracks your performance, awarding points and medals for each mission depending on its difficulty and your achievement. A separate 'master disk' is used to record your career progress from mission to mission. Promotion up through the ranks from 2nd Lieutenant to Brigadier General depends on experience gained and medals achieved.

### AVOID THE RADAR

There are lots of missions, each having a primary and secondary objective. These involve you navigating to, identifying, and dealing with the stated targets, before landing and landing at a friendly base. F-19 differs from other simulations in that you have to attempt this without being detected by enemy radar (or IFF). You're helped by the 'stealth' features incorporated into your aircraft's design. These include a low radar reflectivity profile and construction, and reliance on passive (usually optical) methods of target identification, navigation, etc. Your 'electro-magnetic visibility' to the enemy is shown on an instrument on the cockpit, and the idea is to fly the aircraft in a way which keeps it as low as possible. The same instrument shows the point of enemy radars currently searching for you, so it's easy to determine how visible you are to them.

Missions start from either an airfield carrier or land base. There are busy places, as there are usually plenty of other aircraft landing and taking off. You have to fit into the traffic pattern, just like in real life!

Primary aircraft flight controls are via mouse, keyboard, or joystick, with all the secondary controls on the keyboard. This is where that keyboard template proves invaluable. Response to flight controls is quite good - it's not the Flight Simulator II fighter, but seems better than most. I found it comfortable to fly, but too easy to stall, particularly in tight turns, so you

have to watch this. Not unexpectedly, landing after a mission is the hardest part to master, although it's possible to use 'no crash' or 'easy landing' options until you get the hang of things.

Your normal view of the world is through the cockpit canopy, but it's possible to change this. You can have a full screen view straight ahead, either side, or behind you, 'dot', 'cheese plate', or side view of your aircraft. Limited views - which show you and your airborne opponent, either from your point of view or your opponent's - and finally a 'stealth' eye view - as it looks on its target. There's a complete lack of traditional flight instruments, with everything displayed either via the usual Head Up Display projected onto the windscreen, or on multi-purpose display screens on the cockpit panel.

### RANDOM CLOUDS

Scenery detail is excellent, with lots of rivers, lakes, mountains, roads, and river line buildings, as well as unique installations to see. Scenery has interesting detail too, in the form of a wide variety of ships. The sky is thick with air traffic, both civil and military of friendly and enemy persuasions, and be careful you know what you're shooting at! Another unusual touch is the use of random partial cloud cover, something not often seen in flight simulations.

As expected, the control aspects are first rate, particularly the air-to-air scenarios. At higher difficulty levels you're up against cunning air pilots, expert evasive operators, and missile crews with VERY tricky trigger fingers, and you're lucky to finish each mission alive. Its screen is kept high by the wide range of enemy aircraft types from Jet 70 transports, through F-70 airborne early warning aircraft, to the incredible B67-80 fighter. The enemy also uses some American aircraft, such as Phantom and Tigers, just to keep you on your toes!

This program offers something for everyone, requiring thought and skill as well as supplying action and excitement. It's got excellent graphics and animation, appropriate sound, believable (if not totally accurate) simulation aspects, and in one it has the depth, challenge, and authenticity normally associated with top class games. I can highly recommend it.

Title:	<b>F-19 STEALTH FIGHTER</b>
Author:	<b>Microprose</b>
PRICE:	<b>\$29.95</b>
Reviewer:	<b>John J. Devine</b>

# THE FINAL BATTLE

**T**he long-awaited sequel to the excellent graphics adventure "The Legend of the Sword" has finally arrived and looks very good! Whereas Legend was basically a text adventure which had lots of graphics features, The Final Battle has followed the current trend of using the mouse for everything. Most of the screen is taken up by a very detailed view of the current location. There is a small text window below which can be scrolled up and down, and lots of icons around the edges to allow you to issue commands.

There is no inventory, but the graphics are excellent and cover all aspects of the game. For example to attack an enemy you click on the ATTACK icon, click on the enemy in the main window; it displays your weapons, choose one and a full screen battle is displayed for you to target your attack. If you select the MAP icon an excellent scrolling map of all the areas you have visited is displayed and you can return to any area by just pointing at the map and selecting the GOTO icon.

The story carries on from Legend - the evil wizard Zaxar has escaped and killed most of your party in an ambush. You awaken in a prison alone and unharmed. You must escape, rescue whoever's still alive, and explore the countryside for it crystals of power and it leads to Zaxar's castle so that you can destroy him!

The game covers over 130 locations

each with its own 3D picture and will carry a hundred items you can manipulate (not all of which are useful - don't try and carry everything). You can examine nearly everything in the picture, including little black dots which turn out to be spiders! You need to find four companions if you wish to survive as each of them has unique abilities (eg. strength, archery, thievery). You must use the right one for tasks such as shooting arrows and examining walls or you won't make a lot of progress! One character can throw spells (eg. healing, detect spirit) provided he is kept well fed and in good health! Time passes during the game and the weather changes - these are all taken into account, for example you tend to miss with your arrows if it is windy! All in all there is an incredible amount of detail in The Final Battle!

The main icons LOOK, LISTEN, WAIT, THINK, EAT, ATTACK, CAST, TALK, RUN) are all fairly obvious - but check the manual for specials, eg. right click on LOOK allows you to look in a direction; right click on an object is LOOK INSIDE/ACCESS CONTENTS. There is one other very important icon (OP-ERATE, which allows you to "use" either one item or two items together; for a single item just double click on it. OPERATE means all sorts of things: remove, light, close, open, unlock, wear, smell, swallow, push, search, touch with (a strange one that - what you have to touch is not visible so you just double click on the item you want to touch it) WALK, etc. - if in doubt double click on everything and see what happens! (but beware - it is not entirely consistent - you can break one item by double clicking on it but another you have to, to attack!

There aren't too many hard puzzles to solve in The Final Battle, and the simple interfaces will make it accessible to a lot of people. It is a little obscure to a couple of plots though, so I suspect the Help files will be handy over this one for some time! One minor criticism is that



## "a big improvement on Legend of The Sword"

some of the commands are a little clumsy and each click is accompanied by a couple of seconds pause as the program adjusts the graphics, so for example "TAKE THE APPLE AND THE ORANGE TO BAGAN" takes 10 clicks plus 10 click "to" drag - 20 seconds! Its constant Dungeon Master takes only 8 seconds, and I can type the command in with under 10 seconds, so people who prefer to type their commands may find all this a little tedious. If it will take even longer if you don't realize that you can drag items in the picture - a fact not mentioned in the manual!

You can save in dialogue or (BAM) but a late bug means that you should precede ALL file names by "b". There are a couple of other minor bugs, but nothing that will stop you thinking the game - it saved the worst of them double-click on the big basket to make it go up.

- **GAMEPLAY** - Good WIMP interface (but's "Windows, Don't Mouse, Point" just in case you didn't know)
- **NIGHT & SOUND** - excellent graphics, covering every aspect of the game (as usual on all)
- **VERDICT** - Excellent if you like graphics adventures, a big improvement on the Legend of the Sword



Title: **THE FINAL BATTLE**  
 Publisher: **PIG/Minorsoft**  
 Price: **\$24.99**  
 Reviewed: **John Swandy**



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