

Page 6 Publishing's

NEW ATARI USER

The Resource for the ATARI CLASSIC and the ATARI ST

Issue 63 August/September 1993

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'The magazine
for the Dedicated
Atari User'

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Europe (Air Mail)	£17.00
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The next issue of
NEW ATARI USER
will be on sale 30th September
Editorial copy date is 23rd August

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Editor & Publisher: Les Ellingham - Advertising: Sandy Ellingham

Printed by: Stephens & George, Marlow, Bucks MK35 9EF - Page layout by PAGE 5

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BEST BE QUICK!

Although it could be the latest incarnation of Nigel Mansell's Indian racing, QUICK is in fact a programming language for your Atari 512k. It's produced by Power Per Post of Germany and distributed in the UK by Deon Garrahy, who has also translated the user documentation. Of course, Turbo Basic has already established itself as THE replacement for Atari's built-in offering, so where does Quick fit in?

The authors of Quick aimed to provide a language that could boast the benefits of assemble - speed and power - without the normally associated overheads of programming time and effort. Quick is a structured language which means that, unlike Basic, it doesn't rely on line numbers and therefore helps to avoid the bad programming techniques that these inevitably encourage. It incorporates many functions that are usually unobtainable without resorting to machine code - playing digitised sounds, dealing with player mouse graphics and accepting input from an ST mouse for example. The Quick compiler transforms your typed-in source code listings into machine code 'obj' files which can then be run using the 'L' Load option from DOS. The resulting code is, according to the authors themselves, considerably quicker than Atari Basic. Turbo Basic and Ryan Pascal. Only Action Beat Quick by a mere 2 seconds in a test to compare exactly two thousand prime numbers, and Atari Basic trailed home almost six minutes behind!

COMPREHENSIVE PACKAGE

The package comprises a single sided disk containing the Quick compiler, program editor, system libraries (source code files containing pre-defined sub-routines) and several demonstration samples. The various components are accessed by a shell (or simply menu) which loads on power-up and steps the editor or compiler into use as required. The system will run on all XL/XE machines (except the somewhat rare 120000L) and DOS 2.0 is recommended. Users with more than 64k gain a useful speed advantage by the automatic creation of a 'lib' disk which is subsequently used during the compilation process.

All Quick source code listings have a common structure. The first optional sections contain a list of included libraries and variable definitions. All global variables - those which are visible throughout the program - must be declared before the main program begins, so that the compiler can maintain a table of the variables used. Bytes, words and array variable types are supported but not floating point. The main program begins with the key-word MAIN, ends with ENDMAIN and may call any number of subroutines which are surrounded by PROC names and ENDFROC. Variables may be passed to subroutines, and local variables (which are visible only inside the routine, though they always retain their values) may be used as well. Quick incorporates around 600 program statements, some of which are similar to Basic, some from assembly - e.g. 'C' and others completely unique to Quick. Initial in-

Paul Rixon checks out a new language being used to write many of the new programs from Germany

structions are that the language is fairly technical in nature and probably ideal for assembler users who want to spend up their development cycle. However, after some practice and examination of the demo programs supplied it begins to seem less complicated.

Quick provides a screen-based text editor, unlike the line-based editor built into Atari Basic. You can use the cursor keys to scroll through the text, press letters to insert a new line, insert tabs for indicating program structures and insert new sections of code at any position. Control-key functions allow you to delete lines, define and copy blocks of text, search for specific text sequences and perform many other useful tasks. The editor is equipped with all the facilities you are likely to need in constructing Quick source code - my only criticism is that the cursor is fixed in a central screen position, so that pressing the up and down cursor keys moves the screen rather than the cursor. This seems rather unusual at first, though it shouldn't take long to get used to.

COMPILED CODE

The Quick compiler translates your source code (almost quite slowly without the benefit of a compiler) into machine code in three stages - first the variable assignments, then the straight forward key words, and finally machine subroutines which include the more complex facilities for mouse handling and digitised sound. You simply enter the name of the source file and the compiler reads each line from disk (or cassette) in order to create the final .obj file.

Though it's not intended for the novice user, those who are interested in programming languages really ought to take a look at this one. A large proportion of new commercial games (especially those from Germany) are now being written in Quick and with a small amount of perseverance, you could be the next A-list thought - Quick magazine - a disk mag produced by PPF - explains the ever expanding features of the language - has published an enhancement for Quick that enables your Atari to perform multi-tasking (running two prog) runs simultaneously. Is there any limit to the power of the Atari?

QUICK is published by Power Per Post of Germany and distributed in the UK by Deon Garrahy, 92 Thomson Avenue, Holly, Doncaster, DN4 0SC. The price is £25 plus £1 to cover postage and packaging.

Mailbag

Well, the letters keep coming in! Thank you to all who included words of encouragement and appreciation (including César Harrison, Dave Denning, Freddy Van Heijning, Diane Hayes, M S Wood, Bill Justesen, David L. Waldman, Arthur Morris, Aaron Dumitrescu, Derek Fern, Bill Higgins and Dennis Fogarty). Without more ads, on with this issue's letters.

Allan J Palmer, Mailbag Editor

**Allan J Palmer
sits in the hot seat
at the sorting office
awaiting your
letters on all things
Atari - get writing!**

**Write to MAILBAG at
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PRINTERS, INTERFACES AND WORD PROCESSORS

A regular Mailbag correspondent in H S Wood of Bradford, West Yorkshire, has been using Phil Cardwell's "Page Six Writer" since it was published in issue 88 and has "...found it to be an excellent word processor". There was just one little snag because I use a joystick port printer interface. The solution was to boot the computer using my Epson Monitor. A secondary problem was that if I pressed RESET I lost my printer routines. The cure to this was obvious.

Recently, while writing a longer than usual report (with "Page Six Writer"), I found that the page headings gradually disappeared down the pages giving a most tattered effect, and I decided that something had to be done. The fault is caused by the clash between the program "page-up" and the printer "page-up" routines. It might be someone by the size of the "W" confused but there I would lose the effect of my printer buffer.

I cured the problem by replacing the three carriage return units at line 255C with 5 bytes to send the code 80C to the printer. The remaining 4 bytes were filled with 80FF codes 8EA. This change can be done by modifying the bytes directly in the disk sector without changing the program in any other way. However, I decided that while I was at it I might as well cure the RESET problem. This is a more involved change because it means adding 20 hex bytes into the initialization (first) sector and this in turn means changing the program. The extra bytes near the 1A5780 address, from location 8E2A01 80C11C and restore 4 other RESET is processed. I added the method for curing the page heading bug below. If there is any interest, I will send details of the RESET amendment."

Page Heading Change for "Page Six Writer" by H S Wood

- 1) Format a blank disk using DOS 2.0 and add the DOS and DDP files. It is essential to use a newly formatted disk because if a mistake is made, you could corrupt other files on the disk, and the sectors will not be in the right place.
- 2) Copy the "Page Six Writer" machine code onto the disk under the filename WRITE.COM.
- 3) Using a sector editor load in sector 00080 - this is the sector to be changed.
- 4) Check bytes 7 to 12887-80FF which should be:

```
30 0C 35 35 0C 35 28 0C 35
If the bytes do not have these values then you are to the wrong sector.
04 Replace the bytes with:
A8 0C 20 0A 05 0A 0A 0A 0A
08 Remove the sector and reboot the computer using this new disk. Finally, from DOS load WRITE.COM and if all is well the program will work normally. It is recommended that you keep this program separately until you are satisfied with it.
```

A fan from "Mr Micro Discworld" James E. Davis Fern, has some answers to questions in issue 88's column:

"For 15 W Davey, the only method I am aware of to hook up a serial printer with an Atari 8-bit machine is via the 850 interface. The serial port on the 850 gives off the handshaking lines required. But beware - using this set-up can limit the software you use. Some of the more recent DDP packages will only run correctly with a Commodore parallel printer.

In reply to Steve Blawing, for some time Steve Discworld combined with Dave Richardson of Wembley, have produced and marketed a modified High Speed tape system of the original AtariWriter. It is not possible to use a spell checker as you'll receive with tape based systems because you do not have the random access facility used with a disk drive, you can only read data as it passes the heads. The method to adapt when you have upgraded from tape to a disk system is to load your tape files with the Turbo AtariWriter, then save these out on to a blank tape in standard C: disk setup. Save your new disk version of AtariWriter Plus and load from tape. When loaded you can remove your file to disk or spell check it."

HOME FILING MANAGER

Dave Denning from Gillingham has some comments on Atari's "Home Filing Manager" utility:

"I wish to state the virtues of the superb HFM program - I find it so useful for all types of data handling, and I feel that its main thrust lies in its ability to search for a phrase across an entire data disk, and not just within certain fields, as on a conventional database such as dBaseIII E. To illustrate, suggesting you were to keep a diary and wanted to find how many days you had noted that the sun had shone, or that rain occurred according to whether you are an optimist or a depressive - a

along kept on the IFM would be easily accessible for this disk, but how would you organize such information in a disk on a conventional database, via Finder? A good processor like AtariWork Plus could obviously be used to keep a catalog, but the means of searching the entire disk for a phrase would be very tedious, as it would have to be done file by file.

Now for a couple of questions. Is there any way that IFM can be reoriented to work in true double-density, including the ability to convert all existing single density disks into double density?

Is there a writing console which will enable words to be transferred easily from a data disk of one title to one of a different title which already has a number of words entered in it?

Well, I suspect that it would be possible but long-winded to write some form of patch that would enable IFM to work in true double density. As indicated by my article describing the format of the IFM data records in issue #1, you would need to save for a larger table to record the Atari serial number for each data card. Another way to take on this as a challenge? As for your second question, I am unaware of a utility to merge IFM files - does anyone know of one? However, I am confident that it would be a relatively straightforward task to write such a utility program. The information needed is again in my article in issue #1 and good old Atari BASIC (or TurboBASIC) would be quite adequate to do the job.

NEW GAMES FOR THE ATARI CLASSIC

Coming back to David Perry's list, I find some information concerning some new games that may be coming our way. New conditions.

Over the last few months I have received lots of new software samples from contacts in Holland, Germany and Poland - various stuff as well as some brilliant games. So far I have not been disappointed with any I have seen! But to get these games over in a form acceptable in U.S. Atari units is very difficult. The producers require a minimum commitment to produce English text versions and if it is a serious program, converting text from a Polish multi-page manual is a big investment in time and money. So it's up to you, the user if you want to see all this new software - do something about it - suggest the people who are working hard on your behalf to keep such an idea on possible and possible give with software from all over the world. My own experience with 'Test Qualifier' and 'TapeDex' brought home just how much these games cost to produce. I received over \$2000 to obtain the rights to produce

these excellent games only to find they are going around by so-called Atari fans. Some of the new releases from Poland such as KULT, CAPTAIN GATACHEK and BATTLESHIP are already for the public street.

Even before I have had a chance to prepare the English version, it may not surprise you that these files will now be shipped from my factory but so the photos have once again succeeded in depriving the genuine Atari fans access to this new software. The most successful imported software this year without doubt has been 'Operation Blood' and the MEDIA-Magazine disks. This software contains protection that stops it being copied on lasers or floppy-equipped drives. All future releases, such as 'Operation Blood' for the Light Drive, 'Chess Match Computer', three novel versions of 'Demons' and 'Sphere' and 'BendyBoy' will include this type of protection. But this means that disks cannot be mass produced on each disk is individually produced and they will have some influence on the street retail price.

Always make me consider, when I see advertisements in Atari Star or Micro Star for complete set-ups for sale which include 200 plus disk games, how long have these users been collecting, and how much have they contributed to the support of the Atari fan machine. Have you got software in your collection with title screens that include names like BOB C, JAR K, JOH C, or THE BARTON BANNET? - if you have, it is illegal general software I appreciate that as a producer and distributor of software my name may be regarded as banned, but that may be based on 10 years' experience of the Atari fan scene.

MUSICAL TASTES & SOFTWARE GEMS

Ray Pearson from Maxwell Hill, London MD writes with regard to our Editor's choice of music:

...I feel on this occasion I must write to say I support this choice as Brian Auger's new album 'Other Visitors, Other Rooms' is really in an excellent album. I saw Stuart Ogilby in concert at the Royal Albert Hall during his current tour and it was well worth the money. Moving on to the Atari Classics, Ray continues, 'In The Classics PD Show' Stuart Moving adds why there was never any Atari fan problems. You can tell Stuart that there was. A song called 'The Celebrity Condition' and was published in 1987 by Merrill Lynch it was also featured in ST and Judge Jurek. I also think it was ever imported into the UK. It had a very unusual production scheme which required the artist, on finishing up, to enter a three digit security code which would be different each time the program was loaded.

On to a question - is Alan Brewer of Brevon-

Soft who gave us Starburst2000 still in Atari mode? I'm just wondering if any further applications or even any disk accessories have been developed for use with DS. amms@compuserve.com

Issue 6 of Dean Garraughy's Atari News-Disk included an article by Alan Brewer that appeared on a U.S. disk, which concluded "... Anyway, we're sold out of the associated cards and getting more would be tough. We've been in contact with some people about taking over the project with me as exec. We still often suggest it as long as we can, but aside from that we're no longer involved in any significant disk development. That's the current state of things."

But is there a group of Discovered users and there somewhere who have produced accessories?

Ray writes to Steve Shosting's issue #2 question about a "word finder". "...the only program I have been able to find in an original source called 'Management' written by Humphrey Walcott and appeared in 'Softy Programs' for the Atari 400/800XL/1000 published in 1984 by Pam Binkley's Personal Computer News ISBN 0 230 28880 0 at £2.95. It's not quite what Steve is after, but it's all I could find."

Finally, Alan suggests those where I can obtain a copy of Light Drive which was published by Synapse?

SEEING THE LIGHT

Oliver Hill from Northhampton, North Yorkshire reports that:

"I have recently acquired a Light Drive in its rare hard case for £2. I also have 'Creative' issue 0, 'Creative Reader', 'Big One' (light) and 'Starburst Reader'. Is there any P.D. software which supports the light gun and are there any books which give information about programming the Light Drive? Also, I would recommend that all Light Gun owners take a look at the Softy's catalogue as they contain a light gun game called 'Creative Reader'."

Returning back to issue #6, my reply to Christian Dehles gave some information about light gun programming which is essentially the same driver as a light gun - see (Old) Atari Star Feb. 1987 for an article by Andrew Wiley on programming for a Light Gun and if you can find a copy of 'The Creative Star', this will also help.

NEWS FROM BELGIUM

Freddy van den Hoegaing writes again from Belgium:

"Thank you very much for publishing my letter. I originally wrote some time ago, but I originally wrote more about 'Management' (which was described in issue 5.1). I did not know"

Mailbag

that there was a utility for the 1020 printer. But did you know that the program also contains a game called "Hexcolor Anagrams"?

There was no reply to my question about a user group in Belgium or the Netherlands. I was disappointed to find that the 4-bit Atari users didn't ever there, but I will hang on! There is some good news, however: from England I received to me on 1 June a very nice post to swap Atari and tips with."

You may prefer had no reply about a Belgium or Dutch user group? Well, read on! Finally and get in touch with our best correspondent ...

NOTES FROM THE NETHERLANDS

A lengthy letter from Bill Wolters of P. Lammertinkstraat 4, 4927, On Bode, The Netherlands contains a number of questions and comments - unfortunately with the full Mailbag this issue, I won't have the chance to cover all of them, so expect more of Bill's comments next issue. In the meantime, Bill starts off by asking: "Can you publish the address of the Atari club in Spain?"

The only Spanish address I could find is Page 6's Contact list was Stephen White, C/Payasas 30, 02140 Palencia, Mallorca, Spain who has contributed to the magazine in the past, perhaps you should drop him a line? If you are looking for Stephen, his new home returned to the UK, or was it the other way around? (Ed.)

Bill also suggests including the German club ADDRESS in our Resource File, OR IBM. I would - but you didn't include the full details in your letter! Bill also says that you can write to his address alone "... my club, IBM, for 8-bitners. We have a hard-copy edition that installed my excellent 4-Way-printer output, etc. I would be delighted if you Page 6's if it is the region could drop in."

Bill gives these tips for users of the 1020 (Ed.):

"A common malfunction on the 1020 printer is that a small plastic gear on the metal transport roller spins - I think due to differences in thermal expansion. Press the gear off, slightly enlarge the central hole until the crack remains closed when mounted. Then using standard glue (epoxy compound), put a drop in the crack and on the axle and put the gear on the axle.

You can repair 5020 pins by pulling them up up in hot water (just off the boil) until no more bubbles escape, then quickly dip it tip down in ink (use only water based ink without particulate matter) eg. Higgins Drawing Ink 420444. Also a LED light sensor fitted on the 1020, you can convert it to a scanner and scan pictures."

Innovative Concepts in the States sur-

veyed a similar device which would fit on a dot-matrix printer between the ribbon and main printers but through the printer - it was reviewed in the October 1988 issue of BYTE.

Bill has a question about issue 56: "...on page 11 of that issue, the HexColor program is printed with neither attachment nor copy on the disk. Could you refile these contents?"

Looking back at that issue, I note there's not much in the way of description but the listing is a simple demonstration of concatenating text between upper, lower and inverse characters by using the logical operators to test the input values. The listing is on my copy of the issue 56 disk on the AMCCOM.SRC.

Finally (in this issue) Bill notes that complete hard and software instructions for a light pen are included in the book "The Creative Artist". This book repeats most of the "Outpost Atari" columns and other Atari Classic articles that appeared in "Creative Computing" magazine in the early 1980s. This may help Christian. Details whose letter appeared in issue 60 and may be useful to Chris Harwood.

SCROLLS AND SPRITES

Further to D Benson's question last issue about reading scrolling messages, Avram Diamantopoulo from Belfast, Northern Ireland suggests the following:

"To read a scrolling message from a Page 6 magazine enter an on-screen Graphics O screen, enter the following program with the magazine disk in drive 1 (use Control-I to point):

```
'0 DPDS #1.4, 'DENSED DWT'  
'0 GET #1.0 IF 0-D THEN ' ' ' GO TO 30  
'0 FOR #000-#40: GO TO 30
```

Near the space printed in line 20 and the end of the semi-colon (:) in lines 20 and 30."

Now some requests from Aramis: "I've noticed a trend towards utilities and 'toyish' applications in Page 6. Is there a chance of publishing a devoted sprite editor that will do the following:

- create sprites at least 32 lines high, fit use all 8 sprites (including the missing), position the players (in any of the 3 sizes and colours) anywhere on the screen to create images wider than 4 bits, include commands like reverse, invert, inverse, etc., create multiple images to be created to make animations?

Can New Atari User possibly start a programming column for exotic features of the Atari Classic? Robert Stewart started the ball rolling with his great "Special FX" column a while ago. Could "Special FX" be continued dealing with new things like starfields,

parallel scrolling, software sprites, etc., at the kind of thing found in demos and games but not usually demonstrated in books or magazines? A column like this could only survive with input from demo writers and game authors - I'm sure there are plenty out there!

Sounds like some good fodder for future article there. How about it experia? "Finally, does anyone know how to transfer picture files between the Classic and the ST? I have tried in the past with Paintlib but will up in failure. Any help would be greatly appreciated."

ST DOWN UNDER

Ted Fletcher from Lismore, Western Australia has some ST-related comments. I started taking "New Atari User" just after I got STOS and I find it more relevant to me than the "planet". I read every page and enjoy the 4-bit section. I'm hoping that you will support the ST as you do the Classic when the ST's time comes to be the old machine. I would like to ask a few questions about STOS:

Have Europeans stopped supporting STOS? I was worried about STOS not being as attractive to your mag due to incompatibility with DOS 2.0 but in ST Format 43 there is a file for the computer and it said there was a file for the interpreter in ST Format 44, will there be another as F2?

What happened to the STOS Classic Classic Newsletter? I'm still owed 3 copies - my last one was 225. I didn't get any reply from my letter to Aram getting my copy and the editors (higher number 7 available, might be that?)

I think I recall that Signe Perso have gone out of business - if so, is that state of information? The Game Maker's Manual and Real-Time 3D Graphics for the Atari ST are available? We could do without being any publications for the ST. How did STOS 30 have appeared on a cover disk, will you be featuring it?

Just one more thing, a little bit I found out the ACCEPBY ALLOWED on Page 47 was to use as if simply loaded up all the screen area that it could from the disk - so I changed it to ACCEPBY with one set of inverted commas. Now to load any the sprite necessary, press Page 67, type in sprite - no need to put in _A00 or the final inverted commas - just press return."

I'm afraid I'm not expert for even comment, so it's going to be up to Lee to answer these ... POK here goes ... I'm afraid that STOS needs to be done now, or at least immediately, if and the STOS column was dropped because it was becoming hard to impossible to find new things to write about. Europeans are now only pushing the Amiga and it seems unlikely that STOS will receive further support. Well, but that is the way of the computer world sometimes. (Ed.)

MODERN LANGUAGES

A Paul of Haverhill, Essex reports that he is trying to use PCOPY but can't handle difficulties. I believe I can manage the track and reverse Polish notation (right-angled, for my purposes, but having made up a screen including a new definition of the word CREATE, when I LOAD the screen I either get "DIFFER NOW" or "CREATE not unique" followed by a system crash. The definitions appear correct as they have been accepted individually when typed in directly. I have tried using this on both a 38600 and a 38602, but get the same results. A further problem is that I have three words in print not the "LIST", although I wrote this a long time ago. The other main problem is what do all the WORDS mean? I have found out that CRIP will print to do a line feed, but what does "LF" mean? I should be pleased if someone could throw some light on these problems. I have studied "Writing Poetry" and the instructions on the disk but obviously I am missing something."

ANALOG magazine issues 12 - 21 featured a FORTH column which may be of assistance if you can find those issues. Maybe there's a reader who can provide a tutorial?

On the subject of languages, I still haven't received a detailed response but to John Young's issue 60 letter about "Doc C" and is it really usable? However, Daniel Carroon from Massachusetts and Alexis in France will let me an interesting letter (making excellent use of Teletype Dec 01, 16 writes:

"To Doc C is best program? I don't know but I used it to make the patch program I am sending you. The only thing I am sure of is that Doc C doesn't like a modified DOS." And on the disk (which supplied was a utility which runs with Display Dec 01 to automatically copy fonts from floppy to the DR. EdMark, users of the advanced version of DASH which allows multiple fonts in the same document will recognize how useful this is to speed up processing when DASH has to read new fonts from disk. So we have someone who has successfully used Doc C and provided a working program. Incidentally DASH itself is written in C and Machine Language."

TAPES AND DISKS

Two questions from B H Stranfield (Bucknell, Berkshire:

"Why don't you release more software on cassette because you have a very big PD collection and so many Atari Classic owners don't have disk drives?"

The main I have answered this question before - basically, where Page 6 has tried

selling PD software on cassette before, there has been very little response. This coupled with the cost of producing cassettes (which is done by a specialist firm, not in-house like disk duplicating means that it has been not been economic to do this. "Also where can you buy a 'new' disk drive for the Atari Classic. I've not find any shop or seller in New Atari Area?" No new disk drives are available. You'll have to use an adapter like Derek Fox's Mirror Converter in issue 60 for second-hand drives.

Mr Saunders may be interested in a letter received from David J. Wickham of Hove, Sussex. Among his comments, David mentions that "I am currently starting a monthly paper based magazine 'W.A.M.' (World Atari Magazine) which should be available free by sending a tape and postage in one. When the first issue is ready I will send a copy to New Atari Area."

Good luck with the project David. That does beg my old necessary cello a little. Does any Atari old issue (like say) remember a cassette-based 'magazine' for the Atari 480,800 called 'Newark' that was advertised in 1981 or 1982? I think only one issue was ever produced - I might even have my copy stored away somewhere!

DOCUMENT PRINTING

Dennis Pegerly of Salisbury, Windsor writes: "I have been using Page 6 Library Disk (ISSUE NEW DIGITAL EDITOR) through its pages and find it an exciting program. It certainly brings Desk Top Publishing to the Atari Classic, although disk swapping does become tiresome. I wonder if any reader has modified it to accommodate his drives? The disk also contains that well known graphics printer driver 'BIMMUL', which has always been a favourite of mine. However, on this disk 'BIMMUL' has a bug. Whenever sideways print is selected from the menu it throws an error 12 (EXAMPLE, COPY or THEN referred to a non-existent line number).

Anybody who requires the sideways format should use the 1970 and note the last statement, which reads:

IF @PPI-@Q THEN 18

This should be corrected to:

IF @PPI-@Q THEN 1880

and sideways printing will run a treat.

Oh a different note - could you elaborate in your column on the definition of 'Text File on disk' which appears in your favourite requesting letters. Similarly, Do states the same on page 3 concerning submissions. Did you say 'Not another programme?' I must confess to being just that - on computer matters at least (Please Don't ask me).

This letter has been produced with the aid of TeXPro v4.34 and, where noted, I promise it will be a disk test file that does it

appears the same on your screen, especially if you are using a different W.P. say, First Step or Print, etc. I have checked the code of 'Your Atari Computer' which tells me what things but can't be referred to that file. Maybe there is a different method more suitable. Please let me know. After all, we who bonded you with copies of letters could save to make your life as easy as possible."

Well Dennis, thanks for your input, and to the best of my knowledge, all Atari word processors save documents in disk as straight Atari DOS files containing the text you've typed but with their appropriate control commands embedded. (Depending on what, so don't use it to save in disks, BELL. As a result it is perfectly possible for me to load your TeXPro file into PaperClip and view it normally on screen. All I've done after loading your file into PaperClip is to go through and edit out the TeXPro control commands. In fact, on PaperClip to the word processor that I'm most familiar with but I sometimes require more nested print-out format, I will draft a document using PaperClip usually, save the file to disk in PaperClip, then load the file into TeXPro and use a TeXPro macro to apply formatting commands before saving this file from TeXPro and then going to Display Dec 01 to finally print the whole thing! Any Atari word processor should be able to provide me with a usable file. The only exception might be Letter Perfect which I believe uses a custom DOS, but I believe there is even a utility to overcome this (see Page 6 PD Library disk 0588).

FINALLY ...

From Stephen M. Duffin (aged 16), Newark, Cheshire:

"I've got an Atari 8000, and I want to know how to program my own game and printers. Can you give please help me?"

As you can see, I have the easy ones for last! (In the bottom of the letter, I've been known 'Alan - how many pages do you want to reply?")

I'm rapidly running out of room (maybe, but try and get hold of books like 'Your Atari Computer' or 'Easy Programming for Your Atari Mirror'. Many recent issues of 'New Atari Area' have featured good materials like those articles by Alan O'Brien, Daniel Lee, Steve Luky and Ian Parkinson. Don't regret the answer to appear in just one short article - you need to learn and experiment, start small and build up. Don't forget to look at the listings for the games that have appeared in this and other magazines, learn from them and understand how they work ...

And on that note, this is an enhanced Mailbag Editor signing off for another issue!

WHAT ARE YOU WORTH?

It is a great and increasingly rare pleasure to come across a significant new piece of software for the Atari Classic computers, particularly software that is a "serious" application rather than a game. So I am delighted to have the chance to review *The Home Accountant by Continental Software*.

Although the program is new to me, and probably to all of you as well, I note that it has a copyright date of 1985. Continental Software is not one of the recent European software houses producing Atari programs, but an American company and this program has been available in the USA for about ten years, but has only recently become available over here through Data Press at Home Discoset.

FIRST IMPRESSIONS

Like nearly all the serious (and expensive) software of its day *The Home Accountant* is professionally packaged. It comes in a boxed ring binder of American type (three holes and approximately A5 size), in the binder is the manual and plastic pockets for the disk and warranty card. It also contains some publicity material about IBM's computer firm. This is relevant as it includes continuous cheque forms and the program has a cheque printing capability.

Do not ignore the manual! Like most of you I like to get straight into a program without reading the instructions, and then complain that it is not user friendly when I get stuck, but with this program I very strongly recommend that you read the manual thoroughly before you start or work through the manual step by step as you set up and start the program.

HARDWARE REQUIRED

The Home Accountant needs a minimum 500/5800L with 48K memory and a single disk drive, also a printer if you want printed output. A 132 column printer is recommended, but 132 columns is available with compressed printing on many 80 column printers and this is quite adequate.

WHAT DOES IT DO?

I thought from the title that this would be a simple program for keeping in touch with your current account and maybe a credit card, it is in fact much more capable than that and can do all the following:

- Handle transactions in cash, chequebooks, credit cards, loans, mortgages and other assets and liabilities
- Track up to 50 budget categories
- Flag items for later recall for tax purposes

Ian Finlayson checks The Home Accountant not a new program but still an excellent buy

- Search for and display transactions by date, cheque number, payee, amount, budget category etc.
- Keep track of up to 5 cheque books with a separate bank account for each
- Handle up to 5 automatic monthly transactions for each cheque book
- Reverse bank statements
- Print cheques
- Print a variety of reports
- Print bar graphs comparing budget and expenditure, line graphs of expenditure (up to 3 categories), trend analysis graphs
- Calculate net worth

GETTING STARTED

I would normally recommend you to back up your program disk before getting started but with this program it does not work. The programs run on a two-sided single density disk which seems to copy OK using the ordinary DOS duplicate disk command. As the programs are written in BASIC I thought the copy would run correctly, but it does not. I expect that a little pattern examination of the BASIC code would reveal how the copy protection works so that a hack up can be kept, but I have not had time to look. I have an enhanced 1050 disk drive and SpectraDisk so it would be nice to take all the programs from both sides of the disk supplied and put them on one side of a double density disk to save some disk swapping, but this would also require some careful examination and modification of the menu structure and relationship between the programs.

So back up the program disk then, as the next step is to read the manual, follow the instructions and install in data disk on which to save your own accounting data. Once that is done I recommend that you work through the manual setting up a dummy set of accounts and make yourself really familiar with the program overall. The manual has a natural style which leads you through all aspects of the program. It is quite

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BOOKS

BOOKS

TAPES

TAPES

NEW SOFTWARE FOR THE ATARI 800X SYSTEMS

HOW THE LARGEST MAIL ORDER STOCKIST OF ATARI 8 BIT HARDWARE & SOFTWARE IN THE U.K.

through but just a bit different to understand in places on first acquaintance. If you plunge straight in and try to set up a real set of accounts without an overall feeling for the program you are almost certain to make mistakes which will be rather frustrating.

Once you are familiar with the program you can set up your own ledger system. It will be useful to have historical data available but basic statements etc. so you can make good estimates of budgets. I have only had a week to play with the program, and so I am not familiar with all the details, but it does seem to me that the writing-up process is fairly intriguing. No doubt once you have taken the trouble to set the system up correctly it will be comparatively easy to keep accounts up to date on a regular basis.

OVERALL ASSESSMENT

The program overall is comprehensive, indeed you can derive a figure which indicates what your overall financial status is (over 'net worth') if you complete all parts of the data, but it is this broad capability that also makes the program a little daunting. If all you want is to balance one cheque book the learning curve associated with The Home Accountant may be too steep.

Although it runs competently on a single disk drive the program would run more easily with two disk swapping on a two-drive system, but there are very few of us in UK who have the luxury of two drives.

A maximum of 5 consecutive transactions which repeat every month seems a bit limiting to those days of direct debit and

standing orders, but as the program allows tracking of the checkbooks it should be possible to circumvent the limit by putting some of the recurring payments in 'dummy' cheque accounts and then process up to 25.

It is interesting to see that this complex application is written wholly in Atari Basic - the program can be listed for analysis and no doubt you could learn a bit from doing so, but they are not concerned with helpful ROM statements and so could be quite hard to follow.

I do not know what this program cost when it was first issued in the USA, but the current Micro Discount price is £39.95, at this price The Home Accountant is really excellent value. Can you afford not to keep all your financial affairs under control?

THAT'S NEAT!

SOME HANDY HINTS

*Andrew C. Thompson
presents a handy guide
to a few tricks that you
might not know about*

How often do some of us long-term Macintosh users take advantage of the Mac's most simple feature? Often? Very often? All the time? Well, I've just come back from Germany where I was helping my sister get acquainted with her recently purchased Mac and, well, there, I never realized just how many seemingly unimportant little nigglers one needs to know to make the Mac fit in. Here is a very simple, yet informative article explaining just some of our Mac's seemingly unimportant tricks. Some you will already know but it's handy having them all together.

CONTROL-1 - In possibly the most useful, it's a pause/resume toggle for any print being linked on the screen, inside or outside of almost every program, Basic or otherwise code. This can also be simulated in programs with values 230 and 0 (POKE) into 767 for screen pause and unpause, respectively.

CONTROL-2 - is screen sound.

CONTROL-3 - causes Error 136. Some Basic programs check for the Error Key, but they can still be broken into by pressing this key when the program is executing an input. To prevent this, the input must be TRAPed.

SHIFT-TAB - can be used to set a tab anywhere across a line of text. Digital editors utilize Basic's assembly program.

CONTROL-TAB - will close the tab set with the shift-tab.

BREAK-KEY - can be disabled by POKE 16,04 and POKE 5,774,84.

LISTING - Listing of Basic programs can be prevented by setting a POKE 202,1 within the program itself. This way, if the program was to be broken into, it would be automatically erased.

RESET-KEY - can be TRAPed with POKE 0,52; POKE 0,185 and POKE 0,2

When Reset is pressed an error will occur, thus, the Basic program can TRAP Reset to any line. All the POKEs and the TRAP must be set up each time Reset is pressed. It can also be forced to reboot the computer with a value of 1 POKE'd to location 580. Peter with zero is recent to receive.

WARMSTART - can be done with X=20205244-41. Otherwise known as pressing Reset.

COLDSTART - can be done with X=15205244-71. Otherwise known as turning the computer off and on.

EYE - in Basic can also be achieved with X=15205244-1.

LEFT MARGIN - can be changed by location 82. A value 0 is useful when fighting in program listings, whereby all the screen columns are accessible, giving an extra 81 bytes to each program line.

RIGHT MARGIN - is changed at location 83. Similar to Left margin.

INPUT/OUTPUT - through the cassette or disk-drive can be made silent with a POKE 0,0,0. POKE with non-zero to turn it back on.

DISK - can lower data written to both sides by writing on identical hole on the opposite side of the disk. Believe it or not, I have written letters to several people who never knew about this.

MUSIC - can be played from the cassette unit and through the TV speaker with a POKE 548,18,50. A value of 80 will turn it off. My music system tends to under-estimate up, so this is a good secret when programming in the early hours of the morning.

SCREEN - display width can be altered to narrow, standard or wide with values 33, 34 and 35 respectively. POKE'd to location 308.

CAPS LOCK - can be turned on or off with values 04 and 0 put at location 700. Control-lock can be forced with a value of 128.

TEXT - can be spigun, inverted and moved up/down screen with various values. POKE'd to location 730. It can also be forced to increase width with POKE 004,1,25 and reversed with a value of 0.

CHARACTER-SET - can be chosen at location 730. Value 234 is standard. Playing with 204 gives international characters under the control-key persona. Non-capital size also obtainable on graphics 1 with a value under of 230.

ESCAPE - characters, such as the screen, can either be acted upon or displayed on the screen with values 0 and any non-zero value. POKE'd into location 708.

CURSOR - can be set/forced invisible with a non-zero value. POKE'd to 762, and returned to normal with 0.

KEYBOARD - keys can be detected by peaking locations 894. A value of 000 means no key has been pressed, other values are particular keys. These values tend to be a total mix-up, though on XL it they can be converted to ASCII equivalents by taking the POKE'd value of address POKE(1,31)+256*PEEK(1,22)+PEEK(708).

SCREEN - vertical adjustment can be performed by changing the value in location 580 between 0 and 31. An expansion effect can be obtained in a game by peaking random values between this range successfully.

PRINT - off output that normally goes to the screen can be sent to the printer with POKE 838,180 and POKE 839,235. Returns to normal with POKE 838,180 and POKE 839,240. On the XL, the 4 columns are 362, 364, 178 and 242 in the above order, respectively.

continued ➤

Odds & Ends

MYSTERY MAN REVEALED

You may recall the review of Video Title Shop from the last issue which was uncredited. Well the author has come forward and is Chris Thorley stationed at MAP Brugge. Chris has offered to do a follow up article on using Video Title Shop - what do you think?

SOFTWARE FROM GERMANY

Chris Thorley - see above - has also offered help in obtaining software from Germany where the Atari Classic is well well supported. If you get in touch with him, Chris will purchase any software you want locally and you can pay him in sterling taking all the pain out of leaving in foreign currencies. You can get in touch with Chris at 31 Nijn. Rd# 0893304EM, 8990 05

LEAGUE ORGANISER

You may recall a letter from Ed Hall some time ago asking if anyone could program a league organiser for different sports. Well we had one or two submitted - and thanks for those - but have now received a super version from Adrian Hyland which seems to cover everything any organiser could want. The program is accompanied by very full documentation on the disk. Because of the size and nature of the program it is not suitable for publication in the magazine and is, perhaps, too specialised for a Bonus so we have included the program in our PD library as a special. If you organise any kind of league - football, squash, darts, chess-etc. - check it out, it is well worth a look.



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Ben Poehland, Managing Editor

FIRE SCROLL - can be enabled at location 823 with a value of 255. Disabled with 0. By enabling, rolling Graphics 0 and holding a long program.

KEYBOARD - can be disabled with a POKE 803,255. It can be enabled with a value of 0.

INITIAL KEY DELAY - is at location 785. 0 for no repeat, 1 for fast and 255 for very slow. 31 only.

KEY REPEAT RATE - is at 790. Same for 729 except for all repeats after the initial keypress. 31 only.

KEY CLICK - is at location 731. 0 means sound on and 1 is off. 31 only.

HELP KEY - can be placed at memory location 732. A value of 17 means help is present, 80 means shift and help whilst 148 means control and help. 1 hour actually had a value of 209 in this register. 31 only.

CONSOLE KEYS - can be found at location 52378. A value of 3 means Option is present, 5 means Shift and 0 means Shift. Multiple combinations can be obtained also.

RANDOM - numbers between 0 and 255 can easily be obtained by printing location 52379.

MEMORY - can be cleared from Basic, or the speed of machine-code, by using locations 68, 69 and 106 in conjunction with the screen clear function. Just set 68 and 69 to the 108 and 1058 start address, and set 106 to 100 and address. Then, when a Basic clear function is issued, all this memory will be cleared. This is especially useful for clearing PMS's or strings.

BASIC - can be switched off with POKE 1006,1. Pressing reset will load DOS.

DOS - screen can be disabled from Basic by changing locations 10 and 21. Try POKEing 10 with 255, 11 with 0 and 260 with 0.

VERIFY - can be turned off when using DOS by POKEing 1913 with 0. A value of 67 turns it back on. Note that all DOS alterations will only remain permanent when a new DOS has been written to a Master disk.

WILDCARD - asterisk (*) can be altered

by putting the new wildcard ASCII code at location 2392.

FILENAME - character range can be altered to accept parentheses, numbers and non-caps with POKE 3818,30 and POKE 3820,10.

DUP - can be called up with 04058/0506 if it has previously been called from Basic. Note that this is very fast, but is not always reliable.

AUTOREN FILES - can be prevented from loading when a DOS disk is loaded, by successively pressing break when you hear a pip - through the TV speaker. If BREAK does not appear then press Break.

REVISION DATE - of your Atari is in day, month and year order, and is at locations 4814-4816.

Well now, don't forget, if there are any other little tricks that you think should be known then send them in to the magazine - perhaps to the Mailbag section - we may even get enough for another article.

Could this be the start of a replacement for Mapping The Atari??

THAT'S NEAT!

XL/XE TYPE-IN

BUY WORD



by
Ann O'Driscoll

Buy Word is a simple word game based on the "hangman" concept. Words or phrases - such as television programmes, film titles, famous quotations or adjectives - are loaded in from disk or cassette and you must guess what they are by picking letters to fit in the dashes. You get 200 credits to start and you can use these to buy letters. Frequently used letters like "A" and "E" are expensive, while less common ones like "J" and "Z" are cheap. You may also take letters for free and place them at specific positions in the word/phrases, or you may try and guess the whole answer in one go. You gain credits for correct guesses, but points are deducted if you are wrong. The game ends after 12 rounds, provided you have enough credits to last that long.

PLAYING A GAME

The round number, the amount of credits and, for disk users, the name of the word file, are shown at the top of the game screen. The next phase is shown as a series of dashes, with each dash indicating a missing letter. The letters appear at the end of the screen along with the available options - buy a letter, take a letter or guess the phrase. To select an option, move the joystick left or right and press fire over the highlight choice.

When you pick the BUY LETTER option, you must select the letter you want with the joystick. A FMC "square" highlights the different letters and the price of each one is shown in a value box as it is highlighted. If you choose correctly the letter is inserted wherever it occurs in the phrase. Once a letter is bought its cost is deducted from your credits and its value goes to 0 for the rest of the round.

You select letters in a similar fashion for the THIS LETTER option. This time, however, you have to coordinate the exact position of the letter too. Move a "cross" under the dashes with the joystick and press fire at the chosen place. For instance, if one of your words was "THE" you might choose putting an "E" after the H. Your score goes up by twice the value of the letter if you guess correctly, 5 points are deducted if you are wrong.

You may pick the GUESS PHRASE option at any stage in the round. The chosen phrase under each missing letter and you type in your guess for that position. You get 50 points plus 5 points for every correctly typed letter if you are right. If you are wrong your score goes down by 50 points, the word/phrase is shown in full and the game moves on to the next round.

The game ends if you become bankrupt, or after 12 rounds of play. At that stage you can quit or have another go. With the play again option you may either use the same word file or load another one in from disk or cassette.

MAKING A WORDFILE

There are 25 records in each word file and 12 of these are chosen randomly for each game. Records should be in capital letters only and each can be up to 32 characters long. You just input the records one after the other, pressing RETURN after each one. The records are saved after the last one has been entered. Disk users are prompted to give a filename to the records and this is automatically given the extension ".WORD". Once a file is created, you may either play a game with it, make another file or quit the program.

THE TIPSTER



A very small tip

David Meier of Donkey Kong asks this tip for **SECRETOR**. If you put a weight on the spinbar like this you will clear the game down enough for you to progress to at least the fourth level.

Tarkus & The Crystal of Fear

We have received this issue a maximum collection of tips, the likes of which haven't been seen between these covers for many months. From someone describing themselves only as **Roboter** in *Compu Personallog* (777) these first contain a complete solution to **TARKUS & THE CRYSTAL OF FEAR**.

You will need spells. The 8 spells are obtained by:

ITEMS

2 ROCKS
2 CRYSTALS
2 GOLD CUPS
1 CRYSTAL, 1 ROCK
1 CUP, 1 ROCK
1 CUP, 1 CRYSTAL

SPELL

FLY
FREEFALL
TRANSPORT
ARMOUR
ENERGY
FREEZE

Of the above there are only two that are not really necessary to finish the game, they are **FREEZE** and **ENERGY** spells, however it is a good idea to always keep **FREEZE** and **ENERGY** spells in reserve, you never know when you might need them. If you ever find that your energy is dropping dangerously low then use the **ENERGY** spell to replenish your supplies.

In order to get a spell, collect a pair of items as shown above, and then take them to the machine on the right hand edge of the **Magic World** (level number 3 from left to right), once they finish the machine and press the letter C on your keyboard, this will then create the spell ready for you to use.

All of the objects needed are in plentiful supply (at least to begin with) on the appropriate world. To get one stand over one of the boxes and press F on the keyboard. If, after you have picked up an object, you then want to drop it, simply stand over an empty box and press the F key.

The following solution is not the only one possible, indeed there are several other variants, but this one is, I believe, the quickest and probably the easiest. You still need to be quite good at dodging all the nasties that pop up all over the place, but you should be able to do that without too much trouble after you've played a couple of times - remember always keep an **ENERGY** spell in reserve!

The first thing you should do is to use an **ENERGY** spell - just in case. After that pick up an **ARMOUR** and a **FLY**

ROBOTECH RULES!

Another issue another column, this one is going to be much smaller than usual but that doesn't matter as the tips are still top class.

Coming your way next time will be hints on **Zero Wars**, and **Foot of the Lizard** but this time we have the complete solution to **Tarkus and the Crystal of Fear** and some cracking stuff on **Mission 2000**.

Crashing headlong into the deluge of updates from your tips page we now have the following to offer you for your deflection and delight.

spell. Then go to the **Crystal World** (world number two), go all the way to the right end of the world, dodging the arrows and ghosts as you go (it's not really all that difficult), then drop down onto the first platform, use the **ARMOUR** spell by pressing 2 on the keyboard to get past the ghost, and then drop off the platform until you reach the larger platform with a one way passage through it the one with an arrow pointing downwards in it. Keep going through these one way passages until you reach the first of your **Crystals of Fear**. Pick this up and then drop down to ground level (through the final one way passage). Once on the ground walk left and pick up the two crystals that are shown there (they may come in handy later), then walk back a little way and fire yourself up half way between the two crystallines hanging from the two big arches. Now use the **FLY** spell, press the joystick button and keep it pressed and you should soar up into the skies. Once you are past the narrow entrance then fly towards the right. When you reach the far right end of the screen you should be able to cut the level very roughly, just go back the way you came in, dodging the nasties. Don't forget to avoid that one way passage downwards on the way out, if you do happen to fall down it then you will be started.

Now get the **FLY**, **FREEFALL**, **TRANSPORT** and **ARMOUR** and **ENERGY** if you happen to need it! spells and go to the **Gold World** (the fourth one), jump over the first gap and drop down through the second one (the deep one). Use the **FREEFALL** spell before you land to avoid injury. Once on the bottom go to the right, dodging the crabs, until you reach the 3 platforms with a gap above them. Jump up onto the platform and through the gap, come to a rest on the left hand side of the gap, and when the cowcubs on the opposite side in its lowest point you should be able to jump over it without difficulty. Then jump up the platform and keep on going upwards until you reach the key. Pick this up then jump down the platform again until you reach the bottom level. Now go all the way to the left hand edge of the screen (don't forget to avoid the nasties), reach up the first 8 platforms - go to the transporter (that strange looking creature sort of thing on your right). Stand in it and use the **TRANSPORT** spell. When the number 2 appears press the fire button and you will be transported to the **Crystal World** (level 2). Walk up to the wall and press the 0 key on your keyboard, the wall will now open. Go through and pick up the key, then walk back to the transporter and use the **FLY** spell to get out and

MZ I S S I O N C R Y S T A L O F F E A R

Now for a couple of tips from Robotch on **MISSION ZIRC'ON** - another of Tiger Developments' games

Level 1 may seem a little difficult after the first few games, but once you get used to it is quite easy. Use the automatic scrolling power if you keyboard for the first half of level 1 (inside the square walls) and the fast writing (press J on your keyboard) from there on inside the apartment you only get attacked by 3 waves of aliens. Learn where their appear and the game will become much easier. Moving about inside the square walls is a bit tricky, especially using the fast-write key as the end. Otherwise and you will find that it isn't that difficult after all. I can judge position for the first and last 80% of the time now!

On-level 2 watch out for the **Total Waves**, these always occur at set points in the level, so learn where they show up. Once you finally make it to the **TRIP SHOP**, first buy the Super Gun, and then (possibly attaching the Rocket Launcher) and the Shield, in that order. Only buy extra-lives after you have bought the Super Gun and Rocket Launcher (that's what I do at least and for almost finished level 2) or just before level 3.

Level 3 and 4 are pretty easy, but level 5 is a real pain. The best strategy is to stay as close to the middle of the screen as possible only moving up and down slightly to limit shots in the incoming waves of aliens. Shoot-out for the tanks, when one comes at you then move either forward or backwards to get out of its way. Try to avoid moving up and down as much as possible. Watch out for that last tank, it can sometimes appear in time, or just when you thought you were safe!

One other tip concerns your method of firing. To be put across the bigger bullet and keep it pressed for a continuous (but almost) stream of bullets instead of pressing and releasing the trigger each time you wish to fire. Now this may seem obvious but you'll be surprised! The thing is that if you use the second method of firing instead of the first then you will find yourself using the **TRIP SHOP** before you realise you've entered it.

Finally the cheat mode (which is heavily tested at in the instructions) is activated by pressing the three keys on the leftmost side of your keyboard (if you can't work it out from that then what are you doing?). Using this you can then experience the end of game sequence.

ONE ON ONE

If when you get the ball to **ONE ON ONE BASKETBALL**, you are finding your opponent, press the fire button quickly to turn around, getting your back between the ball and your opponent.

Also, when playing against the computer, Dr. J. hitting is to the floor and does not tire out so easily.

We seem to have lost where this one came from - so thanks whoever you are!

FREE CASSETTES!

If your tip, by e-mail or post is used by The Tipster you can claim a FREE CASSETTE (from those currently available) from The Alternative Tipster. But you won't get one if you don't send something to The Tipster - get typing now!

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If you see your name in this column just drop us a line and say the name is - and I shall give you the cassette cassette and simply tell us which cassette you would like (give an alternative just in case). We will only do it if you provide funds for the postage please. If you prefer you can always give us a ring instead on the usual number.

— di di di — dot dot dot — di di di —

Henry Scavins needs help on **Alternative Reality** - **The City** and **Zork II**. Any one have the full solution to these or any other adventure games? If so there's a very deserving cause waiting to receive them.

One thing that I will say before I go for this issue is that Robotch can contact me on Telnet 128.26.143.226 login: skynet <C> <C> and then contact your old friend The Tipster.

Until next time I will say no more, and goodbye and goodbye and I'll leave you with this final word. **I NEED LETTERS, SOLUTIONS, MAPS, AND QUICK AND CHEERFUL TIPS.**

All that's left for me to say is that the address is so normal and everything else will get into the magazine columns. Write to

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COME ON TIPPERS - KEEP THE TIPSTER IN TIPS

By screen is the right hand side of the screen (do be careful with the arrows). You can now leave this world to exactly the same way as you did before (again watch out for that one way passage!). Now go to the **Magic World**, go down as far as you can, go to the right hand side of the screen and run through the corridor in the left doorway (all these mazes as you go, when you reach the wall, press the U key on the keyboard to unlock the wall and pick up your second Crystal of Emotion.

Now get the **ARMOUR**, **FRIDGEPILL**, and **TRANSPOMY** spells again, go to the **Cold World**, down the deep corridor (remember to use **FRIDGEPILL**), and to the transporator just like before, but this time transport to the **Rock World** level 1), once there use the **ARMOUR** spell to get past the Nasties, walk left, drop down to the level below, walk right, pick up the key, and get out through the one way passage. Whilst you're down here you might as well pick up two more rocks, and then climb up the platform to get out of here. Go up to the top of the level, go all the way to the right until you reach the wall with the Crystal behind it, use the U key to unlock it, go through and pick up your third Crystal of Emotion.

Now get the **PLY**, **FRIDGEPILL**, and **TRANSPOMY** spells, go to the **Cold World**, down the corridor to the transporator and transport to the **Magic World** level 3). Drop down to the ground level, and run left to pick up the key. Watch out for those 4 cards though! It is possible (and quite easy really) to get past them without them touching you. Get the key and go all the way to the right end of the screen and touch the far wall, then go up the platform, through the one way passage, and then leave the level.

Now get the **PLY**, **FRIDGEPILL**, and **TRANSPOMY** spells, go back to the **Cold World** (again), down the corridor (you should know all this by now), then to the right, climb up the platform, only this time don't stop at the transporator, but keep on going up as high as you can go. Then use the **PLY** spell to get up to the top platform where the final Crystal is, unlock the wall, and go through. Make sure you jump over the one way passage and pick up the Crystal, then go down the way passages, go to the transporator (don't use up Scotty!) and transport to level 4. Now run all the way to the right hand side of the screen and touch the right hand wall, and then get out just as you did before. Exit the level and you should receive your final message!

TARLUS AND THE CRYSTAL OF FEAR IS COMPLETED

CONVERSIONS

by David Lamont

This set of four programs might be useful to assembler programmers or anyone else who needs to convert decimal numbers to hexadecimal or binary and back again.

The **AFAB** uses values from 0 to 255 as all programs check that the number entered is within the allowable range. If there is an error the **TRAP** instruction prevents the program stepping and loops back to line 50.

DECIMAL TO HEX

Lines 60 to 75 do the conversion with numbers greater than 9 being changed to the hex values A to F.

```
10 REM DECIMAL TO HEXADECIMAL CONVERTER
15 REM BY DAVID LAMONT 1982
20 DIM A$(1),B$(1)
30 TRAP 50:?"ENTER A NUMBER(0 TO 255)====":
40 INPUT X
45 IF X<=INT(X) OR X<0 OR X>255 THEN GOTO 30
50 ?:"DECIMAL "X;" IS HEXADECIMAL ":
60 A=INT(X)/16: B=STR$(A)
65 IF A<9 THEN A$=CHR$(A+55)
70 B=(B-INT(B)/16)*16+INT(B/16)
75 IF B<9 THEN B$=CHR$(B+55)
80 ? A$;B$;GOTO 30
```

CHARACTERS TO NUMERICS

This one converts a character string to numerics.

```
10 REM HEXADECIMAL TO DECIMAL CONVERTER
15 REM BY DAVID LAMONT 1982
20 DIM X$(2)
30 TRAP 50:?"ENTER A HEX NUMBER(00 TO FF)====":
40 INPUT X$
45 IF X$(1)<"0" OR X$(1)>"FF" OR X$(2)<"0" OR
X$(2)>"F" THEN 30
50 ?:"HEXADEXIMAL "X$;" IS DECIMAL ":
60 A=ASC(X$) IF A<64 THEN A=(A-55)*16 GOTO 75
65 A=(A-48)*16
70 B=ASC(X$(2)): IF B<64 THEN B=B-55 GOTO 65
75 B=B-48
80 ? A+B
90 ? :GOTO 30
```

DECIMAL TO BINARY

This one checks the value of the number entered and assigns a 1 or 0 to each of the eight bits.

```
10 REM DECIMAL TO BINARY CONVERTER
15 REM BY DAVID LAMONT 1982
20 TRAP 50:?"ENTER A NUMBER(0 TO 255)====":
30 INPUT X
40 IF X<=INT(X) OR X<0 OR X>255 THEN GOTO 30
50 ?:"DECIMAL "X;" IS BINARY ":
55 A=B=0: C=0: D=0: E=0: F=0: G=0: H=0
60 IF X<=128 THEN A=X-128: A=1
70 IF X<=64 THEN B=X-64: B=1
80 IF X<=32 THEN C=X-32: C=1
90 IF X<=16 THEN D=X-16: D=1
100 IF X<=8 THEN E=X-8: E=1
110 IF X<=4 THEN F=X-4: F=1
120 IF X<=2 THEN G=X-2: G=1
130 IF X=1 THEN H=1
140 ? A;B;C;D;E;F;G;H
150 ? :GOTO 30
```

BINARY TO DECIMAL

This one determines the length of the binary number and starts at the least significant bit (LSB or bit 0). The conversion takes place in the loop from line 50 to 85. Line 70 is where each bit is multiplied by the bit value (1 to 128). Variable C is the bit value which is doubled each time. Variable D is a counter to determine all values.

```
10 REM BINARY TO DECIMAL CONVERTER
15 REM BY DAVID LAMONT 1982
20 DIM B$(8)
30 TRAP 50:?"ENTER A NUMBER(1 TO 1011111)====":
40 INPUT D: X=STR$(D): L=LEN(X): Z=1: D=0
45 FOR Q=0 TO L STEP -1
60 A=VAL(X$(Q)): IF A=1 THEN 50
70 A=ATN(Z)/2: Z=D+A
80 NEXT Q
150 ?:"BINARY "X$;" IS DECIMAL ":
170 ?
180 GOTO 30
```

Dean Garraghty Software For Atari XL/XE software!

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DANGEROUS DUN

Life can be hard on the other side of the world, especially if you bought an APPLE II/IIIe during the big home computer push of the mid-eighties only to find yourself stranded with no support after a couple of years. But I have persevered and with the help of scanner software, books and magazines the II/IIIe is still used for school projects, homework, correspondence and record keeping. It may not be as sophisticated as more modern computers but it still does the job I originally bought it for.

Problems do still arise from time to time especially when I get creative and try to write games. BASIC games can be slow and, in spite of the wonderful colours, can look ordinary. That's when I decide to try things that other people had put in their programs only to find I couldn't follow their code.

Program listings are fine for typing in and running but are hard to learn from. My aim here is to explain what I have done, why I have done it and, most importantly, how. I am no expert in BASIC programming but there may be something here that will help you.

The first thing I learnt to do is when writing programs was redefining character sets. There followed player/moveable graphics and a silly machine language routine for fast F/MC vertical movement. A new thing I have been using lately to speed things up is dividing my games into two programs. The first redefines character sets, sets up F/MC, includes a title screen, has instructions and then loads part two. Part two contains the essential code for the game and runs faster without all the distractions of part one.

All three things are contained in my latest game 'Dangerous Dungeons'.

BUILDING A DISPLAY

Character graphics is one of the easiest ways to get a graphics display on the II/IIIe. Individual characters within the set can be changed to suit any purpose and it's relatively straightforward.

To redefine characters you must first copy the normal character set from ROM to RAM. Before you can do that you must first find it. The normal character set resides in 28 of ROM

128	64	X	H	0	4	0	1	
		X	X	X				08
		X	X	X	X	X		104
		X	X	X	X	X	X	204
		X	X	X	X	X	X	304
		X	X	X	X	X	X	404
		X	X	X	X	X	X	504
		X	X	X	X	X	X	604
		X	X	X	X	X	X	704
		X	X	X	X	X	X	804
		X	X	X	X	X	X	904
		X	X	X	X	X	X	0

Figure 1

beginning at the location determined by the contents of location 704. The starting address must be found and this is done by multiplying the contents of location 704 by 256. My program, therefore, contains the following statement:

```
CHORG=PEEK(704)*256
```

Now that the character set has been found the next step is to find somewhere to copy it to. Location 108 contains the page number at the top of memory. In all the examples I have seen the top eight pages are kept free from use by BASIC so I use the following statement:

```
CH=PEEK(108)*8*256
```

The character set is then copied from ROM to RAM by using

```
FOR Q=0 TO 511
  POKE CH+Q,PEEK(CHORG+Q)
NEXT Q
```

The next thing that has to be done is to tell the computer to use the new character set. This is done with

```
POKE 756,CH/256
```

Every time you change graphics modes within a program you must execute this statement.

To modify characters you will need to fill in that grid. Each character is made up of eight rows or bytes. A byte is eight binary digits, or bits. Each bit has a value from 1 to 255 and they are added to find the total for each byte. The eight byte values are then POKE'd into the appropriate character in the new set in RAM.

My programs now have the complete set redefined to one that I think looks better than the standard one in ROM. For example you can see from Figure 1 that the letter 'W' is made up of eight bytes with values of 66, 121, 225, 244, 244, 245, 245 and 6.

In Listing 1, line 1040 reads from the data lines the address of each character (the internal code) followed by the values for each of the eight bytes. These are then POKE'd into that address in the new character set.

Lines 1005 to 1070 contain the data for special characters such as @, #, & etc. Lines 1080 to 1110 have the numbers 0 to 9 plus the '*' symbol. Lines 1120 to 1200 have the data for letters 'A' to 'Z'.

As well as modifying some special characters I have also redefined 'I', 'Q' and 'X' to represent the player character in the game.

HANDLING VERTICAL MOVEMENT

Vertical movement of F/M graphics in BASIC can be done but it needs a special machine language routine. It took me a long time to work this one out because, although it was com-

MORE TRANSDISK SOLUTIONS

Following Daniel Doverstock's letter in issue 42 identifying difficulties in using TransDisk IV, I've had some replies on the subject. I saw Bill Jackson of Laramie, Wyo. as apologetic. If I'd spent a bit more time researching last issue's Mailbag, I might have remembered his article in issue 37 of "New Atari User" on TransDisk IV which outlined the cause of Daniel's problems. Thanks for reminding me Bill.

In the meantime, Raphael Espino (who wrote the near 60 article describing ways to overcome TDFV problems) has written to with the following information: "First, this is TDFV problems, not one, and neither are anything to do with the LK06E. I would like to see the second straight at this point, because despite what may have been written elsewhere, XT and XL menus created on a 64K machine WILL work on a TDF02E. I know this for a fact since various versions on my 800E ran with no problems on my LK06E.

The first problem is that Daniel's old disks will not load on his enhanced TDF02E disk drive. The solution is to reinitialize the drive. A suitable program for doing this appeared in New Atari User issue 45 (page 14) written by Phil Carrawell. You need to run this program twice, 1. and then change the number of sectors per track from 48 to 26, leaving all the other parameters unchanged. Now stick one of your old XL/XT disks in your drive and reinit. you should find that it will run now. Note you only have to reinitialize your drive once when you switch it on. After you have done it, it will sync with these new settings and you switch the drive off again. It should also be noted that there is a bug in Phil's program. The first record on line 980 reads LK0607F; this should be changed to 060507F; also there is a line missing which should read:

1048 POKE CHR\$(16)DEVIDITY

Now for the second (and hardest) problem, the problem of formatting new disks on an enhanced TDF02E when formatting a disk, TDFV automatically selects the "best"

density available. On a standard TDF02E this would be enhanced density, however, on a 150 Doublet 1000 (or 20-550) it would be the double density. This is why you can't copy files from your old disks to your new ones, since DOS 2.5 does not support the double density, and DOS2.DTD handles TransDisk IV enhanced density only. But it doesn't matter anyway, since you can't load a double density XL/XT menu disk from an enhanced TDF02E for reasons too complicated to go into here. Formatting XL/XT/XL disks from outside TransDisk IV is possible but difficult. Basically what you have to do is format a disk in enhanced density using DOS 2.5, then you need to take one of your old enhanced density disks (XL or XT depending on which menu you want) and by using a sector duplicator, copy across sectors 1 - 3, 308 and 309 - 310 (XT versions are available and it doesn't), if you have an old XL/XT menu disk which you formatted but never copied any games onto then use it as the source disk. Otherwise you will need to use a sector editor after copying the sectors across to the newly sector 300. What you have to do is set bytes 1 and 3 within the sector to 100 and bytes 2 and 4 to 0, then set all bytes from 50 to 100 inclusive to a value of 255 (that's counting the first byte in the sector as byte 0, the second as byte 1, etc.). The disk should now work!

As you can see this is not only long to do, and including a full description plus a couple of programs to do this would need a whole article to itself. I have known about these problems for some time now, but have only just got round to fixing them. I am planning on writing another article on TransDisk IV with a couple of programs which will fix all these problems, and allow you to set up any disk with an XL/XT menu in any density. This, however, will take me some time. Once it is written I will submit it to RAU for use in the paper. Hopefully with this information, Daniel will be able to use his old disks even if he can't format any new ones yet.

Thank you Raphael for such an informative and prompt reply.

60% SUCCESS RATE BUT HELP STILL NEEDED

M B Gardner of Barnhill, Indiana is another keen advocate of TDFV: "I read your TransDisk IV is one of the best utility programs in my collection. I have had about 60% success rate with my transfers, but now I need help. Could you please tell me if there is an updated guide to files that have been transferred, because try as I might, I cannot transfer 'Real Star', 'Ace of Aces', 'Kennedy Approach', 'Daguer in Vietnam' and 'Dance'. I would be grateful for any information that you may have."

Steve Downing of Orlingham, Kent and P A Cole of Ashford, Kent both use an emulator with the results of transferring games with TransDisk IV. Dave writes: "I have successfully transferred a complete version of 'The Empire' - San Francisco 1900'. Unfortunately when the you need to save the game at a convenient point, it can only be saved on cassette - is there any way the save procedure can be modified to function for disks?"

And Mr Cole reports: "I have transferred 'Mr Robot' and 'Polar Bears' both by booting up into disk, and looking at the sectors with a disk editor. I find that the disk commands are in the tape format. How can I get them to save to disk? Maybe someone can look into this to see if it is possible by changing some bytes in the appropriate sectors?"

O.K. TDFV experts - has anyone got a definition that of what games can be transferred by this utility from tape to disk? And is there anyone who can come up with a way to break the Save Game to Disk, find over?

If you can shed some light on these problems or have any tips to help TransDisk users drop me a line at Mailbag.

Allen J Palmer

Painting Pictures ...

Welcome to another journey into the Classic PD Zone! Along the way you'll encounter a strange and powerful race of beings. They hail from the planet Auril and go by the name of the Proteic software known as Public Domain Software. This time they have sent an artist and an entertainer. Shall we see what the hazard offers? Here goes ...

All programs are abundant on the 5.25" disk. Commercial releases have included *Ami Artex*, *Techniques Drawing and Design Lab*. The public domain is also represented with *IBM Artex*, *CPA Sketchpad*, *Graphics Work shop* and many others. So, in **Pixel Artist Deluxe** merely another one to add to the list? Let's see ...

Pixel Artist Deluxe (PAD) from now on is described by its author Art Heron as "a feature-packed point program". It is programmed in *Artex* and machine language. The program is controlled by a series of menu-bars which are accessed by one of three ways: pressing the spacebar, moving the cursor to the top of the screen, or pressing the right button on a graphics tablet. Almost every option can be directly accessed with the keyboard.

The combination of menu-bars and keyboard makes PAD a joy to use. There are fourteen options on the main menu bar which can access the top of the screen: *Palette*, *Lines*, *Line*, *Box*, *Oval*, *Fill*, *Copy*, *Wipe*, *Undo*, *Tablet*, *Clear*, *Disk* and *Quit*. There are also sub-menus within a number of these options.

The first option on the main menu bar is *Palette*. There are four main features within *Palette*: *Choose*, *Set*, *Speed* and *Blend*.

Choose allows you to control the use of brushes, colours and patterns. All three can be changed both quickly and easily by on-screen selection. There is a range of ten brush types, four colours and sixteen patterns to choose from. Additional options at this sub-menu are: *Spray* (an adjustable spray can effect) and *Solid* (which allows solid shapes to be drawn instead of outlines).

By selecting *Set*, you can alter and set the colours and patterns from the complete palette of 256 colours. Two vertical colour bars appear superimposed over your picture. By moving your joystick or tablet (up or down) you can alter the colour. The hardness of this colour can then be altered by moving up or down. It's as simple as that! Just press the button to select the colour or hit the spacebar to return the old colour.

You can also design new patterns by picking a section from your picture or choosing colours from the palette. *Speed* allows complete control over the speed of the cursor. A fast writing is recommended for a Tablet. This option could be

used to draw down a joystick-controlled cursor for young children.

The final option within the *Palette* sub-menu is *Blend*. This is an amazing option which allows you to place two lines in a line. You can toggle *Blend* on and off at this sub-menu. Once activated, you can design curved lines with ease. Just select *Line* from the main menu-bar and draw a line in normal (x-y) plot beginning - plot end. Next, select the first bend by plotting a third point. A second bend can then be added by plotting a fourth point. It takes a little practice before you get used to the blending process but after a few on-screen screens you soon get the hang of it.

There are seven painting options on the main menu-bar. *Draw* allows free-hand drawing (great for the child); *Line* creates a line or arc between plotted points; the *Box* option creates on-screen squares or boxes (depending on whether or not the *Solid* option is activated); *Oval* is similar to *Line* except it creates circles and ovals; the *Fill* option allows you to shade enclosed areas with the current colour; *Copy* draws a series of lines which radiate from a fixed point; and finally *Zoom* allows magnified drawing and editing around the cursor (at magnification). Each of the magnified areas and the relevant part of the picture can be seen whilst drawing in *Zoom* mode.

Before placing any line or shape onto your picture you are shown what it will look like and asked for confirmation. This allows for a last minute change of mind.

There is a cool little option which gives you the horizontal and vertical coordinates of the cursor. It also temporarily replaces the cursor with a larger bounding rectangle. This is great for identifying the cursor whilst working with a small brush.

Undo is a powerful option which lets you undo your mistakes (very useful when working in the wire frame). Every time you select one of the painting options above, your work is stored in a buffer area in the computer's memory. If you change your picture and decide you don't like it, you can retrieve the earlier version from the buffer.

By selecting *Tablet*, you can toggle between joystick and graphics tablet control of the cursor. PAD will work with both the *Kaiba Pad* and the *Star Touch Tablet*. Art Heron mentions in the PAD documentation that the routines for the *Touch Tablet* are experimental (the only bad news to the *Touch Pad*). However, I used PAD with my *Touch Tablet* for over an hour and successfully used all the options without any problems whatsoever.

The *Clear* option clears the screen, and requires an extra press of the button for confirmation (again, very useful when working here).

Disk reads disk directories, and loads and saves pictures in *Microcomputer* or *Boole / Ami Artex* format. I liked the idea of displaying the first letter of any *Microcomputer* file to screen (this is of great help in identifying files). In the *Disk* sub-menu you can also store up to ten configurations of your favourite colour, pattern and cursor speed settings. By entering zero at the prompt, you can change the boot-up configuration.

The last option on the main menu-bar is *Quit*. This allows a smooth exit to DOS.

As you can see, PAD offers a wonderful range of options and Art Heron is fully justified in describing it as "feature-packed". I will not believe this program is in the public domain - it is comparable with any commercial 8-bit art package! The ease with which you control all of the options is amazing. You can use the joystick, tablet or keyboard - whichever you prefer. By using the keyboard you can switch from one option to another by simply pressing two keys.

Almost all of the usual art options are included (only *Wipe*

and Test are missing. The Zoom option is a big improvement over the Atari/Amiga equivalent. These zoom options are complemented by a wide range of extras, particularly level-based, Airboards and Waves. Also, it was great to be able to control the speed of the camera - I could slow it down the detailed drawing.

PD is a very classy piece of programming. Right from the turning page effect on the title screen, the graceful exit to DOS 1 was extremely impressive. Art Floran must be congratulated for creating such a wonderful program and releasing it into the public domain. *Pixel Artist Deluxe V1.0* is undoubtedly one of the best art programs available for the Atari Classic.

CLASSIC PD ZONE RATING : 92%.

in a Surfer's Paradise

It's a sunny day at Malibu and the smell of sunbather lotion lingers in the air. Off to the distance you see some killer waves. You pick up your board, and out you go!

This is a level excerpt from the introductory scrolling coverage in C.A. McClellan and Eric Simard's **Surf's Up**. As you're probably guessed by now, *Surf's Up* is a sports game in which you play the role of a surfer riding the Malibu waves. You must use your skills to avoid a wipe out and become a true Hot Dog.

There are three levels to complete at three increasing difficulty settings (Surfer, Beach Bum and Hot Dog). In other words, to become a true Hot Dog you must master nine wave sections.

You begin as a Surfer as you enter the first level. Your goal is to paddle out to the surf by using your joystick to negotiate the waves before they crest. If you're on a wave as it crests ... **WIPES OUT!** Big waves are quite tricky as you must paddle backwards at exactly the right moment. If you're not careful you'll be thrown off your board ... **WIPES OUT!** However, the bigger the waves negotiated, the more points awarded.

Along the way you can collect floating prizes (beerlugs, sunbather lotion, etc.). If you catch six prizes you gain an extra surfer (very handy for later levels).

Now and then a floating octopus will appear just below the waves. You must pass over him and avoid his grabbing tentacles. If he touches your board you are thrown into the water ... **WIPES OUT!**

If you manage to paddle over all the waves and avoid the octopus you will soon find yourself approaching a buoy. This signals the end of the level.

The second level is out on the surf, there you must surf along a wave whilst avoiding rocks, whirlpools, killer sharks and angry turtles. This level is tough. It is quite tricky avoiding all the obstacles because you are continuously pulled into the wave.

You don't have any sight on top of the wave - when you get a chance you can "peek" on out to the prism and watch up the "prism". The 3D perspective on this level is a little off and takes a few wipe-outs to get used to.

In level three you must try to get back to the beach on top of a "hazy" wave" is just wave to us land-lubbers! However, a tropical storm is forming and lightning bolts can strike at any time. You must stay on the wave and avoid the lightning bolts to make it safely to the beach.

If you make it through all three levels you are given a message by this real real marine dude. Hey, I'm even speaking like a Hot Dog now hehe.

You are now a Beach Bum and must battle through the levels again. However, they are now even tougher to master. For example, while paddling out to the surf, the octopus levels a lot faster. Also, you now have to dodge low-flying gulls. It is here that I have a minor gripe: the gulls fly at the same speed on the waves! In other words, if a gull is flying just above a wave crest you cannot avoid it ... **AUTOMATIC WIPES OUT!** It would have been more sensible to program the gulls to fly above than the waves. Thankfully, this is corrected on the Hot Dog level (the gulls fly faster than the waves on both ends).

By the time you become a Hot Dog everything is really brought *Surf's Up* offers a challenge for all age groups. I haven't yet become a true Hot Dog but I'm working on it.

I really enjoyed playing *Surf's Up*. As soon as you load the disk you realize that it's something special - there is a burst of music and the title screen starts sailing into the centre of your TV screen. The graphics are of a high quality and very colourful. The gameplay is great fun on the first two levels. Level three became a little easy but then I did play the game for quite a few hours. The background music throughout is very catchy and creates a lovely atmosphere for the game (the second verse is brilliant). Good games. If you are wiped out you don't have to begin the level again; you emerge from the water after the next wave. Also, because carry-over to the next level.

Surf's Up has the feel of one of those 1983/84 Synapse games. It scores with quality! You can tell that the programmers were attempting to sell it to a software company (they left the top of the title screen empty so that they could add a name above parents!). Why it was never released commercially I'll never know. The game was written in 1984 and I have to say that it is better than many of the commercial releases of the time. For simply, *Surf's Up* is a PD sensation dude!

CLASSIC PD ZONE RATING: 91%

Thank you for flying Air Atari8. We hope you enjoyed your journey. The *Paradox* were indeed a very powerful race. I'm sure we will meet them again when we return to the Classic PD Zone next time. Until then ... Superscrap (that's *Paradox* for keeps @-bitting). The Atari Classic: 2000 here we come!

This issue's reviews are:

DISK #73 - SIMP'S UP

DISK #141 - PIXEL ARTIST DELUXE

with Stuart Murray as your guide

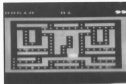
PACMANIA

by John Young

TURBO BASIC

The program is written in Turbo Basic and must be compiled before it can be played (since there is only one ghost, as the computer handles away antagonists).

Turbo users might like to note that another feature in Turbo Basic not supported by the compiler, as well as those listed in John White's article in issue 51, is the use of SOUND on its own to turn off all sound.



Surely this game needs no introduction. Control your Pacman using the joystick, eating the dots and avoiding the poisonous green mushrooms. Power pills (large dots) let you eat the chasing ghost. The mushrooms change into apples that can be eaten for bonus points.

```

20 0 000 *****
21 0 000 *          PACMAN          *
22 0 000 *          GY              *
23 0 000 *          JOHN YOUNG     *
24 0 000 * Turbo Basic needs compiling *
25 0 000 *          *****          *
26 0 000 *          ***ALIAS OVER - RUN 1991 *
27 0 000 *****
28 0 000
29 00 0000 0000000
30 00 0000 000000
31 00 0000 000000
32 00 0000 000000
33 00 00
34 00 0000 000000
35 00 0000 0000
36 00 0000 000000
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69 00 0000 000000
70 00 0000 000000
71 00 0000 000000
72 00 0000 000000
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93 00 0000 000000
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96 00 0000 000000
97 00 0000 000000
98 00 0000 000000
99 00 0000 000000
100 00 0000 000000

```




FRACTION FEVER

son it. At the end of the screen is a "radar" which gives a visual guide to the position of the correct answer on the platform. Each platform is several screens wide so that the radar becomes essential to determine which way to go. When you initially play you will be confused for the instructions seem to indicate that the fractions are counted from right to left along the radar whereas they are really counted in the more conventional left to right. Suppose for example that you need to find the fraction $3/4$ (three quarters), you try and judge that distance from the left of the radar and move your top along to the correct position. You will pass on the way visual representations of fractions in the form of, say, 8 circles with 4 coloured in. If you leave on one of these then you score extra points but you need to be careful because each bonus leaves a hole in the platform and if you need to come back you can quite easily fall through to a lower level.

Once you have identified, and learned on, the correct answer then an elevator lifts you up to the next level. If you are lucky you might go right through gaps in the floor above and jump into or three levels at a time. Conversely if you fall through a hole, and your luck is out, you could go back several levels.

As the levels increase so the manner in which the fractions are depicted changes. At first they are filled circles which you can get used to quite quickly but they later change to squares, bar graphs and alternative mathematical numbers such as $1/2$ for $5/5$. When the symbols are all mixed up it becomes much harder to think quickly and identify the correct answer. You have 20 levels in all and by the time you reach the top your mental arithmetic skills will be fairly tested.

Fraction Fever is much more of an arcade game than most educational software and can easily be played as a straight game. While it scores in that the player almost subconsciously learns the concept of fractions and begins to very quickly estimate parts of a whole. This is very similar to exercises a child will come across in school and will be useful in all sorts of situations in later life.

Fraction Fever scores highly as a single game and an educational tool and will not be wasted on any child who is beginning to learn more advanced maths. It comes on a ROM cartridge so you just plug it in and go. At £8.95 it is not a bad investment and will teach the concepts of fractions to whoever is playing whether they realise they are learning or not.

Title: FRACTION FEVER
Publisher: Spinmaker Software
Supplier: Miles Discount
Format: ROM cartridge
Price: £8.95
Reviewer: Lee Sillington

Only a few educational programs have been aimed at older children and Fraction Fever is one such, predating on the best pages 7 in Adult.

Fraction Fever is an arcade game of the platform variety that aims to teach fractions, not only in the accepted sense of mathematics but also visually, so that the learner develops a feel for fractions and is able to estimate quite accurately what relationship part of a given object bears to the whole. The aim in Fraction Fever is to control a spinning top which bounces sideways along a horizontal platform in the centre of the screen, knocking out incorrect answers for points and identifying correct answers to rise an elevator to the next level.

At the top centre of the screen is a fraction expressed in conventional mathematical terms such as 3 over 4 or $3/4$

QUICK ED

This program lets you re-design your Atari's character set. Why should you want to do that? Well, you might want to add a touch of class to your text-based programs or maybe even a detailed backdrop for a game using several characters merged together. With Quick Ed you can carry out the process quickly, easily and with several useful tools at hand.

First you must select an input device. There's a generous choice of joystick, 54 mouse or touch tablet. For users of the latter a paper template is supplied so it's easy to locate the functional areas. This also opens up the possibility of designing your characters on photocopied paper grids and transferring them to computer via the touch tablet. At last another use for the tablet!

Quick Ed's screen area is divided into five sections. At the top left there's a box containing the characters available for

re-definition. To choose a character, you move the screen pointer over the character required and press a button - the character is then transferred to a large 8x8 grid in the centre of the screen. At the top right there's an area you can use to store characters - perhaps to check how they look when placed alongside each another. To the left of the main grid there are some icons that give you access to the principal functions. You can load and save character sets, view the standard Atari set, copy characters between different sets (Quick Ed can deal with two sets at once) and select the one you want to work on. To the right of the main grid there's a selection of drawing facilities.

Editing a character couldn't be easier. You can point at individual squares of the grid and click to toggle them 'on' or 'off'. The drawing options let you scroll the character in any direction, mirror the

design in a horizontal or vertical plane, clear to fill the grid and invert the mirrored definition. Unfortunately the instructions don't explain how to use the resulting data in your own programs, though it's a relatively straightforward process of loading the numbers into the RAM and pointing the character base register (7540) to the correct location.

In conclusion, if you're looking for a good character set editor... this is it!

Quick Ed is distributed in the UK by Dean Garroghy, 80 Thomas Street, Bally, Downpatrick, Co. Down.

Title: QUICK ED
Supplier: PFF/Dwan Garroghy
Price: £5.00
Format: Disk
Reviewer: Paul Nixon

COLOUR EXTEN SUBROUTINE

John Foskett has banished the boring Graphics 0 screen forever with this exciting routine for multi-coloured text screens

The Colour Extension Subroutine or CES was written as an extension to Graphics 0, to provide a coloured screen for displaying text such as in an adventure game, etc. Each Graphics 0 line and the characters printed upon each line can be coloured independently. However, the rules for Graphics 0 must still apply, so that the character colour is merely a different realisation of the line colour that they are printed as.

For text input purposes such as that required for an adventure game, a flashing cursor is provided, also all the inverse characters flash along with the cursor to enable flashing prompts, titles, warnings, etc. to be used.

A keyboard lock is provided to ensure that only uppercase characters can be typed from the keyboard for text input purposes, again, such as for an adventure game.

CES contains its own modified Graphics 0 display list which enables a fixed screen to be used. Also it disables the printout mode and disables the Control-1 stop-assert facility.

CES DESCRIPTION

CES is a machine code program that is VBI and OLI drivers, therefore its operation is completely independent of Basic. CES uses four of the unused page zero registers, two for its own use and two to interface with Basic to enable it to be controlled. Loaded into page six, CES consists of five sets of data and allows three vectors to point to the correct parts of CES. The

five sets of data are the VBI data, the OLI data, the line colour data, the character colour data and the modified display list data.

THE COLOURS

As stated above there are two sets of data which control the colours, they are the 'Line Colour Data' and the 'Character Colour Data'. Both sets of data consist of 25 statements each to control both the line and character colour for lines 1 to 25. The first statement found in each set of data controls the colour of line 1 and the colour of the characters on line 1 respectively, the second data statement in each set, controls line 2, the third, line 3, etc. Line zero (the top line) is controlled by registers T09 and T10 (or the NEECOLOR commands) in the normal way.

Since the OLI section of CES is constantly reading the data from where it is stored in page six, it is just a matter of pointing the correct register to allow a certain colour. Once pointed the colour will remain until it is once again altered.

The location in page six for the colour of line 1 is location \$519, for line 2 is location \$520, up to location \$541 for line 25. The location for the colour of the characters on line 1 is \$542, the characters on line 2 is \$543, up to location \$564 for the characters on line 25.

THE KEYBOARD LOCK

CES makes use of location \$55 to control the keyboard lock. When this location contains a zero, the keyboard lock is disabled, allowing the use of all of the usual characters, but when this location contains a non-zero value, the keyboard lock is enabled allowing only uppercase characters to be used.

The keyboard lock ensures that the keyboard is locked into the uppercase mode even if the CAPS key or the inverse key is accidentally pressed.

When the keyboard lock is enabled, all lowercase and inverse characters can still be printed to the screen, the keyboard lock merely prevents them from being typed in at the keyboard. The register may be altered under program control.

THE FLASHING CURSOR

CES uses location \$54 to control the cursor flash. When location \$54 contains a zero, the cursor and all inverse characters assume their normal state (i.e. not flashing). When this location contains a non-zero value, the flashing of the cursor

continues ▶


```
MBE 4th CED November 1992
```

```
MOV
MOV
MOV
INC ZRF
LDD ZRF
NOP
NOP
NOP
LDD LADR,X
STA SIZ21
LDD LADR,X
STA SIZ21
PLA
TAX
PLA
RTI
(END)
```

Source code for the Display List Interrupt and Vertical Blank routines

and all increment characters is enabled, the flash rate being dependent upon the value location 204 contains.

For an eight flash with an equal mark-space ratio (on/off times), the value should be a multiple of two. 18 is the most suitable value which gives a good flash rate. A "1" gives a very fast flicker whilst a value of "00F" gives a very slow flash rate. Any value may be used to generate some different flashing effects. It is recommended to experiment with this.

Any time, whether or not flashing is enabled, the cursor may be "turned off" by using POKE 752.1 in the normal way.

A SECOND CLOCK

Although location 205 is used by CES itself to regulate the cursor flash rate, being incremented at each VBI, it may be used as a second clock in the same way as location 20. This location may be PEEKed, but it should not be POKEd. If POKEd under program control, a disruption to the flash rhythm will result.

REGISTER 209

This location is used by CES as a counter to synchronize the colours to the current screen lines. This location is incremented each time the DEL is called by the display list, which is 23 times. Thus location 209 increments in 23 before it is read in via the VBI. This register tells the DEL where to read the data from its page six to load into the appropriate two hardware colour registers. If this location was to be POKEd under program control, then a random flicker of the screen colours will result creating an unattractive and an untidy appearance.

WHY NOT "WSYNC"

The usual way of synchronizing the loading of the hardware registers is to use the "WSYNC" register at location 2432C.

```
MBE 4th CED November 1992
```

```
MOV
LDD #0
STA J7
STA J7,P
STA J8F
INC J8F
INC J8F
) CHARACTER
LDD J8F
MOV (MARK)
LDD #0
STA J9F
LDD #0F
STA J9F
(MARK)
) CURSOR
LDD #0F
MOV J9
LDD #0F
MOV J9F
LDD #0F
CURSOR
STA J9F
PLA
)FF 4700C
)-----
) CURSOR ON
ON
LDD #0
)FF CURSOR
) CURSOR OFF
OFF
LDD #0
)FF CURSOR
(END)
```

When used, the colours of the lines were found to be rock steady, but they solidified when text was printed in the screen creating a nasty unattractive appearance. Instead of using the WSYNC register, three "NOP" instructions were used to deliberately delay the loading of the hardware registers to ensure that the loading is actually done "off screen" preventing colours that remained rock steady at all times.

THE DISPLAY LIST

The display list data is a normal Graphics II display list modified to call up a DEL interrupt 23 times. Items have been included in the display list to produce the fixed screen. Some of the lines may be removed by simply removing the relevant ones to give a partially fixed screen. Since the loading routine continuously loads data until it reads a "-1", the actual number of statements is therefore unimportant.

THE BASIC LISTING

The basic listing comprises of CES itself followed by an example program to show some of the potential of CES. CES is in the top part of the listing down to the data statement -1 which is the end of data flag.

THE SAM DESKTOP SYSTEM

reviewed by Paul Rixon

SAM for the 8-bits? Not quite, but SAM - an abbreviation for Screen-Aided Management, and not to be confused with the classic Software Automated Maniacs - is an 80-column desktop environment for the 80/88 complete with windows, pull-down menus, 85 mouse support and lots of other 8088-like features. Unlike some other 8-bit OS enhancements SAM requires no tinkering with the hardware. Written by Harold Heindel and Andrew Hume and originally published in the 'Start magazine', the software and accompanying documentation (25 pages of A4 - but no index) have now been fully translated for English-speaking users.

SAM is basically a collection of useful DOS functions together with several useful applications and utilities. The front screen comprises the drop-down menus - File, Directory, Utilities, Info/Access and Exit. To view the underlying options you have to move a screen pointer with the joystick or mouse onto the required menu, and then press the trigger or mouse button. You can then point to the desired function and click again to invoke it. The mandatory 80-column display is quite readable on a monitor though TV users may need to look a check-up at the Optimizer.

The File menu incorporates eight common DOS functions: Lock, Unlock, Delete, Rename, Format, Disk Copy, Read Sector and Write Sector (but not Copy File - a strange omission). When the selection of a file is required a window opens up to the contents of the screen and the screen pointer can be used to scroll through a list and mark the chosen item. The Disk Copy option seems excessively keen on disk usage, though this will be no concern to multiple-drive users. Another quirk is that the Read Sector option seems prone to causing lock-ups if non-sensible values are entered. Otherwise, everything acts as expected. The Directory function is given a sub-menu of its own, in addition to the expected file listing, there is an option to create and edit Extra Disk Information (EDI). EDI takes the form of up to sixteen 80-character lines which can be attached to a disk and stored without any loss of normal disk space. The idea is to replace the need for 'Bad Me' files, and modestly assumes that the disk's own recipient will also be a SAM user!

Under the Utilities menu you'll find Character Set Editors for designing mono and colour character sets (which can then be used in your own programs), a word filing system, a Memory Monitor, a Test Processor and a paint program. All use the SAM 80-column display and interface methods, including mouse or joystick selection (though sometimes keyboard in-



puts are required, even when a 'touch-off' method could have been implemented).

SAM Monitor, the word filing system, allows you to create and manage 80 data words on a specially formatted word disk which may contain up to sixteen lines of 32 characters. A separate catalogue file helps you keep track of the contents. You can subsequently search for specific text (including wildcards) in the catalogue or in the words themselves. You can also create input words to simplify data entry and print out the data display-

ed during edit, show and search options. SAM Tracker is a text processor that greatly benefits from the 80-column display mode. You can insert, delete, move, copy and clear text as well as specify margins and alignment. When it comes to producing a hard copy you can select printer attributes such as Font, Size, Condensed, Expanded, Bold, Italic and NLQ modes (an Epson compatible printer is required). SAM Painter offers the usual drawing functions such as Line, Box, Box, Frame, Circle, Fill, Zoom and several others. You can choose from five brush sizes or a spray can effect and include up to 128 colours in one picture! The end result can then be saved to disk and printed using right grey-tones.

Finally, the Access/Info menu provides a launching pad for SAM accessories which are available separately from the publisher or can be written by those familiar with assembler. It's important to note that normal machine code or basic programs can't be loaded from the SAM desktop - you should think of it as a completely new operating system. SAM Postcard is supplied as an example accessory and will be well received by Brookline fans. This variation of the game (which also uses the standard SAM interface) has four difficulty settings ranging from beginner to available!

SAM is, without doubt, an extremely clever feat of 8-bit programming. Its usefulness as a desktop system is diminished by its inability to launch 'normal' programs though the inbuilt accessories provided, and the option to add more, go some way to alleviate this problem. TV-based users are unlikely to be satisfied but others should be impressed by the innovation.

The SAM Desktop System is published by Power Per Force of Germany and distributed in the UK by Dux Computers, 92 Thurston Avenue, Ealing, Wembley, Middx SW17. The price is £120 plus £1 to cover the cost of postage and packing.

Software

LIGHTS, ACTION!

You probably know the Atari Classic by his arcade games. This time I'm going to tell his story under the Multisync lights. There is quite an amount of software adapted from the big screen to the screen of our machines which might seem obvious when you consider that Atari was owned by the master producer Warner! I will present you all of them, or rather all of which I know and have played with on the XL, XLII, converted from movies, TV series or cartoons.

LEADER OF THE PACK

I will begin with a little trivia. Which is the most productive firm for those adaptations on the 8 bit? The winner is DATA-SOFT with seven adaptations among which we can count **ERIKS**, **GOONIES**, **CONAN**, **DALLAS GUNST**, **NEVER ENDING STORY**, **SPACE LEE** and **2148 BARRON STREET** (as it relates to Starbuck Holman).

Let's begin to explore the DataSoft world with **THE GOONIES**, adapted on XL in 1985 from the Warner Bros' release and which really respects the soul of the movie. The programmers have succeeded in keeping the team together by having two characters controlled by only one player with several screens in which you have to think of the appropriate action which will enable you to pass on to the next one. Each action is straight out of the movie like making the money machine make work. A great success from DataSoft as almost every adaptation from this software house has been, perhaps one of the best in XL history!

Next came **TORRES** produced the same year, which really puts you in the same world as the hero's one. That is to say the rain, the cars, the horses, etc. allowing you to fight the soldiers and also to solve the puzzles and consequently adopt the right action for each screen. A game that can't be missed anyway (except for the boring music) as it really combines action and reflection. You do have to take care which screen you use as two versions have been produced, one for tape users and another for disk users which has more screens. Let's have the last one for the movie first!

I have never forgotten in **CONAN THE BARRBARIAN** but I don't like the computer adaptation produced in 1984 as the colours aren't great and the character throws his sword really far killing everything on his way ahead and back. Not one of the best.

THE FIRST MOVIE

You probably wonder what are the first and last adaptations on XL from the movies. The first movie game translated was **DARK CRYSTAL** from Screen-On-Line released in 1982

they, that's 11 years ago and I am still using my XL5. This comes on three double sided disks, that is to say that this first one came on 6 sides - a longer length game? This is a classic adventure game based on the movie's story, where you can talk with these strange creatures seen in the picture.

Talking about adventure type games, I have had a look at the **SCOTT ADAMS / ADVENTURE INTERNATIONAL** titles which appear to refer to movies, and discovered that a significant amount of movie based software had been produced: **MISSION IMPOSSIBLE** (1982), **HULK** (1984) - but where is Bruce Banner?, **SPIDERMAN** (1984), **RICKBARDI**, **BANZAI HUMAN TORCH** and **THE THING** (1985). These kind of games are very similar and it is quite difficult to be really addicted to them as graphics are not so great and they are without music. On the contrary, adventure such as **DALLAS GUNST** or **THE NEVERENDING STORY** are good enough to master the spirit of the cinema with elements such as music, people, and well adapted graphics.

HI SPOCK!

On the TV side, series like **STAR TREK** have given life to software adaptations on the XL as far back as 1983 with a game based on the movie produced by Paramount Pictures. Hi Spock! (as it was produced) a nice **STAN TIKER** version where your spaceship has to clear each one from the aliens. The upper part of the screen showed the Asteroids, and the lower part had a night screen and a bigger view of the alien coming near.

Also from High is **BUCK ROGERS "Planet of Zebes"** produced in 1985 in which you are piloting a spacecraft in a 3D area and have to pass between two laser barriers as well as avoiding and destroying alien spaceships. This game had a very original concept when it was out in stores. It has been used 5 years later in the Atari version of **CYBORG XL** produced in 1990 in which the background is perhaps more than the 3D's version but prevents less interest due to the existence of only one alien spaceship to be destroyed at a time and to the difficulty of moving your spaceship. Moreover, the High's XL version can be joystick or keyboard driven, offers 5 lives and a really better animation whereas the above mentioned Atari game offers only 3 lives.

GREETINGS PROFESSOR FALKEN ...

With these famous three words, you have probably recognized "Galaxia", the computer of the movie **WARGAMES** which for I should say who began the "global thermodynamic war". The XL version of this movie was produced by Capcom in 1984 under a license from United Pictures. It is really addictive as it puts you in front of the same situation described in the movie,

ION ...

Patrice Robert investigates the adaptations of big movies, series, comics and cartoons to the Atari Classic

where you see missiles, strikes points and satellites moving around the USA on your computer screen. The "defence status" and the time remaining displayed on the board bring you to the movie's atmosphere.

This game makes me think of modern times where information, its access and its ownership means power and money. It reminds me of Activision's strange game **HACKER**, where the information has to be hacked along with several spies in order to complete a full page message. If you saw the recent movie **SUBURBANS** starring Robert Redford, you probably have a better understanding of what I mean. The Atari 8-bit is also an example of this technological war that has just begun. That sometimes make me think that the world is going crazy when looking at the incredible penetration of the computer in modern societies just to see twelve points after its introduction in most firms.

MY NAME IS BOND ...

Talking of information and spies reminds me that I haven't yet mentioned **007** spy. I mean **007**, **JAMES BOND**, who has also been adapted twice in 8-bit world.

Firstly came the Parker game, in 1984, where you control a sophisticated and later, in 1987, he appeared in Demark's **LEAVING DARTLIGHTS** (see Atari User Vol. 3 No. 4, August 1987, page 6) which includes 61 levels, in which 007 has to shoot the enemies (as he has a wide range of weapons), and avoid the bullets. The most outstanding thing about this game is that every level puts you in a really multi-dimensional scrolling scenario and offers multi-screen action full of colours. The concept of this game could be taken to create a light-gun driven game. It would be a success!

USE THE FORCE LUKE!

According to my 8-bit knowledge, the only movie to have been adapted several times on the 8-bit is **STAR WARS**. The first time was from Parker who released a cartridge representing a spaceship fight whose scenario was based on the **STAR**

WARS FROM FROM AMI. Then came **THE EMPIRE STRIKES BACK**. Finally, **THE RETURN OF THE JEDI** (which this trilogy all three parts of which have been adapted). Before that Demark (initially developed by Zep-pelin) produced its own version of the original first part, **STAR WARS** (see issue 30 of N.A.U., page 45). Both the Parker and the Demark/Zepelin versions are very similar as they all are on the subject of a spaceship trying to destroy those 4 evil fighters and finally the Death Star. Three parts of the movie are represented from the 8-bit version, via the growing towers, to the inside of the Death Star.

'Well, that's four games from a movie trilogy adapted to our 8-bit machine, not so bad for a single concept movie! But what a movie wouldn't you say?'

WHO YOU GONNA CALL?

GHOSTBUSTERS on 8-bit from Activision (see Atari User from October 1986, vol. 2 No. 5, page 10) was one of the biggest movie conversions to the 8-bit world. The introduction specially synthesised recreates perfectly the atmosphere of the movie. This adaptation from the Columbia Pictures' movie lets you drive special anti-ghost cars through inverted tunnels and finally face the Marshmallow man. Quite every machine must have an adaptation of this movie. Well show Activision! But why didn't you produce the second part which appeared on 8-bit and Amiga?

HI, ELLIOTT!

If you had a VCR from Atari in the 80's, you can't have failed to play **E.T. PHONE HOME**. On the 8-bit, the graphics are clear and well coloured. Starting Elliott who tries to recover all the puzzle pieces. If you succeed in assembling all the pieces and go to the right place in the forest, you will see the mother spaceship landing and will face the digitized voice of E.T. A classic game that must have been played and known by every Atariist. I just regret one thing which is that when Atari was a "White" company, it could have produced more movie adaptations on the 8-bit micro of this status.

MORE STRANGE PEOPLE

During this short review, you probably couldn't have failed to notice that many games converted from movies began life in the console - **Hulk**, **Human Torch** and the **Thing** etc. I would really like to see more of them on our machines and why not an arcade version of the **X-MEN**, **THOR** or the **SILVER SURFER**?

On the cartoon side, **Walt Disney** have shared **Mickey Mouse** on the 8-bit in **SECRET IN THE GREAT OUTDOORS** (see Atari User vol. 4 No. 7, November 1986, page 25).

Some cartoon characters have recently come along to the 8-bit, like the famous Hanna-Barbera ones by **YOGI BEAR** (Eured Monitor and Canal Storage - see N.A.U. issue 51, page 41) and also **BUFFY & WEDDY** (see N.A.U. issue 48, page 42). Both from 48-50c. According to my knowledge, there are some of the latest conversions from cartoons to our 8-bit machine. **DONALD** from 8c-soft, produced in 1985, is the most recent one, with master class pieces from Hanna-Barbera which really sound great. You should have it.

WELCOME TO THE JUNGLE!

Coming from "out of the jungle" as the title says is not only initially a comic star, but also a TV and movie star who has appeared in many different bodies but played the same good man to the animals. You recognize him, of course: **TARZAN**. Converted to our machine by Cyberlabs first developed in the their game console on IBM compatible in 1984, the Edgar Rice Burroughs' character, Tarzan, roams among monkeys, gorillas, hidden snakes and humans, and jumps from creeps to creeps, climbs trees, dives in the river and swims and is even pursued by crocodiles. As in his movies, your XL character has to liberate the monkeys from the hunters who also try to shoot him. Atari had registered the same topic in 1982 with **JUNGLE HUNT**, based on the game of Taito America called **Jungle King**, itself based on the character of Tarzan as Indiana Jones. This game offers 4 different action screens and horizontal scrolling, both well designed, and a wonderful jungle background with a great amount of colours, especially these green shades. Both are worth playing.

MANY REGRETS

One of my biggest regrets is that when Atari belonged to the big movie producer, WARNER Communications, it didn't decide to make games of their biggest productions. They would have been a huge success! This makes me think of **FRISPOON**, which was produced by the Warner team and about which I had seen a advert in an issue of the French magazine "TR", saying it was to be adapted on C64, Apple and Atari XL. Has anybody seen the XL version?

However, the big movies have been explored by some software producers such as Activision who didn't buy the rights of the movie "Indiana Jones", but published two games based on his characters, which were both a huge success in the XL/SE world. I speak of **PITFALL 1** and **PITFALL 2**, respectively released in 1982 and 1984. Luckily, the movie producer of "Indiana of the Lost Ark" (you will note that the under title of PITFALL 1 is "Lost caverns" not so far from the second's title episode, it it) could have adapted their movie to the Atari as they produced many excellent games for the XL like **Bullfighter**, **Excuse**, **Koona Kiki** and **Force on Franchise**, are all examples of their superb talents.

However, David Crane, the creator of the Pitfall series has created a similar character to Indiana called **Herb Peltit**, presented as an adventurer, that had to be guided through a maze of jungle rivers, trying to collect the most treasures in the shortest possible time. Didn't this make you think of a well known scenario? Congratulations are due to the programmer who included in his games the much needed elements to make the player feel as close as possible to the movie star. There are jungle rivers, treasure, snakes, scorpions, ladders, dragons, traps... and you find yourself guiding a hero that had to jump over crocodiles' mouths to pass some platforms, and trek into deeper forest by underground and alpine artifice! David Crane must have hit the jackpot when he released these games as they are very similar in spirit to the revered movie. Being not a fan, he did it again with **SHONESTONES**, which, according to the Activision's advert, has sold over 500,000 copies in the all-format computer world.

I think Activision's programming team well understood the point that success can be close at hand by taking a movie's hero and his environment and then including both in a computer game. **MASTER OF THE LAMPS**, produced in 1985, has also explored the old movie theme of Al Hahn. It is on a magic carpet and you are flying in the air in an outstanding 3D action scene before meeting a giant.

However, some big movies such as **RAMBO** or **CYBERMANKI** which both exist respectively for the ST and the PC, haven't been turned as the XL/SE. Why not?

FIGHTING FIT

Many of us would have liked to see those big fight movies on our computer screens but don't be too disappointed, some other titles give an alternative way of destroying those "bad guys". For the specific killer player, take a look at **GREEN HENET** from Image Software, which includes horizontal scrolling but lacks the final touch that puts a game up at the top. There are, however, very nice backgrounds during the player's evasions. In the same world, **WHO DARES WINS II** from Tyrsoft offers a vertical fighting progression but is no more successful than the previous one. And there came **LOS ANGELES SWAT** (also based on an old TV series called **SWAT**) starting a team of three cops guided by yourself through a town under siege in which you have to clear obstacles throwing grenades at you, without killing those poor grandmothers walking down the street.

More recently I discovered **OPERATION BLOOD** from Mirage and ASI software which is graphically very near the classic **OPERATION NOLF**. Those Polish programmers are really good!

What I've always been waiting for, however, is **JACKAL** from Konami which even had published an advance notice for the XL version in Atari User (see issue of Nov. 1987, vol. 3 No. 7, page 33. Did it ever appear?

GOING THE OTHER WAY

Some software publishers feel the need to get movie stars converted to their games as it probably boosts their sales, but some computer characters have taken the greatest path from the computer to TV. I want to speak of the greatest Master of all computers, **PAC-MAN** who was converted to cartoon some years ago and **POLE POSITION** has also followed the same way. What a success for NAMCO and STARC, respectively creator and publisher. Some others like **MARXO** (a great success and of course, **SUPER MARIO BROTHERS** has just been released in the cinema. What about **MOSBY**, the hero of Montyman's Beverage who could have made nice transformations to the big screen as well as **JERRY**. Both, however, have stayed in the shadows.

Early adaptation gives life to my Atari and creates fun in my own life because when I play one of these games I remember the movie of the cartoon I saw when I was kid. But these adaptations are not just relics of the past as Pac-Man, Hi-Tec and ASI software are continuing the tradition with more recent adaptations. DONALD and other Hanna Barbera decorated games are proof of it!

I hope that you have enjoyed this trip to the movies and, maybe, found out about a few games that you didn't know existed. As a conclusion, I would like to roll the credits and say hello to some French friends of mine who form a major part of my Atarius life. Hi to Jean-Lucade, Pierre-Antoine, Christian and many more. I know that they are all subscribers to this great magazine and will read my article if published.

I also would like to say hello to Atarius all over the world who can write to me if they want.

**Patrick ROBERT 7, 1st Marcel Perrotet
2500 Rue de Melunien FRANCE**

DARKNESS HOUR

Introducing the latest Fantasy Import from Micro Discworld - called DARKNESS HOUR. This one's an arcade adventure one with plenty of levels, loads of screens and seemingly no shortage of enemies.

According to the instruction slip (not to be worried at - or you might lose it) an evil sorcerer has invaded your country and bewitched the souls of its faithful knights. They have all been transmogrified into bat-like creatures and scattered far and wide across the land. Your task, of course, is to search for and rescue these strangely re-animated crea-

tures so that law and order may be restored. As the souls are only visible at night you have a very limited time-scale in which to complete your mission. A clever "rising sun" indicator gives you a fair idea of the period remaining and various nasty guards help to ensure that your progress isn't too straightforward.

In order to locate the five captured souls on each level you're required to run around the levels and find keys to open doors, some of which are indicated in maps you see as they don't actually lead to anything worthwhile. Some areas are protected by animated castles which you can eliminate with your unlimited supply of swords (just as well since otherwise they instantly kill you on contact). You can also jump, climb, or over other obstacles. Transport pads help to move you around the levels through some problems



will only be solved through trial and error over several attempts - annoyingly, you've got to start from the beginning when your lives are depleted or the time limit expires.

The main playfield and other objects, including your own character, are relatively large in size and therefore clearly defined. The scenery is nicely shaded and generally well designed, using a variety of styles over the different levels. Animation is also beyond criticism. The screen's tip at your character's moves across the landscape into new loca-

tions and the joystick response is predictable, giving the game an approachable feel. A series of icons below the playfield illustrate your current holding of keys, lives and souls. Appropriate music - which can be silenced - accompanies the action. Aside from the inability to re-save play on a previously completed level, Darkness Hour is a very competent game with a strong quality of achievement and many commendable features. Arcade adventure fans alike would be well advised to investigate.

Title: DARKNESS HOUR
Publisher: Avalon/Miles
Platform: Discworld
Price: £5.95
Format: Disk
Reviewed by: Paul Dixon



In issue 60 I reviewed a new game from Ke-Sell called Bomb and mentioned that it was based on a PC Microsoft Windows program named Minesweeper. Now, from PPP of Germany comes none other than ... MINESWEEPER!

Naturally there's little difference in the nature of gameplay, though PPP's version is more faithful to the Windows original. The playfield comprises a grid of squares, with the number some of which are dangerous mines. Your objective is to correctly distinguish

the clear squares from those that contain mines. When you uncover an empty square, a number is displayed to inform you the number of mines located in the adjacent squares. Using rules of logic (and occasionally pure luck) you can gradually 'sweep' the minefield. You must use an ST mouse or joystick to click a screen pointer over the clear squares. It's also useful to prepoint the minefield squares so you don't inadvertently select them later, but to do this you've got to hold down the shift key as you click on the

MINESWEEPER

button. This is not exactly easy when two hands are required for the joystick, and unnecessary when using a two-button mouse - it can help feeling the author could have chosen a better method.

The game offers five levels, which differ in the number of squares and the corresponding intensity of mines - from an 8x8 grid to a massive 30x30 variety. There's a time restriction of 30 to 60 minutes though you'll need to do a lot better than this to achieve a good placing in the challenge high-score or low-score table. The program maintains a different table for each level so there's no confusion when comparing times.

Minesweeper scores more highly than Bomb in the graphics department. Although simple, the display is well drawn and incorporates some nice effects - instead, it's a fine advertisement for the

Quick programming language used in developing the software base system elsewhere in this issue. My only criticism is that the squares could be slightly larger, as the smallest grid appears rather tiny in the centre of a mainly blank screen! If PC Minesweeper is anything to judge by, this game should be very popular indeed.

Minesweeper is distributed in the UK by Dean Goughley, 50 Thomson Avenue, Bally, Duncaster, DN4 0BL. Dean also distributes the PPP games Rubber Ball and Slings II, both of which received favourable reviews in issue 63.

Title: MINESWEEPER
Publisher: PPP
Distributor: Dean Goughley
Price: £5
Format: Disk
Reviewed by: Paul Dixon

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TUTORIAL TIME

A SIMPLE SCROLLING MESSAGE

For this edition of Page 8 I have been a short but sweet subscriber. It is taken and modified from a much more complex program used to me by Mr R C Williamson and I thank him for it. His big program is a disk based weather forecast application, in which he has used a great range of interesting and prompting methods to keep the whole application lively and varied. If you are interested in meteorology that is weather forecasting, you would inevitably delight you will find the program interesting. You can get in touch with Mr Williamson through me if you send me a stamped and addressed envelope.

Approach back to the little subscription. What it does in general terms is take a text string that is a message and print part of it on the screen. Then, after a short pause, move everything one character to the left and print it again. This is repeated until the end of the message is reached and then starts again making the text appear to scroll continuously through the "window" on the screen. To stop the attempt, just that occurs when the text reaches the first 0 in the list in column 41 of the string giving a continuous flow until the message is deliberately interrupted.

THE LISTING

The program listing has three examples of the scrolling message. The actual messages are held in string 40 and can be seen in lines 28, 30 and 175/176. The string can be as long as you like, but make sure the DIM statement in line 30 is as long as the longest string you use.

I will explain the first example and leave you to follow the others.

In line 30 A is dimensioned and defined. When writing your message the last few characters should be the same as the first to avoid a jump as the message loops back to the beginning. Repeat a length of message equal in length to the display window.

Line 28 clears the screen. In many instances you will want to insert your message in a particular space on the screen so you will not want this clear screen command. I have only put it in because I do not want the screen cluttered with whatever is there when you DIM these examples (you will see that it is not in examples two or three).

Line 30 sets the variable values for the first example. C is the column and R is the row of the start point of the message on screen (numbers to count from the top left of the screen). L is the length of the "window" in which the message is displayed. D is the delay constant, the bigger this is the slower the movement of the message. X is set to 1 because it can be left in an whatever state if the subprogram is used more than once in a program. Finally M is the total length of the message - characters and blank spaces.

Line 35 is not really part of the tutorial, it is just a conventional status prompt before line 40 goes to the scrolling subprogram.

Line 1100 is the start of the subprogram. The MORE turns off the cursor so that it does not flicker distractingly as the message scrolls through.

In line 1100 the cursor is positioned at the start of the message window and then in line 1120 a section of the message L characters long is printed.

Line 1140 increments X by one, and if X is greater than the length of the message less the length of the message window it reverts to the beginning.

Line 1150 is a delay that slows the message so it can be read. If you can't read fast try setting D to 1 in line 30.

Line 1160 is the test condition for moving on to the next part of the program. I have just used a test for any key press (see the articles in the last two magazines), but you can put in whatever condition you wish. If no key is pressed the subprogram goes on to line 1170 and loops back to line 1130 where the message is printed again but one character to the right. If a key is pressed it jumps to line 1180 where the MORE turns the cursor back on and control RETURNS to the main program.

Example 2 is very similar to example 1, then to example 3 I have drawn a box and put a longer scrolling message in it. I hope this gives you some ideas for including this simple technique in your own programs. If you want help with BASIC programming or wish to have your name forwarded to Mr Williamson in connection with the weather forecast program, write to me with a SAE. My address is

Ian Finlayson, 60 Roundstone Crescent,
Essex Preston, West Sussex, BN16 1DQ

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ISSUE 63

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

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One of David Adams' famous graphics adventures in which you wander in an antique house lost in a dark, desolate castle. It soon looks like you are going to meet a certain booby Transylvanian (count) who goes by the name of ... (bracket) Will you escape or become one of the living dead? An adventure with full graphics, moderate level for ages 12 to adult.

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PD Paul Rixon's WORLD

THE STRANGE WORLD OF ALTERNATIVE LANGUAGES

In the last installment of PD

World we examined the subject of programming languages and specifically focused on the mainstream packages such as Basic, C and Modula 3. This time we're going to look at a selection of more specialised languages, some of which are well known in the academic and scientific worlds. The languages may be different but you can rest assured that all the programs have one thing in common - they have been critically assessed by Page 9 to ensure they meet the demanding standards of the ST Library. If a disk's not brimming with good quality and value, you won't find it here!

OOPS!

One subject that's recently a 'hot' topic for discussion is the competing merits of object oriented programming, or OOP for short. As the breakthroughs in computing technology continue to push hardware components to their limits, human programmers may find it increasingly difficult to cope. A method is required to simplify the representation of coding problems so that the complexities of wire systems are masked by a number of reusable modules, each of which can be maintained in their own right. **XLISP** is an experimental programming language merging some features of the more generally recognised LISP language with OOP extensions. XLISP has been designed to aid research into OOP techniques using various small computers - in the past, versions have also been produced for MS-DOS, Macintosh, Amiga and CP/M machines.

Many traditional LISP functions are provided within XLISP and, in addition, XLISP provides a data type known as 'object'. An XLISP object consists of a structure containing a pointer to the object's class (or object type) and an array containing the values of the object's instance variables (information about the object). Officially, there is no way to see inside an object (look internally at the values of its instance variables) as the only way to communicate with the object is to send it a message. The way in which the object acts upon the message it receives - and thereby produces the desired result - is independent of the surrounding program code and should therefore be very easy to comprehend and substitute - well, that's the theory anyway! The documentation is quite extensive but it assumes some knowledge of LISP and a basic understanding of OOP techniques. A standard version of LISP, known as Common Lisp and given the abbreviated title **C-LISP**, is also available.

NO ICONS

Despite its title, **ST ICON** has absolutely no connection with icons - in fact it's not particularly graphical at all! ST Icon is a high level programming language with many facilities for processing strings and lists. It supports many data types including variable-length strings, lists, sets and tables with all their associated access methods. ST Icon also has a goal-directed evaluation mechanism (or so we're told) that allows complex programming tasks to be formulated easily. Some of ST Icon's features are comparable to a language called SNOBOL4, which is more widely known. Possible applications include text analysis and generation, document formatting, symbolic mathematics and artificial intelligence. Developed by the Icon Project at the University of Arizona, ST Icon is produced for free distribution and retains no licensing or restrictions of use. As with XLISP there is certainly no lack of supplied documentation and commercial publications are also available on the subject. Not one for beginners this, but those with an interest in programming styles will find it quite intriguing.

SPORTING STRIPES?

No, this has nothing to do with Lotus Calc - **ELAN 1** is actually a language developed in 1974 by a group at the Technical University of Berlin as an alternative teaching language to BASIC, and subsequently appeared for use in German secondary schools. Elan is intended to teach the subject of systematic programming techniques - top down programming, using suitable control structures and data structures, bottom-up programming using procedures and type declarations, plus a number of related programming styles such as recursive, modular and syntax-directed programming (plover). If these terms are unfamiliar don't worry too much as Elan-1 promises to help you discover exactly what they mean as well as good language tricks the documentation does not tell you how to program - it assumes the reader has a good knowledge of general programming methods and concentrates on the special features of the language. The manual starts with an example session, introducing the reader to a hands-on fashion to the use of the Elan programming environment. The second part commences with an overview of the full Elan language in the form of annotated syntax diagrams. This leads on to a description of the user interface of the programming environment and three several user condition examples. For those who want to learn more, a commercial reference has been published.

PROLOG

There are several other languages in the public domain which are aimed primarily at those who are already familiar with, or are currently studying, the subject matter. **PROLOG**, for example, remains on the reservation: other than brief installation notes in full manual is supplied but written in German. The work is referred to Clarkston and Mellish's book 'Programming in Prolog'. The ST version is said to readers clearly to that

described in this book so anyone with knowledge of Prolog should not encounter problems. There are various sample programs included so you should at least be able to gain some idea of how it works. Finally, **FORTHMACS** is a version of the Forth language based around the Emacs Emacs text editor. The author claims:

The program is virtually bug free, having spent four years working on different implementations. Instructions comprise an Emacs guide and a list of Forth keywords - but no introductions to the language, so the acquisition of an appropriate manual must be considered essential.

OH NO, IT'S IN GERMAN!

If all else fails, you may consider an attempt to decipher the German instructions supplied with certain public domain disks. If this is the case, a utility disk named **TEXT TRANSLATOR** may prove to be rather handy. The disk contains an update to the translation package TOL that originally appeared on an earlier library disk. There are two main programs - one providing a 'brute force' method for word translation of an ASCII file from a foreign language into English, and one helping to update the reviewer's dictionary file. The package is aimed at users who have no knowledge of the language from which they are translating. It simply replaces words in the source file with their English equivalents, according to a dictionary being stored elsewhere. The program makes no attempt to re-arrange words where the rules of grammar differ between English and the source language - the content of each word is ignored. Although this isn't ideal, it is surprising how much information you can glean from instructions that would otherwise be incomprehensible!

A fairly large German dictionary is supplied, though the software has been designed to allow the easy expansion of existing dictionaries and the creation of new ones for any language. A very comprehensive instruction file is provided on the disk (written in English, of course). The software will operate on a 32001 with one double-sided disk drive but this configuration may prove frustrating when it comes to editing dictionaries - certain documented bugs may also be encountered. Apparently the author is now working on a translator for library files so that German programs can also be converted. Sounds interesting!

GFA HELP

Now for an update on last issue's delightful 'last-but-not-least' language. Users of the commercial system GFA BASIC may now get even more assistance following the release of **THE ULTIMATE GFA DATABASE**. It's not actually a data base program but rather a collection of references to articles in disk magazines, ST Forum and GFA User. The article base is not on the disk itself but you are directed to the publications which may have the answer you've been searching for.

A CENTURY!

Believe it or not, the Page 6 ST library will shortly be topping a total content of one thousand disks! If you receive the regular Library Updates you will know that a new PD catalogue is being prepared and, as a result, some early disks are due to be removed from the library. Until August 81st members of the PAGE 6 ST Club can purchase any of the first 500 disks at the ridiculously generous price of £1 (each subject to a £5 minimum order), whilst non-members should also order their requirements as soon as possible to avoid future disappointment. At present details of the library or details are available but this could be your last chance to obtain some of the great programs featured in past PD World columns.

NO WINNERS

Finally, an announcement regarding last issue's mystery competitors. The fabulous prize of six weeks holiday for four in Bermuda was on offer to the first person who spotted that the Database C compiler should in fact have been referred to as the Database C compiler. Unfortunately no entries were received by the closing date - shame about that!

ST SITUATIONS VACANT

Due to the departure or demise of a couple of STs we need a couple of people to take over the PD WORLD column and do some ST games reviews.

You need to be able to write reviews (it is not as easy as it might seem) and you have to want to do it for the love of it, or the buzz of seeing your name in print, as we cannot pay the going rates for freelance journalists. What you will get is loads of free PD disks or a few free bits of ST software. Not all of it will be good but you might end up with rather a nice collection for the cost of a few thousand words of comment. That's not so bad is it?

If YOU are the right ST person to take over PD WORLD or write some reviews, drop us a sample review and we'll see what happens.

Write to Les Clingham at
PAGE 6 Publishing, P.O. BOX 24,
STAFFORD, ST16 1DR
SUPPORT YOUR ST

HOW TO GET THEM

The disks featured in PD World can be obtained from the PAGE 6 ST library. When referring to a specific disk please use the unique reference code for identification. A printed catalogue describing all the library disks in detail is available from Page 6 at a cost of £1.00, refundable against the first free-disk order. This includes a copy of the PAGE 6 OR BLACK BOOK which is otherwise priced at £5. The disks featured are listed here:

ST01-07 BASIC LANGUAGE	ST07-PROLOG
ST08-EMACS	ST08-COLONY
ST11-AGRICULTURE	ST11-TEXT TRANSLATOR
ST01-ELAN 1 PROGRAMMING LANGUAGE	ST01-THE ULTIMATE GFA DATABASE

Prices for standard disks are £2.00 each or £5.00 each for the six or more but prices are lower for members of the PAGE 6 ST Club. Write to PAGE 6, P.O. Box 24, Stafford, ST16 1DR. Telephone 0582 218888 with credit card orders.

ORBITER

I've tried several Space Shuttle simulation programs over the years, but on the whole I've found them disappointing. They seem to concentrate on simulating procedures rather than action, and, for some reason rarely exploit the Atari sound and graphics capabilities. Perhaps Orbiter will prove the exception?

It's actually a fairly ancient program, dating from 1986. This was the year Space Shuttle Challenger exploded shortly after lift-off killing the whole crew, so the program's authors dedicated Orbiter to their memory - a thoughtful touch. It's supplied on two single-sided disks and runs on any Atari 5200 with at least 512K memory and a colour TV monitor. Two disk drives are supported if you have them. The package also includes a 74 page instruction manual written for the Apple Macintosh version, a supplementary Atari instruction sheet, and a 'quick reference' sheet listing all the program's commands.

Orbiter has a number of scenarios including training, deploying and retrieving satellites, rendezvousing with and repairing satellites, and variations on these themes. You can choose the type of mission you'd like, or let Mission Control decide. You can also choose which mission phases you'd like to fly - launch, orbit (including the main mission tasks), and landing, or any combination of these.

SYNTHESISED SPEECH

I was pleasantly surprised to hear synthesised speech over the title screen - a promising sign, even though the speech sounds rather 'robotic'. In fact speech is used throughout the simulation, representing the voice of the Mission Controller who literally talks you through the mission. Unfortunately there's not much else in the way of sound - speech, engine noise, and the odd bang and ping just about cover the program's sonic repertoire!

The programmers have obviously tried very hard to make this simulation as detailed as possible, and have included a vast amount of the Shuttle's instrumentation and controls. In fact,

there are far too many control panels and computer displays to show everyone of even with any clarity. This problem has been solved by dividing the ST's



Seven stages in a Shuttle flight

Title: ORBITER
Publisher: Spectrum Holobyte
Price: Varies
Reviewer: John S. Davison



monitor screen into four "windows" into which you can load your choice of panels, displays, or even the data outside the Shuttle. The only problem is knowing which panels you need, but you learn this with practice.

You can select a training mission to begin with, which steps you through all the tasks involved in launching the Hubble Space Telescope and returning safely to Earth. Mission Control provides step-by-step instructions, both spoken in that robotic style voice and displayed on one of the Shuttle's computer display screens. There's also additional information available in the instruction manual. Once you've got the hang of things you can move on to "real" missions.

ROBOTIC ARM

In addition to launch, orbit, and landing procedures you also have to handle various mission specific tasks. This can involve deploying satellites using the Shuttle's Remote Manipulator System, a robotic arm designed for lifting satellites into and out of the cargo bay. You may also have to find and repair malfunctioning satellites, or capture them, load them into the cargo bay and return them to Earth. You could even be asked to add new modules to a space station, which may involve a space walk using the strap-on jetpack system known as the Manned Maneuvering Unit. There are also various hazards (such as fires) and Shuttle malfunctions (like engine failures) to contend with. Most problems can be dealt with by pressing the appropriate button, but some simply cause the mission to end abruptly - usually with your immediate demise. Very frustrating, as you have no control over this.

Orbiter sounds complicated, but seems to require very little real skill to use. Almost everything has been automated, so your role consists mainly of loading appropriate programs into the Shuttle's onboard computer and pushing buttons to initiate automatic procedures. True, you can perform some tasks (e.g. landing) in manual mode, but for me even this didn't boost the interest level much.

Although the instrumentation graphics are quite well handled there's not much else to see. You can look through the Shuttle's windows and get an occasional glimpse of a satellite, the Earth, the Moon, and a few stars (which inexplicably change position in a crazy, random way). The graphics for these are cruder than usual and very poorly animated. The landing phase graphics are particularly disappointing - I'm sure I've seen better results on a Starline 2500!

Orbiter has done nothing to change my view of Shuttle simulators. It's certainly more comprehensive than anything I've seen before, but it's still really just a complex procedure simulator. I just don't get that feeling of real involvement in the action - there's nothing to give you that buzz of excitement you get from using a good flight simulator. The interface - poor graphics obviously don't help, and nor do frequently aborted missions through random failures beyond your control. In fact it doesn't take much for the program to become frustrating and boring to use. Regrettably, I can't really recommend Orbiter - it's likely to be of interest only to confirmed Shuttle freaks!

OH, YES... IT



Just when you thought it was safe to go back to your computer? A huge number of ST games aren't here because we've already added to the original Learnings and had that addition foisted by Oh, No, More Learnings! but, just as most of you have finally bought the inspiration to try one more time, along comes whole tribes of Learnings!

Really they can't make three games out of the same idea? Well, it all depends on how many changes are made to the concept and I can tell you that Psygnosis have made such significant changes that you are sure to become addicted once again. This time, there is no much depth to the game that your addiction is liable to become much more serious. No matter how difficult you thought the original Learnings, this is seriously harder.

ALL-OVER THE WORLD

In Learnings 2 Tribes there are not only a dozen different worlds to explore and save the tribes in, but also a whole host more Learnings in control with... I don't mean more to ourselves but more Learnings with more skills than ever before. You will also find some of your past friends missing on many screens, especially the most useful of all, the Blocker.

In this new game there are several ways of blocking the advancing tribes but they are much more subtle. Come on the days when you could put a couple of blockers either side of the advancing army and bravely figure out what to do. There is however pause (a 'you're' mode and I highly recommend that you use it on each one level to give yourself a chance.

in which when there are 60 or so raining above!

As complicated as it is to remember each skill, things can get even harder when certain skills require suitable influences as well. Take the Wind Skills for instance, there you can have Barbarians, Wolves, Warriors and Parachuters who will all sit the storm but who will only progress in the right direction if you use a fan to blow them along. Careful use of the fan is essential if you want to make use of these skills before they disappear. Warriors can, for example, be blown into the ground to make barrels but as soon as they leave the ground their skill is lost so you need that practice screen once again.

WE CAN DO ANYTHING!

The Learnings crew are divided into groups with various allied skills and so we now have eight Learnings with different Wind Skills, eleven with various Ground Kicking Skills, seven with different Blocking Skills, half a dozen with Shooting Skills, ten sorts of Movement Skills and another ten with skills that don't fit a particular category. All in all, that's a lot of different types of Learning to remember! Luckily you can practice before trying to save lives for real, and you can pick eight different types per hour which you can use on a choice of four practice screens. Practice really is essential to see just how rich the skills is used. For example Club Batters, Frasers, Batters and Misses all cut through the landscape ahead but they all do it in a slightly different way and it is important to know which one to use.

Any skill can be given to any Learning as before but some of the skills are temporary and some are permanent so you do need to plan ahead and try not to remember which skills have been given to which Learnings. The Learnings are bigger and more animated than before but, even so, it is still hard to figure out which

NOW IT'S FOR REAL!

Let's suppose that you have practiced all of the skills - that is all 52 of them - and you want to start saving some lives. You now have a choice of twelve different levels to play in, arranged in a step by similar fashion to Discworld with each advancing from a central spiral. Of course the aim in each level is the same, to save all the Learnings, but this map this adds a great deal of variety to the game and is more challenging than simply re-aching level 10, or whatever, on one standard playing field. The aim in each level is to pick up a Gold Talisman by saving all of the Learnings. It can be two for along the way then you can make do with a Silver or Bronze Talisman instead but once you have figured it out you are sure to want to go back and try the screen again to get that Gold. The objective is to save at least one Learning from each tribe through 10 levels of the world picking up a piece of the Talisman as you go. Pieces of the Talisman are taken to the central ark to be joined with other pieces. If you can complete all the levels in all twelve levels you will have formed the complete Talisman which lets all of the Learnings escape from the island. Some chance!

IT'S MORE LEMMINGS!

IT GETS HARDER!

As hard as it is to remember what all those Lemmings can do, things are made harder by the fact that only the number of Lemmings saved on one level can be taken to the next. If you just almost scrape through one screen, you are unlikely to have enough Lemmings left to conquer the next so you need to keep playing a level until they are all saved. Once a level is completed you can play it again, return to the map to choose another level or save the game. The last option seems sensible or you will find the boats slipping away and down breaking outside!

The other thing that makes life difficult is that you cannot choose what skills your Lemmings can have. On each level you are awarded a set of number of skills and the number of Lemmings that have each skill. You will often find that skills you could really use are not available and not enough Lemmings with a particular skill to go round. On each level the skills and numbers are carefully chosen for you so that, used correctly, you can solve the puzzles. Make one mistake though and you will run out of a skill just when you need it. In this case there is no option but to Nuke the lot, as before, only this time they will reach screens and as they are blown to bits if you carefully study each level you should puzzle make an aim as they drop through the trapdoor! Here you can work out just where and when to use the skills you have, but several levels do appear to have a number left savings as it is not always obvious.

BETTER ALL ROUND

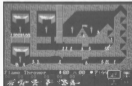
One of the refinements, and presumably one of the reasons that Lemmings 2 will only work on 3 Meg machines, is the addition of a simple sound to the proceedings. Great fun can be had by just

listening to what is going on. If a Lemming falls to his death, a groaning death yell will be heard. If he just falls and stays still, an 'Owww' is emitted as he lies in a heap with stars twirling around his head. A few seconds later he will be up and running. The best sound of all though is the 'Tippoo' as a Lemming reaches the end. Only 'Tippoo, tippoo, tippoo' is a rare, however you sound a nice string!

Almost every aspect of the game has been improved over the previous versions from the variety of skills available, to the graphics in the various worlds, to the variety of puzzles. There is much more music, added sound effects, many more levels and better animation than before and Lemmings 2 will have you more hooked than ever.

Cancel all your engagements, tell the lady you can't make it to the pub, because you are going to be saving Lemmings almost every night of the week. Unless of course it drives you completely up the wall because it is so damned hard!

Games like this shouldn't really be allowed on, at least should have warnings about the degree of addiction likely to be encountered. There is no government warning on the box, though, so approach it carefully if you are the type that gets really addicted. Yes it's a real stinker.



'Seriously addictive'

**LEMMINGS 2
the TRIBES**

Psychosis
£29.95

Reviewed by Les Elingham

MAKING MUSIC WITH YOUR ATARI

THE ALBATROSS

*John S Davison's has
made good progress on
the ambitious project
started last issue*

In the last issue I began telling you the story of how my friend Derek West and I are using our Atari STs to publish sheet music for *The Albatross*. This, if you remember, is a music originally written for the RAF bands by composer Gustav Wilens, which didn't get published through the normal channels. At the end of the last article the hard-writers were for the 31 part band arrangement had been entered into Notator, our chosen software package for the venture, and we were about to start experimenting with printing. This article describes the fun and games we had trying to get the music onto paper in a suitable form.

To produce printed music your printer has to be capable of working in graphics mode. Music contains lots of curved and sloping lines and edges, so a high resolution mode is needed for good results - the higher the better. Low resolution results in jagged edges and stepped lines which just aren't good enough for professional use. Ordinary 8-pin dot matrix printers operate at 72 dots per inch, which is inadequate for our purposes. 8-pin extended and 24-pin printers push this to 180dpi, which is just about acceptable. For truly professional looking output you really need a laser or ink-jet printer operating at 300dpi or more. Our original plan was to use my Star 50-10 0-pin extended model for the whole job, but then we decided we'd use this just for the basic layout and proofing work, then buy one or two something better for output of final masters from which the band copies could be produced.



Notator is supplied with a large number of printer driver files, known as 'printer adaptations', but guess what? There's no Star 50-10 adaptation provided! However, Atari is an editing facility for customising the supplied adaptations to suit any printer, so at worst we could build our own drivers.

DIP SWITCHES

Before doing that the manual suggests you try all of the supplied adaptations for your make of printer in case one of them works anyway. We did, and they didn't. The 30-10 is Epson compatible so we also tried various Epson drivers, but all we succeeded in doing was driving the printer crazy with data streams it couldn't understand. Just before it became totally disconnected we remembered... — DIP switches! A quick check established they were set incorrectly for what Notator was trying to do. Once corrected we found the Star ML-10 (extended) adaptation supplied produced good results with the 50-10. The only trouble was that it took about ten minutes to print out a page of music, which was far too slow when you're experimenting and need quick turnaround. So, we switched to my 8-pin IBM printer which is about twice the speed, but again had to waste time finding a suitable printer adaptation.

As described in the last article we initially created only the 'bare bones' of the score, i.e. the basic musical notation without any performance symbols or text. Initial tests produced very encouraging results - the music looked clean and clear on the printed page, both for the full score and the individual instrumental parts to which we extracted them. There were a couple of problems though - the 21 staves of the conductor's score wouldn't fit onto an A4 page, and Notator wasn't labelling the staves with instrumental names in the traditional way. It positioned them above each staff instead of in the left margin in front of it. Hmmmm... we decided to press on and solve these problems later.

The next step was to add performance markings to the basic music notation. These include such things as slurs and phrasing marks, staccato dots, 'accipies' to indicate ornaments (decorative effects), text symbols for dynamics (pp, mf, ff etc.) repeat bar markings, rehearsal marks, and so on. We also needed to add text for the title, credits, and copyright notice. Instrument name subtitles also needed adding to the top of individual instrument parts.

Adding performance markings is easy with Notator - just point and click on the symbol you need, point and click where you want it positioned, and it's there. If it's the wrong size you can stretch or shrink it, and even alter the curve of phrasing marks or the angle of the slurs lines for the best aesthetic effect. You can then slide the symbol around with good accuracy for final positioning. Notator really is excellent in this area.

TEXT PROBLEMS

Adding text caused us headaches, but as with most things once you know what you're doing it's easy. Notator comes set up with an internal text font in three sizes, and at 72, 108, and 144dpi resolutions for use in screen display and the three main types of printer. These can be scaled to produce several additional sizes, but as they've hit expanded fonts the results tend to be less than professional looking.

To get round this you can also load in up to 13 additional GDS (dot-matrix) fonts. Our version of Notator (SL 3.10) provides two main text fonts (Helvetica and Times Roman

THE ALBATROSS
WOLFGANG AMADEUS MOZART

THE ALBATROSS
WOLFGANG AMADEUS MOZART

Two pages from the final laser printed score reproduced here at just over 40% actual size. On the left is the full arrangement for the conductor and right is the part for Oboe. Twenty-one such parts, one for each instrument, have to be produced.

equivalent plus supplementary symbols and chord fonts in the three required installations. The text fonts are supplied in 10, 12, 16, and 24 point sizes and may also be scaled, but with the same limitations as the internal font.

We chose 18 point Times Roman for the main title and 10 point for everything else, and after much experimentation and manual studying found out how to correctly load and use them. You can also apply variations to the basic font - making it bold, underlined, boxed, italic, etc. We put this to good effect, for example by using a bold 16 point title, and bold 10 point 10 point for instrument names on the individual instrument parts.

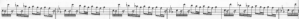
There then followed a period of extreme frustration. We tried to get the main title, composer's name, and arranger's name centered on three lines at the top of the first page of the score. This just would not work - we'd get it nicely positioned on the screen, but the layout was completely messed up when printed out. We eventually got the printer looking right by trial and error - adding the text lines around relative to each other on the screen until the printed came out correctly. But the screen layout then looked completely wrong. What's more, the required screen positioning seemed to be completely different on every instrumental part. This was crazy - whatever happened to WYSIWYG after such crossing around we eventually hit on the answer. We'd missed the vital fact that you can ask Notator to automatically justify the text you enter - it can be left, right, or center justified on its line. Once selected it looked right on the screen AND in the printout every time. Ever

felt like a complete idiot? This was one of those times!

PAGE LAYOUT

The next stage was to get the instrumental parts nicely laid out so they could be easily read by the musicians. Notator lets you choose the number of bars of music to be printed on each line. This is a good starting point, but doesn't take the number of notes in each bar into account. Sometimes there's only one note, but there could also be dozens. In the latter case the music could become unreadable, with the notes crammed tightly together. Notator's print preview mode gives you a rough representation of the whole page layout and lets you quickly shuffle bars from one line to another until the layout looks right. The performance markings don't always move correctly though, so a little editing is also sometimes necessary. In spite of this the feature is extremely useful, avoiding the need for lots of trial printouts.

One essential task was to print copyright notices on each sheet. After two months of hard work we wanted to discourage people from simply photocopying it. Unfortunately, Notator doesn't include a copyright symbol, not even in the supplementary symbol set, so we had to use straight text. I had problems positioning it too - each instrumental part is spread over two pages, but didn't fill the second page. Notator wouldn't let me put the text at the very bottom of the second page - it had



to go under the last line of music, which was a pity.

So, with everything else we printed out some sample parts on the IBM ProPrinter and Derek took them away to try out with the St. Martin team band. He returned with bad news. The music was too small for the musicians to read comfortably. **Assassinateggggghhhhh!**

We'd already noticed that Notator produces different sized output on different makes of printers, but none of ours (Star, IBM, or Panasonic) produced quite the required size. For experimentation we then borrowed an IBM 4019 laser printer from a friend, and once again went through the process of finding the correct printer adaptation. This time we were lucky - although because didn't have an IBM 4019 adaptation, it did have one for a Hewlett Packard Laserjet. The 4019 has an HP Laserjet emulator mode, and the adaptation worked OK with this.

We then had to rethink the fonts, as to fully exploit the laser printer we needed 300dpi fonts. These take up a lot of memory in the ST, and were enough when we tried to load 300dpi fonts AND the full score we got the dreaded "No Memory" message. However, there was enough available for handling individual instrumental parts at 300dpi.



authors left out such a basic requirement. Perhaps there's some arcane way of doing it we haven't discovered yet?

The brilliant idea of transferring a .IMG file from Notator to the TimeWorks desktop publishing package and adding the text there failed when TimeWorks wouldn't read Notator's .IMG files for some unattractively arcane. In desperation we settled for a very messy two-pass printing approach. We printed the text+music scores down the left-hand side of the page with TimeWorks, then put the paper through the printer again and printed the score (with a wide left-hand margin) using Notator. Hopefully the staves lined up with their associated text. At the time of writing we still haven't perfected this, but we're nearly there and should be able to produce the final master sheets soon.

THE IBM TOUCH

A few quick tests showed the IBM laser printer produced superb quality output at the right size. After a little re-editing of the layout we tried to print the first instrumental part. And guess what? Our page of output was far too big for the 8000's memory - it only had 512K, which was fine for general use but not enough for full page graphics at 300dpi! It's responsible up to 3.5MB, but we weren't about to spend the various money required for this. Was there an evil in the hand?

After more fiddle-fiddling we decided it might be possible to run the laser printer at 180dpi resolution, using Notator's 180dpi fonts. We even found an HP Laserjet printer adaptation ready-made-to-do this. And it worked! True, the printer wasn't as nice as 300dpi, but it was the right size and perfectly usable. At last, we were getting somewhere. But there was still a slight snag. Notator limited us printing each page TWICE and sometimes there is a couple of blank sheets for good measure - that's four pages for every one we requested! We knew the printer was OK, as it worked fine with other software. The software supplier's help line people are now investigating, but we don't have an answer yet.

It was now time to solve the two problems with the musician's score. How could we format and size it so it fitted onto an A4 page and still remain readable, and also position the instrumental staves in their traditional places? We didn't want to use larger size paper so that left only two options - squash the staves closer together or make the printed physically smaller somehow. The first option is easy with Notator: using the mouse you just drag each staff in the required direction from the one above it. We tried this, but on printed the page looked unacceptably crumpled. So, it had to be smaller output (after we'd spend ages making it bigger for the instrument parts!).

Notator has a "miniaturize" setting, which reduces the size of any or all staves to about half size. Using this the score fitted

nicely onto A4 with room to spare. But I thought it was too small to be useful. Derek soon dispelled these fears however, saying it was perfectly adequate for conducting lines. Problem solved.

The instrument name problem was harder to crack.

Notator has a margin facility so you can leave blank space on the left of the staves, but there doesn't seem to be an obvious way of putting text into it. As with the copyright symbol problem I find it very hard to believe that Notator's

PRACTICALITIES

that now we have a new set of problems - how to produce something printed from the masters. Because, as before, we see one as a music stand, they have to be bound together so they don't fly about or get out of sequence. Each instrumental part is two pages long, so the obvious solution is to photograph the A4 masters side-by-side onto an A2 sheet, then fold it in half to make a two page A4 booklet.

The musician's score is rather more difficult. It's two pages long so we'll have to photograph pairs of A4 masters onto A2 sheets, fold them down the middle, then staple them together to make a two page A4 book. We're also including a title page produced with TimeWorks to add the finishing touch. To complete the package the scores and parts will be put into a new plastic wallet to ensure everything stays in good condition when out in use.

We're now forming a music publishing company, previously called Albatross Music, to market the finished product and set about to establish bands liberty to be interested in adding The Albatross to their repertoire. In the highly unlikely event that anyone reading this would like more details, please contact Derek West on 0480 218025.

So, Notator and the ST finally proved themselves up to the task we set them. Many of the problems we hit were of our own making, but we were still a little surprised at some of the generally minor deficiencies we found in Notator. Just goes to show - you have to use a software package on REISA work to find its limitations.

It's taken many months of hard work to get to this stage, and all we need now is to sell a few copies of the music so Gerin's creation can get the public performance it deserves. If I'm happy if I cover our costs. We might even make a profit, but I'd believe that when I see it!

HAVE YOU GOT YOURS YET?

THESE GAMES HAVE BEEN WRITTEN FOR YOU
GIVE THE WRITERS YOUR SUPPORT NOW

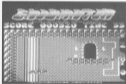
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PAGE 6 is proud to be able to bring you these two superb new releases for the XL/XE. There are still a number of programs being released for the XL/XE but we have always been extremely selective so you can be sure that our programs from PAGE 6 are of the highest standard. ENIGMATIX is the first major program from a British programmer for some time and we are proud to make it available.

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**A BRAND NEW XL/XE ROM CARTRIDGE!
EXCLUSIVE TO PAGE 6!**

HYPNOTIC LAND



Yes, believe it or not, we have tracked down a brand new ROM CARTRIDGE for the XL/XE from Limasoft in Italy who have produced this in conjunction with Atari Italy.

HYPNOTIC LAND is a version of the massive AT 101 FLAK - a highly addictive, highly entertaining game that will challenge you to complete the first few levels and have you coming back for more - again and again!

The aim in HYPNOTIC LAND is to redirect mineral elements in the form of coloured balls into the corresponding coloured cup at the end of a ramp. To do this you must place arrows on the ramp to redirect a ball into an adjacent column. Remember to only put green balls into the green cup and so on. It seems easy but once you have mastered the first level, some disgusting monsters start to appear to try and steal the balls. You can shoot them with the joystick but don't forget you also have to keep one eye on the ramp! Sometimes special shining extra-balls will appear which can go in any cup and give bonus points.

HYPNOTIC LAND requires skill, concentration and quick reflexes. Can you manage it? Like all the great classics a simple concept that has provided the foundation for a stunning and addictive computer game.

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THE TAIL OF BETA LYRAE

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