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April/May

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ARE BECOMES CITY

In issue 47 you mentioned that the **ARE BECOMES CITY BECOMES** may have closed down but I'm happy to say that it has just gone through a complete change. It's now called **THE CITY** and is available on 081 582 1007. The City runs 24 hours a day at fixed rates from 800 to 2400.

The City mainly supports the Atari 8-bit with a small but growing ST section. Atari 8-bit users should like the fact that the Beasid runs in two 40 column mode in **ATARI** or **ASCII** with the ability to switch to 60-column mode for ST users.

Since the change, things have gone pretty quiet, and a mention in your excellent magazine would help a lot.

James Beakley
Ozzy, The City

1020 PROBLEMS

I recently purchased The Designers Panel for use with my 1020 printer. I thought this was a graphics printer but when I try to print out my own pictures or the screens on The Designers Panel all that comes out is numbers, letters and symbols. In my 1020 a graphics printer and if we how do I print out my pictures and screens on The Designers Panel? I have tried changing the filename from **SALENS.PRI** to **SALENG.PIC** but it doesn't work. Also can you tell me where I can get more paper rolls for my printer.

Steven Jones
Anslow

The 1020 is a graphics printer but, like any printer, it will not

print out graphics without a software based driver for the printer. My published work is done in issue 47 which will print out 102 printer graphics but I don't think it will work with The Designers Panel. The program is being altered each week/weekly updates it to be an on card package when in fact it is a programming language. What you can create graphics with The Designers Panel, it does in fact write a program to create the graphics rather than create a file which is, effectively, a screen dump. Unless the program contains an option to save screens as standard pictures I doubt that you'll be able to use your 1020 for the purpose you outline. It will certainly dump other picture files though.

PRINTING QUESTIONS

Can you help me by answering the following questions: 1) Can the Atari/Write word processor print out documents on a 1020 printer? 2) Is the 1020 printer an Epson compatible? 3) Do Beasid still sell and if we increased speed cassette modification for the 00110?

Matthew Penhance
Leeds

If you'd No. 1 No. but David Park is now selling this modification, check his column in this issue.

1020 PRINTER RIBBONS

I am writing to let readers know that if they are in need of a replacement ribbon for the **ATARI 1020**, a direct replacement can be found in **TASOT** stores. The ribbon is in fact for their own **IMP 110** but it fits the

1020 exactly and gives a better quality print with no smudge characters. It is steady in design and the ribbon lasts for 1 million characters. The price of £8.99 may seem a little steep but it is a good buy.

M. Preston
Widnes, Merseyside

62 SECTOR PICTURES

I am having trouble with **AtariArtist**. My problem is that I cannot seem to save my pictures as 62 sector compressed files as required by the 1020 screen dump listing on page 90 of issue 47. Please could you tell me if it is possible.

Peter Tonge,
Leeds

Do good looking in the world, it isn't there! When you have a picture on screen, just press the **INSERT** key and the picture will be saved to disk for transfer to a 62 sector file called **PICTURE**. You must use **DISK** to transfer this otherwise when you save again the original picture will be overwritten. Pressing the **DELETE** key when in Disc mode will enable a 62 sector picture to be loaded into **AtariArtist**.

PET TO ATARI

Please could you help me with a problem I have in a program that I am transferring from a **PET** to my **Atari**. The program calls for the file **IMP** **FRAN-INT 1001.A** but my computer won't accept it. I have discovered that the **ATARI** won't accept some **DISKIO** functions so how can I get round this line?

Ken Hughes,
Leeds

I don't know much about programs running on the **PET** but support the best way to overcome this is to put the function in a sub-routine and use a variable in place of the **DISKIO** something like this (the true name

bits can be assigned.
10 PPS-280
280 A-INTL309ALC

Whenever you need to use the features in the program use CODES IN PPS as noted.

PRINTERS ...

I have an IBM Microline 80A which can operate in both serial and parallel modes. Please could you tell me which is the best mode to use, what baud rate is best and what interface, if any, I would need.

John Hickey,
Gwent

... I have acquired a BROTHERS M1000 printer without an interface. Is this compatible and, if so, where can I purchase an interface?

S. Piggot,
Croyley

... I have an Ekita 8004 electric typewriter. While reading the instructions I found that I could also buy an interface to use the typewriter as a printer. The instructions said that the typewriter is compatible with any home computer. I have rung around many dealers but none have of this interface. Where can I buy one? Also are there any word processing programs available on cassette or will I have to buy a disk drive?

Wynn Wynn
Tarnworth

Always choose a printer that works in Centronics Parallel mode for use with the Amstruc. It is possible to use a printer in serial mode but it requires an RS232C interface, serial drive or software and will be quite slow. Provided the printer has a standard Centronics port, you should have no problems using it. You will require an interface and the one we recommend is the ICD Printer Connection available from Grants International or you could try Derek Piers at his store in Centronics Interface. Both these just advertise in

ADP ADAM LINK. The Brother WT000 should work without problem.

The interface for the typewriter is none of a problem. Many electric typewriters have this facility but you need to obtain the interface from the minor features or his agent. All this interface does is turn the paper roller into a Centronics printer and you will still need a further interface as most closed circuit, or attach it to your Amstruc.

The only cassette based word processor we know of is sold by Derek Piers but it is, as far as we are aware, available only in conjunction with the high-speed cassette magnetisation that he sells. If you wish to do some processing without a disk drive there are several certainly even more this high-speed magnetisation as it will save you a considerable amount of time in writing and loading documents.

ON USING THE XP301 AND TURBO BASIC

Here are some notes about the XP301 disk drive and Turbo Basic which I have discovered and have not seen mentioned elsewhere.

Firstly the XP301. To regulate the revolution speed of the disk, the drive uses the timing hole, the small hole on the disk near the big central hub hole. The drive has a LED sensor and sensor over the hole, the 8008 has a hole in the drive mechanism for an LED but no LED. The signal of this is that the XP301 needs a potentiometer to control the speed which is controlled by the processor chip. So to change the speed would require a different ROM chip which would make the processor spin the drive at 200 rpm. The advantage is that the speed does not differ off the normal speed like the 1000.

Another disadvantage is that the XP301 will not see the reverse side of a disk because the timing hole is on the other side of the hub hole when the disk is flipped over. When I first

tried to format the reverse side of a disk I thought that the drive was malfunctioning.

The XP301 uses a different size than the 2000 (with 20 Doublets, etc.) when formatting a disk in true double density (200 bytes per sector). I have listed the number of revolutions needed to read all the 16 sectors on a track and rate at which the drive reads data from the disk.

XP301 Normal slow
18 revolutions 1.50 per sec
XP301 Sector slow
9 revolutions 0.50 per sec
1000 Normal slow
17 revolutions 1.25 per sec
1000 Sector slow
7 revolutions 3.000 per sec

The different drives do not matter until a disk is swapped from one drive to another. 1000 sector drive disks are very slow when in the XP301 drive.

I have heard about people replacing the 80 track 3 1/2" disk drive mechanism in the XP301 with an 80 track 3 1/2" disk drive mechanism so I decided to have a go. I took the internal drive out of my ST which is 80 track and double sided. The ST drive has a 54 pin IDC connector and a 4 pin power connector. The XP301 has a 34 pin PCB connector and a 4 pin power connector. I made an adaptor to connect the XP301 PCB to the ST's IDC and attached the ST drive to the XP301. The drive worked but with one problem. I was able to format a disk with 80 tracks and read and write to it. However it only formatted one side. I do not know if this is because of incompatibility between the ST drive mechanism and the XP301 or if my adaptor had a bad connection.

Now for Turbo Basic. I have found some bugs. Printing a string that ends in CONTROL-B has the effect of having a colon/zero at the end of the string. The RELOAD command does not work if the DOS is MTDOS or Spantastic X but you can use X80-80 instead in these

DOSes. Most commands work in upper case or lower case but commands with non alphabetical characters must be in upper case, e.g. WPU and MOVE.

Turbo Basic allows up to 255 variables. An absolute bug occurs however when you have a large program with around 100 or more variables. If about the 150th Variable in a string it will cause an error 8. The string can be READ, PRINT and given values but not INPUT. I found that if I list the program and then ENTER in this rearranges the variable table and the string can be INPUTted but another string may then be affected.

Finally some notes that I have not seen mentioned elsewhere. PUT, GET, WPUT, WGET can be used in get or put mode then one number if you use comma, e.g. PUT #1,X,Y,Z. Turbo commands can be abbreviated, e.g. ERASE can be ER or ERN; SPANFORM can be SPAN. The Turbo Support Disk says that ROT can be used from within REPEAT or WHILE loops. This is so but it will error if you try to complete the program.

Richard Lewis,
Chichester

Thanks for the useful information, Richard, especially using the ST disk drive with the XP. Just one point which is raised by your remarks about formatting the reverse side of a disk and finding that the ST drive would format only one single density. The XP301 needs to be configured in order it is double density drive and it appears that you have not done this. You may need a command to the drive to tell it to format and use both sides. WTDOS contains an explanation of this and can easily be configured to use the XP301 in double sided mode when desiring you. You should also be able to read the appropriate command in about half an hour or so more time. Perhaps someone else could advise? If you do this I am sure that the ST drive will be formatted in double density.

LYNX

HANDHELD HALF DOZEN

At last a number of new games have been released for the Lynx. John Sweeney has been playing with the latest

XENOPHOBE

Armed with only a Phaser you must set off to clear 20 space stations of Xenos. These come in various shapes and sizes. Pods - destroy them before they hatch. Crawlers attack in droves and latch onto your body. Ballistoids level you over. Tentacles reach out and grab you. Secteraphylls jump on you or spit at you, and Protos not only hide in doorways and passages you, they also lay new eggs. Each station has a number of 8-room levels linked by elevators, and fortunately you will find some useful tools along the way - better weapons, bombs, jet-packs, fire extinguishers, keys, etc. - as well as machines to help you in your fight, e.g. a self-destruct to blow up the station if you are losing. The items add an arcade adventure aspect to the game making it above the general mindless-blasting genre.

You get four lives with 2000 hit points each or you can tick up with up to three other Lynxes to give yourself more chance of success. Since you are racing against the clock, as well as the single player version to HANDED reached station 4 after a few tries, but it was getting difficult as the plane is on fire - you really need someone else to wield the fire extinguisher as you shoot the badfellas.

A new twist on the multi-player version is that one player can choose to be a Mediapillar and fight the others for itself the better equipped.

The only criticism of this excellent shoot-em-up is that you can only start from the beginning - I can't see myself ever reaching level 20 by myself so I don't suppose I will ever see the "gross, disgusting and obnoxiously despicable Mother Proctor". If any of this seems vaguely familiar then, yes, I reckon the authors see through Alien a few times.



MS.PACMAN

A good traditional arcade game - it looks just the same on the Lynx as it did on my old 808 about a century ago! Mouths of the pellets, dodge all the ghosts - I sure I don't need to tell you how Pacman works! It seems slightly harder (maybe it is a little faster) and you get less lives, also there is no Telly. But that may level. On the other hand you get a set of new larger

monsters as well making a total of 20 different monsters. To help you finish the new monsters there are lightning bolts to give you a speed-up if you are about to be caught. You can choose large or small monsters and you can start at any level up to the ultimate level 70. Special effects and various interrupts are all faithfully recreated to give an excellent classic arcade game.



KLAX

A brilliant conversion of the highly popular arcade game. Just in case you haven't seen it yet, coloured tiles roll towards you along the ramps. You must catch all of them to your paddle and drop them into the loading bins at the front of the screen. Each of the bins and your paddle can hold five tiles. A KLAX is a row of three tiles of the same colour horizontally, vertically or diagonally. KLAXs disappear immediately to make room for more tiles - if you hit more than a few they drop off the end of the ramps or if all your loading bins get full then you are dead.

At the beginning of each WORM of tiles you are given an objective, e.g. score 100000 points, make 5-diagonal lines, catch 100 tiles, which you must achieve to reach the next level.

It sounds ridiculously simple, but when the tiles start speeding up I can assure you it is a real challenge, and a highly addictive one. You can choose between Easy, Medium and Hard and you can start at level 1, 5 or 11. There are ways to get you up to the higher levels more quickly. For example if you make a "Big X" five diagonals of five simultaneously - usually only possible by dropping a "wild tile" into the central on level 1 - you get a seven-warp straight to level 50. Certain other levels give you a standard warp - the ability to jump 10 levels. These options mean that you can make him good, you see you can get to a challenging level very quickly!

The sound effects and speech have all been perfectly implemented on this Lynx version. A must for all arcade gamers!

ROADBLASTERS

Fasten your seatbelts, put your feet down and get a good grip on the trigger! To save the world you must beat the Death Squad in a road rally across the nuclear wastes, mannaed by deadly mutants, cancer towers and oil slicks. Blocked by scores of enemy cars, and desperately trying to collect enough fuel to see you to the next checkpoint.

Your basic tactic will take you out most of the enemy cars, and a robot jet drops more powerful weapons for you to use from time to time, such as Cluster Missiles which destroy everything for miles around!

If you go too fast you will crash into the slower cars in front of you - if you go too slowly you will run out of fuel. Coasting just wastes time - you get instant repairs! Keeping your trigger finger down may clear the road ahead effectively, but you won't score very much as points are awarded with a multiplier based on your shooting accuracy - a nice feature!

Your objective is to complete level 30, you can start on level 1, 4 or 11 and skips other certain levels while you skip a few or several levels (depending on your confidence) to help you get there.

The only slight problem is that at high speeds the screen is a little blurred and it is not easy to make out what is ahead of you. Apart from that it is an excellent Overlander-style race/shoot arcade game.

ZARLOR MERCENARY

All computers have had a certainly exciting character about em-up - here is the first one for the World Bigger than the average in that the screen scrolls a bit in horizontally each way as well. Zarlur Mercenary has all the usual features: waves of alien ships; lots of general targets for extra points; bonuses; extra big extra powerful end of level bonuses; Power Ups in gaps; end of level Shups to buy Power Ups; Extra Ship, Speed Up, Laser, Mega Bomb, Wing Cannon, Side Missiles, Super Shield, Invulnerability, Power Shots, Auto Fire, Backstabbers.

The Levels are an Action B and hence is on anything that moves. Mega Bombs are on the Option 1 feature and are worth waiting for the end-of-level bonuses.

There are six levels to fight and they get hard pretty quickly. Unfortunately you can only start at level 1. Fortunately you can get up to three friends to play in their Zlayers and help you - I suspect that without some help level 6 is going to be right on impossible! But watch out for anyone trying a Backstabber - I can ONLY be used against other players!

If it moves, shoot it. If it doesn't move, shoot it anyway! Great game.

SLIME WORLD

The best of the recent releases, Todd's Adventures in Slime World is a mix of arcade adventure, maze game, platform game and lots of other ingredients. Armed with only your trusty water pistol you have been abandoned on the grass, and repulsive Slime World. To survive you must reach the escape capsule at the end of an enormous maze populated by such delightful creatures as Maggots, Wood-Groceries, Old Snails, Devils, Headcrabbers, and Tarp-Scooters! Slime drops from the ceiling, pools of slime block your way, slime waterfalls suck you, the monsters explode into hordes of even more Maggots! that stick to you - all these things slowly turn you green. Touching monsters speed up

the process. Luckily for you there are pools of water occasionally so that you can clean off the slime, and avoid monsters off if you turn completely green you explode!

Beware when killing evil monsters - evil buggers come instant death!

Along the way, you will find lots of help: Super Slime Green (instant cleaning), Gun Powerups, Slime Darts (that turn the enemy to where you can kill or avoid them), Slime Shields, Mega Bombs (blow whole rooms), Chomsters (eat Slime Pools to water) and Jet Packs, but watch out for enemy barriers that destroy all your tools!

Plus it keeps an air-tension map of your current area so that you can spot which way to try, and in your search for the surface - most of the mazes are relatively straight forward - as long as you keep reaching new rooms you are probably going in the right direction - though you may have missed some of the shortcuts - there are hidden doors all over the place!

There are actually six complete games in Slime World:

- 1) BASIC: an 'easy' introductory maze.
- 2) EXPLORATION: a larger, harder maze to practice your skills in.
- 3) ACTION: an arcade style version, less problems - more fighting.
- 4) SUSPENSE: Just 2 minutes to get out unless you can find the mushrooms which extend the time.
- 5) LOGIC: each room is a separate puzzle - over 50 of them - and your gun doesn't work!
- 6) ACADEM: The standard one of all!

In games 1-5 there are regular restart points after each few rooms - just press PAUSE and you get a ride which you can use to restart the game at that point next time you have changed your location! But game 6 has no restart - what you really need here is some help - you can play it up to 7 more layers - watch out for monsters floating Slime Green and using them on YOU!

The mazes are different in each game and are composed fully of expert puzzles which you have to solve by dodging, blasting or clever use of your tools - this is TERRY, VERY addictive - best game on the Lynx so far - watch out and buy it NOW!

SUMMARY

As well as the original Gold Lightning, California Games, Chip's Challenge, Gates of Babiloon and Electrotop, there are now Gauntlet III, Paperboy, Rampage, Straight, Rygar, and Redneck only, ght is the six mentioned above. With AM, MFL, Superhero!, Vendicator, World Cup Soccer, Tournament Cyberball and Ninja Gaiden all scheduled to be available by the time you read this, the Lynx is becoming a very versatile machine with a range of games to suit all tastes.

The games are generally of a very high quality and the Lynx is still the only high quality, robust, portable machine on the market, together with a 25% price reduction in six months back it is now listed at £129! This makes the Lynx a superb machine if you like playing anywhere, any time (and have plenty of rechargeable batteries!)

By the time you read this you should also be able to try a 'word game' Lynx for just 100 which is basically the same pack without California Games. Atari have also announced a new range of peripherals for the Lynx including a new cigarette lighter power adaptor for £24.95, a 'Data Disc' (rivaling at £5.95), a Lynx kit case for £24.95 and a Lynx pouch for £5.95. The cases allow storage of software along with the machine.

My thanks go to The Computer Store in Nottingham (Great news!) for helping me try out the multi-player versions.

DRAGON CASTLE



by Dave Stubbs

Tortlet the white knight has been sent by King Atlas to the local boarding school for damsels in distress. A particularly bad infestation of Dragons-inchicutes is causing the fledgling princesses to become suicidal. Tortlet must keep the fiery fiend under lock and key by placing four keys in the east alcove of the castle wall. Successful suicides make an awful mess on the courtyard and it would be very bad form if the

knight let more than three ladies perish! Catching them in open arms is the best way, catching them on the head gives our hero terminal migraine! White knights only have three lives! It's all a waste of time anyway because the cheap padlocks don't last and soon the suicides are more frequent. It keeps a knight off the streets though!

PLAYING DRAGON CASTLE

Use a joystick to port one to control the knight. Pressing the fire button will grab keys and catch falling ladies. Up and down will let the knight enter the castle doors.

Dave Stubbs is 48 years old and is a Photographer by profession. His comments on this, his first game, are as follows.

Dragon Castle is my first try at a complete game. I've had my 8008, for nearly two years and I've had a lot of fun exploring the world of AT&T computing. An editorial about reader participation prompted me to form a got My 8008, is a bag filled, etc. I could see I do most of my programming with the fabulous Turbo Basic loader. When I read the game in Atari lands my heart sank at the slow action, but every problem is an opportunity in disguise! A crash course on VHS saved the day and taught me a lot! A VHS reads the joystick input and updates the player's horizontal position. It also checks a flag and moves the falling damsel down her PMG stripe. A Display list interrupt is used for the multi-colored background to the graphics mode 12 screen. The display list is modified to give the text lines at the bottom of the display. Two small machine code routines are used. One moves blocks of data and is used to print the PMG graphics and move the characters out to RAM. The second routine fills a selected area of RAM with zeros and is used to erase PMG characters.

XE

ren Wilda

loaded only when requested and from then on you can access any DOS 2.0 disk by using the device name A: instead of D:. All DOS functions except those that use the new file management system can be used with DOS 2.X disks. DOS 2 has been left in the cold although there is a file called "DOS2.XE.DOS" on the DOS disk to convert DOS 2 disks to DOS XE format.

The Machine Language Access Menu must be known for programmers and power users. Options include renaming, loading and executing binary files, saving memory in binary format, expanding memory in binary files and changing contents of RAM. All entries are made in hexadecimal or in octal.

Also in this menu are the files listing and working directory options.

In the third menu - The system function menu, apart from the "Allow DOS 2.X access" option, you can use a redesigned version of DOS-XE, duplicate an entire disk, set current date and execute batch files.

Batch files are a fast way of executing a series of DOS XE commands previously stored on disk and DOS XE has several features to simplify their use. A batch facility allows you to enter several commands on one line but any options which require function key presses to continue, i.e. "PRESS SCROLL TO COPY FILES" cannot be used this way. The full stop "." works like the escape key which moves you from a menu to the main screen. Also because DOS XE examines only the first letter of each entry on a line you can use explanatory terms like Filenames or Systems instead of F or S. Commands developed by users and finally the colon/asterisk mark works like the DOS statement - anything after it is ignored.

With DOS XE you can now set the current date and it uses the information for the Date created and Date last modified stamps on your files.

```
-----
DATE:08/08/83          TODAY:08/08/83
-----
DOS XE SYSTEM FUNCTION MENU
-----
FILES LISTING          WORKING DIRECTORY
COPYING DIRECTORY
RUN A BATCH FILE      SET CURRENT DATE
-----
INITIALIZE DISK
CREATE DOSX.E SYS FILE
DUPLICATE A DISK
ALLOW DOS 2.X ACCESS
-----
SELECT ITEM OR [ESC]APE FOR MAIN MENU:
-----
```

```
-----
DATE:08/08/83          TODAY:08/08/83
-----
DOS XE FILE ACCESS MENU
-----
FILES LISTING          WORKING DIRECTORY
COPYING DIRECTORY     WH DIRECTORY
UNPROTECT FILES      SELECT DIRECTORY
DELETE FILES          COPY FILE
RENAME FILES          GOTO TO A FILE
CICH A FILE           INITIALIZE DISK
-----
SELECT ITEM OR [ESC]APE FOR MAIN MENU:
-----
```

You can make your own redesigned version of DOS XE with the SETUP.COM program - a binary file loaded from the Machine Language Access menu. With SETUP XE01 you can create ALTERNATE SYS files that initialize the RAMdisk, load the BIOS drivers and activate a basic program. It lets you specify which types of disk drives you have from a choice of the Atari 810, 1050, XPS5 I, 1050E RAMdisk and XPS02 drive. You have done a great deal to make sure existing software will run under DOS XE by keeping directory map and CBI entry (and compatibility with the older DOS 2.X) options.

Software that sends filenames to "IO:FILE" will be interpreted by DOS-XE as "D:\ working directory-FILE".

No documentation is included on disk although the classic DOS XE manual is one of the best

ATAM have ever published with simple information for beginners and serious programmers. The manual gives a complete rundown of the changes to

the NOTE and POINT commands and the new XE functions which make use of the new DOS.

Both DOS XE and its manual were around when Alan UK launched the XPS01 in this country. The fact that the XPS01 has not been available over here for over a year could be due to its use XPS01 mark on the fact that Alan UK, faced with threats of liability under the Trade Description Act (see Page 6 issue 28) decided to pull the plug on what is a really great disk drive.

"The final verdict" - DOS XE is a powerful user friendly DOS. Its ease of use makes it ideal for those who wish to improve their system and first time buyers whilst its power features make it ideal for programmers. Well done Alan! - less we need more software.

I would like to thank ATAM SPAIN for their cooperation - especially for the DOS XE manual and the rest of the page of Anglo-Computer Club. This article is dedicated to those who continue to fight for the best 8088 ever. Keep it up!

TAKE ONE TABLET

Is it worth buying a Touch Tablet? Colin Paine shows you what you can do with one

The Atari Touch Tablet is basically a sleek grey A5 sketch pad with a few extra features. It has a stylus which is a sort of pencil with a button on it for drawing. It also has two large buttons on both sides of it which can act like mouse or, differently from the stylus but too depending on the program. Could it be the perfect tool for graphics?

At one time or another everyone has done some graphics, whether for a program or data, but to produce high quality graphics with a joystick is an easy task. There are some good quality joystick controlled graphics designers around but will a lot of skill be needed to draw from life or copy. A touch tablet makes it a lot easier. How your touch doesn't make so much difference!!

When my Touch Tablet arrived through the post, I ran up to my computer to try it out. I plugged it into joystick port 0 and held the stylus in your own use to draw as it with into the back of it. Then I plugged in my Atari Action cartridge without

reading the manual. After a few seconds I was greeted with the menu. I placed the stylus on the tablet and selected Help. I was told that lifting the stylus off the tablet and pressing the button would take me between the menu and the drawing screen. I returned to the menu, selected draw and went to the drawing screen. I pressed the button and just drew lines all over the screen. It was great, a full-sized every movement I made with the stylus.

I returned to the menu and had a look at the options. The options were Draw, Point, Line, K Line, Keys, Fill, Frame, Box, Circle, Disc, Erase Screen, Storage, Magnify, Mirror, Colour Menu plus brush shapes, colours and patterns at the bottom of the screen. After consulting the manual I discovered that the options could be selected by keyboard or tablet.

I tried out the line a different colours then changed them at the colour menu. I entered the screen then selected DRAW. I was asked if I wanted a horizontal ruler or a vertical or a diagonal or an 'all four way' one. I chose an all four way and drew - it was great! Then I tried my shape with the different colours and patterns. Drawing had never been easier. I then took an A5 picture and decided to trace it. I checked with the manual and discovered that there is a sheet of clear plastic over the top of the Tablet. I removed the plastic and placed my picture on the tablet then I put the plastic back and it held it well so I could trace it without any bother.

NOT SO BIG ON PRINTING

I wanted a printout on my X25A. I searched the menu and used everything. I even put the cursor on top of the Atari logo

TABLE OF TOUCH TABLET BUTTONS

Number returned by STICK(s)	Buttons
14	Pen
11	Left Button
7	Right Button
10	Pen and Left
6	Pen and Right
3	Left and Right
2	All Three



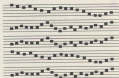
A CHALLENGE!

Colin's use of the Touch Tablet for making random sounds gave us the idea of using the Touch Tablet as a sort of musical instrument. Can anyone write a program to read music from the Touch Tablet? The idea would be to divide the Touch Tablet into five or six horizontal bands, with each band containing the same kind of notes based on a scale close to that upon the pen rests pressed on the tablet; the appropriate note would sound. The length of the note could be determined by how long the pen remained in contact and frequencies could, perhaps, be added by using the buttons on the tablet or on the pen.

Music could be created by producing a template to lay over the tablet containing blocks for each note on its respective channel. Readers could quite easily create templates of their favorite tunes and send them in for publication.

How about it? The program should be relatively easy to write given the information in the two sample programs with this article. Let's hear from you.

Sample template for Touch Tablet Music - needs to be 40 rows



```

04 1 ROW 1 4 SQUARES ROW
05 2 ROW 1 4 SQUARES ROW
06 3 ROW 1 4 SQUARES ROW
07 4 ROW 1 4 SQUARES ROW
08 5 ROW 1 4 SQUARES ROW
09 6 ROW 1 4 SQUARES ROW
10 7 ROW 1 4 SQUARES ROW
11 8 ROW 1 4 SQUARES ROW
12 9 ROW 1 4 SQUARES ROW
13 10 ROW 1 4 SQUARES ROW
14 11 ROW 1 4 SQUARES ROW
15 12 ROW 1 4 SQUARES ROW
16 13 ROW 1 4 SQUARES ROW
17 14 ROW 1 4 SQUARES ROW
18 15 ROW 1 4 SQUARES ROW
19 16 ROW 1 4 SQUARES ROW
20 17 ROW 1 4 SQUARES ROW
21 18 ROW 1 4 SQUARES ROW
22 19 ROW 1 4 SQUARES ROW
23 20 ROW 1 4 SQUARES ROW
24 21 ROW 1 4 SQUARES ROW
25 22 ROW 1 4 SQUARES ROW
26 23 ROW 1 4 SQUARES ROW
27 24 ROW 1 4 SQUARES ROW
28 25 ROW 1 4 SQUARES ROW
29 26 ROW 1 4 SQUARES ROW
30 27 ROW 1 4 SQUARES ROW
31 28 ROW 1 4 SQUARES ROW
32 29 ROW 1 4 SQUARES ROW
33 30 ROW 1 4 SQUARES ROW
34 31 ROW 1 4 SQUARES ROW
35 32 ROW 1 4 SQUARES ROW
36 33 ROW 1 4 SQUARES ROW
37 34 ROW 1 4 SQUARES ROW
38 35 ROW 1 4 SQUARES ROW
39 36 ROW 1 4 SQUARES ROW
40 37 ROW 1 4 SQUARES ROW
41 38 ROW 1 4 SQUARES ROW
42 39 ROW 1 4 SQUARES ROW
43 40 ROW 1 4 SQUARES ROW

```

```

04 1 ROW 1 4 SQUARES ROW
05 2 ROW 1 4 SQUARES ROW
06 3 ROW 1 4 SQUARES ROW
07 4 ROW 1 4 SQUARES ROW
08 5 ROW 1 4 SQUARES ROW
09 6 ROW 1 4 SQUARES ROW
10 7 ROW 1 4 SQUARES ROW
11 8 ROW 1 4 SQUARES ROW
12 9 ROW 1 4 SQUARES ROW
13 10 ROW 1 4 SQUARES ROW
14 11 ROW 1 4 SQUARES ROW
15 12 ROW 1 4 SQUARES ROW
16 13 ROW 1 4 SQUARES ROW
17 14 ROW 1 4 SQUARES ROW
18 15 ROW 1 4 SQUARES ROW
19 16 ROW 1 4 SQUARES ROW
20 17 ROW 1 4 SQUARES ROW
21 18 ROW 1 4 SQUARES ROW
22 19 ROW 1 4 SQUARES ROW
23 20 ROW 1 4 SQUARES ROW
24 21 ROW 1 4 SQUARES ROW
25 22 ROW 1 4 SQUARES ROW
26 23 ROW 1 4 SQUARES ROW
27 24 ROW 1 4 SQUARES ROW
28 25 ROW 1 4 SQUARES ROW
29 26 ROW 1 4 SQUARES ROW
30 27 ROW 1 4 SQUARES ROW
31 28 ROW 1 4 SQUARES ROW
32 29 ROW 1 4 SQUARES ROW
33 30 ROW 1 4 SQUARES ROW
34 31 ROW 1 4 SQUARES ROW
35 32 ROW 1 4 SQUARES ROW
36 33 ROW 1 4 SQUARES ROW
37 34 ROW 1 4 SQUARES ROW
38 35 ROW 1 4 SQUARES ROW
39 36 ROW 1 4 SQUARES ROW
40 37 ROW 1 4 SQUARES ROW
41 38 ROW 1 4 SQUARES ROW
42 39 ROW 1 4 SQUARES ROW
43 40 ROW 1 4 SQUARES ROW

```

and pressed the button. I got a strange surprise! Anyway I couldn't find a printed option, so I turned to my trusty Star Artist 2/4/8 magazine. As I flicked through them I came across just what I wanted in issue 25, a 1929 Star Artist print routine. I saved my picture to disk then started typing out the listing. Two and a half hours later I saved it and ran it. I looked in my picture and with the touch of a button I got printouts in different shades of grey and in different sizes! Unfortunately other printer users will have to find another way because this program only works with IBM.

A short note to other printer users. If you are trying to make your own printer dump, watch out because Star Artist doesn't save it in the usual 62 vector form.

PROGRAMMING? NO PROBS!

I am sure Star Artist won't keep everyone happy for ever, it didn't need to! I turned to basic programming. My personal bill nothing on programming it nor did the second other banks I have. I tried programming and found you can access the table from the BASIC command. The Star Touch Tablet has 256 resistance pads (bits) that the stylus can touch like pencil in both directions making it difficult to use Graphix mode 6. The

X axis takes its readings from Padfield and the Y axis from Padfield. The pen and one-side buttons can be accessed with STERES. These are the table for the buttons and their numbers. For a small graphics-draw program look to Listing 1.

The Tablet doesn't have to be used just for graphics it can be used for sound too - see Listing 2. I am sure you can find many more uses for it too. Just use your imagination there with a program on it.

IS IT WORTH BUYING?

Is it worth buying? It all depends on what you want your Atari for. If you just want to play games then I shouldn't bother because as far as I know there are no commercial games for it. But if you are at the stage of "What do I do next?" with your Atari or if you have any interest in graphics then I would certainly recommend it. No previous knowledge is needed to get going. It costs prior to the light pen - the one thing it stops your arm aching! The only drawback is, if you rest your hand on it while you are drawing it will take readings from your hand not the stylus! I bought it for forty nine pounds but this says if you sleep around you can get it cheaper. As for software there isn't a lot, but making your own programs is not difficult.

PROGRAMMING

WRITING ADVENTURES

TRAVEL

MOVING

In the first article, I looked at the way the rooms of the dungeons were created and gave a few lines of illustrative line code from my "Medusa" adventure; the full listing for which will be given in the next article. In this adventure, a large (800-element) array of mostly reserved names is created. The letter 'Q' is used to denote a solid name (e.g., a wall, floor or ceiling), the number '0' represents a room which is easily passable, while the number '1' signifies a room blocked by a "monster".

The word "monster" is defined to include any obstacle which impedes passage into the room. It might be a fire-breathing dragon; it might be just a fire; it might even be a room with a locked door. When the adventurer tries to enter any room denoted with this symbol '1', a message is given, appropriate to the room, saying that "something will not let me pass", or "I can't do that yet", or words to that effect.

PUZZLES

This introduces the puzzle element. The player has to commit some action which the program recognizes as well done to overcome the "monster". When this happens, the '1' in the room string is replaced by a '0', indicating that free passage is now permitted.

For example, a room sealed by a locked door has a '1' in the room string. If the player picks the key, the "monster" - in this case the locked door - is overcome, and a '0' is placed in the room string.

Normally a "monster" will stay permanently unscathed once the puzzle is solved. However, some adventures (not "Medusa" I assure the "monster" to reappear under certain circumstances, for example after another 20 turns of play.

GO COMMAND

The GO command can similarly be implemented. A player can say GO NORTH, which the program will interpret as NORTH. But GO has another, more complicated use. Suppose you are standing before a building. Visible exits are north and south. You try GO SOUTH, but you find up in a dead end. GO SOUTH takes you to a path, so you try GO BELLING - not listed as an exit - and at once you are in the building.

There are various ways of implementing the GO NORTH-

BELLING command. The easiest is to assign the appropriate room (with a value different from 0) and 1 using "Motions" as the example, and make the program recognize that an attempt to GO in the room is equivalent to a legal move in the same direction. In the example I have just given, GO BELLING would be interpreted as GO WEST for whatever direction the building cell lay in, separate from the visible exits of north and south.

Other values can be used in the string array for different purposes. For example, characters in a 'r' lower case might call up 26 different types of HELP text. However, HELP is implemented differently in "Medusa"; see below.

THE RESTORE COMMAND

The command RESTORE in Atari Basic is one of 165's great beauties to adventure writers (I255 writer Alan Hanks), because it is programmable. The RESTORE command tells the program which line of DATA to read in next, so that RESTORE 1000 means read in DATA from line 1000. Much more important is the line RESTORE Q, which restores data from line Q, the value of Q having been defined by the program elsewhere. Suppose the player is standing in room number 37. Then the simple three-line:

```
Q = 37 : RESTORE 1000 + Q
```

will read the data specific for room 37 from line 1007. If we record a room description as line 1000, then the additional line:

```
READ DESCRIPT: PRINT DESCRIPT:
```

will give us the whole room description.

But we can do even better than that: in line 1007, we can put not only the descriptive data for room 37, but also other data such as an index to the HELP text which is similarly referenced with a RESTORE command. Consider this sequence:

```
Q = 37 : RESTORE 1000 + Q  
READ DESCRIPT: INDEX  
PRINT DESCRIPT  
RESTORE 2000 + INDEX  
PRINT HELPS  
1007 DATA This is a room. 10  
2010 DATA This is help text for room 37
```

Implementation of this sequence gives all the room informa-

SOME PRINTERS CAN BE CHILD'S PLAY...

ES

Part 2 of our series on programming your own adventures takes us on to the commands needed to start to make things work

tion, and provides access to the HELP text.

Why use `INDEXES` instead of `INDEXES?` for the help text? Usually you need much less help text than is required for every room, so this method has the potential to use space and code more efficiently (machine code programmers used to think indexing will appreciate the benefit, too).

Actually, the `INDEXES` command is very similar to indirect indexing in machine code, when used in this way.

ROOM ATTRIBUTES

I have shown how the `RESTORE` command can be used to index room descriptions and other text for a room. It can also be used to index the attributes of the items in a room. A long list of `DATA` statements will contain the following attributes, or information:

1. The movable item
2. Its state
3. Its location
4. Its link index, whether it links another object.

Let us take an example from "The Maze":

```
3232 DATA BEEPERON,1,10,0
```

When data from line 3232 is read in its entirety, the program knows that there is a beeperon currently in room 101. Its state (0) means that it can be moved (other values here might signify that it could not be moved, that it was too heavy to move, that it won't let me pass or has other special features). The "link-index" is in this example zero, meaning that the beeperon does not connect another object.

by John White

If the "link-index" were non-zero, then its value would point to another object in the same list of `DATA`. Since the object data items begin with line 3200, a value here of 12 would mean that the beeperon was hiding itself, obviously an absurd concept. Suppose that the "link-index" had a value of 20. Then the second object in `DATA` line 3220 will come to light after the `BEEPERON` is examined. Similarly, the second object would point to a third, and so on.

Until the hidden items are exposed, they are assumed to reside in room number 1, a valid room which the player can never visit. Room number zero (0) is assumed to represent the player's pocket, and is also inaccessible to the player.

CONTENTS ARRAY

The list of objects described above tells the program where everything resides at the beginning of the adventure. However, it would be very time consuming to search this list whenever a wanted to display the contents of a room.

Instead, the program additionally keeps a list of the locations of each object. The arrays `CONTEND` and `INDEXO` show where objects are currently contained or hidden. Thus, for the beeperon, `CONTEND(10)=101`, `INDEXO(10)=0`, then the player is holding the beeperon.

The list of objects held by the adventurer is revealed when the player types an `INVENTORY` (which can be abbreviated to "I"). Most adventures, including "The Maze", limit the number of objects which the adventurer can hold at any one time.

FLEXIBILITY

This system of setting up an adventure is amenable to easy modification. Lists of `DATA` are set up to display the attributes for each room, and for the rooms contents, each `DATA` list is ended by "-1" as an end-of-data marker, so that programs keeping track of the items could flag the "-1" marker.

It is therefore very easy to create a new adventure, essentially just by altering the `DATA` statements (but see the next section).

ROOM SPECIFICS

In any adventure, there will always be some actions specific to certain rooms - killing "monsters" is an obvious example. Again, the code for this can be organized according to the room number, using the programmer's coordinate-programmable `GOTO` and `GOSUB` commands, as in:

```
G=ROOM+room*10:GOSUB G
```

Use of the expression "ROOM+room*10" ensures that, from line 3200 onwards, there are up to ten lines of BASIC code

available to deal with the specific problems of every room. Usually the line `15000 = room` will simply say RETURN - an action is required. For room-specific code can be incorporated where required, and this will be the hardest part to manage when a new adventure is written.

THE PARSER

The parser is the input routine which handles the player's typed instructions. Normally it will deal with two-key words, a verb and a noun as in `OPEN DOOR`.

There has been an increasing tendency in modern adventures to market sophisticated parsers as sales gimmicks. I use the word "gimmick" advisedly, since no serious adventurer will usually enter more than two word commands (if you doubt this, look at the *Wizard's* page).

The feature of a sophisticated parser is that it can handle a lengthy sentence, such as:

`OPEN THE DOOR THEN KILL THE DRAGON AND
TAKE THE TREASURE.`

This adds up to eleven words. An experienced adventurer would say:

`OPEN DOOR
KILL DRAGON
TAKE TREASURE`

These are the key words which the more sophisticated parser would pick out of the earlier long sentence.

Does it matter? Well, the second method involves typing only six words (instead of eleven). Suppose the door is locked? Then the second method wastes two words of typing, while the first wastes eleven! Clearly, use of the second method is more efficient for the player and saves the programmer the trouble of a great deal of complex coding (see below). *MacMan*, the many-adventure program, uses only a two-word input parser.

It is convenient for the player that a parser should recognize short versions of the most common actions. Thus `GO NORTH` should be replaceable with `NORTH` or even `T`. Again for convenience, the parser should accept the first four letters of any noun or verb to take action. Four letters are just enough to convey unambiguity on virtually all words used in an adventure. Thus it should be possible to abbreviate `ENTER CASTLE` to `ENTE CAST`.

IT

It is another addition of database value to some modern parsers. For example:

`TAKE TREASURE
EXAMINE IT`

This is quite easily coded. Store the last noun used, and replace all occurrences of `IT` with the last noun stored. However, it is possible to imagine ambiguities when using the word `IT`, especially in a long sentence, so that it is probably best avoided. Again, no serious adventurer would use the phrase `IT`. The `IT` routine is not incorporated into *Merlin*.

CODING THE PARSER

There are a number of ways of writing the code for the parser. The most important requirement is to separate the key words from the text string which the player has entered. The key

words will all be separated by spaces in the text string, so the program has only to look for spaces and separate the words parted by them, ignoring the number of spaces.

This is achieved by examining each character of the input string, and saving those which are not spaces as two strings, `VERB` and `NOU` (the verb will always come first).

Such a process can be quite fast in Basic if the player is forced to use a simple two word command sequence separated with a single space. Then we can write:

```
100 SPACE = 32 : FOR K = 1 TO LEN(INPUT)
110 IF INPUT$(K,0) = " " THEN VERB$ =
INPUT$(1,K-1) : NOU$ = INPUT$(K+1, LEN
(INPUT)) : SPACE=1 : POP: GOTO 130
120 NEXT K
130 RETURN
```

Notice the `POP` command, necessary since the program is jumping out of a loop. The `SPACE` flag tells the program whether a space had been detected in the input string.

This simple program is not sufficient to deal with more complicated cases where, for example, the player puts two spaces between the verb and the noun (the above routine would give an inaccurate result for `NOU$`). Thus a better parser would examine every character of the input string before allocating the characters to `VERB` and `NOU$`. The procedure can be quite slow in *Altair Basic*, and *MacMan* uses a machine code routine to separate the verb and the noun.

Playing time and program space are both shortened if all verbs and nouns are truncated to the first four letters, as mentioned previously. Two lines of code will first to pad out short strings to four letters, and then to truncate longer strings to four letters:

```
VERB$(LEN(VERB)-1) = " " : VERB$ =
VERB$(1,4)
NOU$(LEN(NOUB)+1) = " " : NOU$ =
NOU$(1,4)
```

The parser has now managed to separate the player's command into a verb and a noun, both of four letters (including trailing spaces). These are now matched with a `VerbList` and a `NounList` to find the appropriate 'Action Number' and 'Object Number'.

VERB AND NOUN LISTS

The next stage in the parser is to match the verb and noun against the legal lists for both. These will be turned into numbers which provide a more convenient representation for the action and the object.

At initialization, the adventure program will compile a string of verbs with associated 'Action Numbers', and a separate string of nouns with associated 'Object Numbers'. For example, the list of verbs might start off as:

`PUT LIGHT STAIRSROOM...`

Note that each verb contains four letters, padded out where necessary with spaces. The `Action Numbers` provide indices to a list of actions which the program will take. In this example, `GET` and `TAKE` are decreed to have the same meaning with an `Action Number` of 3.

A similar list provides an `Object Number` for the noun. If no match is obtained with the verb, the `Action Number` is zero; if no match is obtained with the noun, the `Object Number` is zero.

The `VerbList` and `Object Number` are subsequently used as indices to find the appropriate action for the described object. For example, `TAKE BOTTLE` might give an `Action Number` of 5 and an `Object Number` of 5. The program then

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executes the basic:

```
GO SUB ACTION - (Action Number) ' 10
```

where the action for taking any object is described in blocks of up to ten lines. The Object Number serves as an index to allow the contents of the array COB and HSB described previously. If the Action Number or Object Number remains zero the match found after the lists have been searched, then an appropriate message should be given:

```
I don't know how to VERB with something.  
I don't know what a NOUN is.
```

How can the VerbsList and NounsList searched Turbo Basic contains the INSTR command, which matches the occurrence of any small string within a larger string. So we could write:

```
X = INSTR(VERBLIST,VERB)  
AN = INSTR(COB(X+LEN(VERB),X+LEN  
(VERB))
```

Just similarly for the Object Number from the NounsList. This provides a fast way of finding the Action Number and Object Number from Turbo Basic. However, Anat Basic lacks the INSTR command, and to mimic INSTR with Basic commands makes for a very slow parser.

The second alternative is to skip along the problem with the high speed of machine code. This is the approach I have used with "Moby" with a routine which scans the INSTR command, and which is such the most flexible solution for general use.

The third alternative is quite well suited to Basic, but does require a little thought. The VerbsList and NounsList are organized alphabetically, and stored as DATA statements (instead of as one small string with one line of Basic DATA statements assigned to every letter of the alphabet. Knowing the first letter of the verb and of the noun, the program searches only those DATA statements which have the same initial letter.

For example, consider the statement EAT FISH. 'E' is the fifth letter of the alphabet. 'F' is the second. If the VerbsList starts at line 10000, then all verbs starting with letter 'E' will be stored in DATA at line 10005. Thus the program has only to search line 10005 for a match. Similarly, if the NounsList starts at line 11000, the program has only to search line 11000 for a match with FISH.

This method was illustrated in Peter Dean's adventure "Ralph's Castle", posted in New Atari User, Issue 54, July 1988.

COMPLEX PARSERS

Sophisticated parsers, for those still interested in them, require more planning. Each of the many words of the input string is matched with the VerbsList and NounsList in that order. Any words not matched at all are simply ignored. At the end of this process, the string should have been broken into a series of constraints:

```
VERB(NOUN) VERB(NOUN) VERB(NOUN) ...
```

Each sequence of VERB-NOUN will be implemented separately. It means proceeds to the verb (assuming it came from the beginning), or if a verb/noun has no matching noun/verb, then an error should be given at that point, after all preceding verb-noun combinations have been executed. For example, the input command:

```
OPEN THE DOOR THEN KILL THE DRAGON AND TAKE  
THE TREASURE (40)
```

will be evaluated as:

```
OPEN - DOOR (succeeded)  
KILL - DRAGON (succeeded)  
TAKE - ??? (no match to noun list, but list not executed).
```

Note that if TREASURE had been spelled TREASUREE, then the sentence would have been executed in full, since only the last four letters are required of a noun than TREASUREE.

MESSAGES

Once again, a general method should be used to create messages. Programmers to machine code will be familiar with the technique. When a message is required to be printed, the appropriate "message number" (MESSAGE) is used as an index to read the DATA. The Basic INSTR command sets the line of DATA to be read, and a general routine prints the message. For example:

```
(MESSAGELIST = 2500) MESSAGE = 10  
RESTORE MESSAGELIST + MESSAGE  
READ MESSAGE: PRINT MESSAGE:  
GOTO DATA This is a message.
```

THE MAIN ROUTINE

The main routine of "Moby", which loops continuously until the adventure is completed or the player runs out of turns, looks like this:

```
GO SUB INTRODUCTION  
GO SUB SETUP MACHINE-CODE ROUTINES  
GO SUB INITIALIZATION  
DO GO SUB ROOM-SPECIFIC DATA  
GO SUB ROOM DESCRIPTION  
GO SUB ROOM CONTENTS  
GO SUB SHOW EXITS FROM ROOM  
GO SUB PARSER  
GO SUB MOVE PLAYER  
IF (no enemy left) THEN EXIT  
ELSE GOTO 100
```

[Note: the above is a simplified version of the actual code. Do not attempt to type it into your computer.]

THE POP COMMAND

Whenever a subroutine is entered, or a FOR-NEXT loop is executed, a Basic software stack is loaded with the address to which the program must return. If the programmer jumps out of a subroutine, or out of a loop, then the stack will not be cleared or its last entry.

This can cause a number of problems. Firstly, the stack may overflow with continued entries, causing it to read with unpredictable results. Secondly, subsequent RETURN or NEXT commands encountered may cause the wrong or no entry point for the program to be taken from the Basic stack.

The way to clear an unwanted stack entry in Basic is with the POP command (see example given above). I have mentioned this since many programs listed in New Atari User do not appear to make use of this technique.

Incidentally, it is very bad practice to jump-out of a sub-routine even with a POP command, since you have to be very careful not to GOTO the middle of another subroutine with previously disastrous results. Nevertheless, use of the GOTO option from "Moby" involves a jump out of a subroutine with a double POP command in order to illustrate the technique.

PERSONAL AUTOBOOT

Do you ever have occasion to require a BASIC program to load and run automatically on boot-up? Would you like the READY prompt to be replaced by your own message while the program is loading? Would you like your disk to display some personal message while booting? This program will give your disks a little more life - in a more professional appearance.

The program is essentially in two parts. The first part creates a message to be displayed while the disk is loading. When the computer boots from a disk, the data in sectors 1-3 is read into memory and the action is to activate the boot process. However, the information on sector 3 is not used, so this sector can be re-written for some user applications, such as our message. Two pointers in sector 1 are changed to invoke the application. This is conventional programming at its best, as the application effectively uses no disk space!

The second part of the program creates an AUTORUN.SYS file which will load and automatically run a BASIC program. An optional message is displayed while the program is loading.

TYPING IT IN

Type in listing 1 and save it as AUTOLOAD.BAS. Check the listing with TYPE 3, in order to verify the data statements will have predictable consequences.

USING AUTOLOAD

Run AUTOLOAD.BAS and you will see a brief explanation of what the program does, followed by a menu of two choices. Choose between (1) the boot-up message or (2) that message plus an AUTOBOOT BASIC program with a further optional message.

After selecting from this menu, you will be prompted to insert the DSK 2 or 2.2 formatted disk, containing 40K/55K, on which you intend to place your message. Note that the new AUTORUN.SYS will replace an AUTORUN.SYS which may already be on your disk. Press START when you have placed your disk in the drive.

If you had chosen (1) from the menu, the screen will clear and you will be prompted to enter your text. Up to 28 characters are allowed and a template is provided for typing, as a guide to the length of your text. Typing is in lower case, no space, SHIFT for upper case as required. You can create a blank screen on boot-up by simply pressing RETURN without typing any text.

You will then be asked for the background screen colour. Valid entries are 0-15, and numbers outside this range are not accepted. Thus enter the background number; here 0 is the valid entry. You can experiment with different combina-

Peter Kirton shows you how to create your own boot-up messages and autorun Basic programs

tions of these two values to arrive at the screen colour which you find the most pleasing.

After creating your text and colour choices, you will be kept informed while the computer goes about adding changes to pointers in sector 1 and building a new sector 3. If you had chosen (1) at the earlier menu, the program will end at this point. When booting from this disk, your message will be displayed, control on the screen, in your chosen screen colour.

If you had chosen (2) from the earlier menu, after the boot message set-up has completed, the screen will clear again. You will be prompted for the name of the BASIC program you wish to maintain. Enter the full file name plus extension, but don't add the ".B" prefix like programs will invent it if you do!

You will then be asked to input the text you wish to display while your program loads. Again, you are allowed up to 28 characters and a template is provided as a guide. The text will be control when it is displayed. Simply press RETURN if no text is required. The computer will keep you informed as the AUTORUN.SYS file is created and written to disk.

All you have to do now is to create that your BASIC program is on the disk to which you have just written your displays. Be fast to see the effect. Note that the computer no longer says "READY" when it obviously can't be due to program loading in progress.

Acknowledgements:

The routine for maintaining a BASIC program is based on a program in *ANALOG* magazine (MAY 1985), written by Cliff Walters. This routine prints "RUN PROGRAM/MENT" before "PROGRAM/MENT" is replaced by your filename on the screen, then puts the Atari into direct mode to enable the user to control. (These commands are not seen as the text database is set to the background function.) The original program then replaced the "RUN/D" with "LOADING" and reset the text database so that "LOADING PROGRAM/MENT" could be seen. My modifications allow a greater control and more flexible text display.

BATTLECRUISER

from the manual, would appear:

ED order file from 05/95 game

document/1.00 Feb 20 2

Feb 95*

Primary target list

This is interpreted as "the ship under the cursor is a battleship under fire from a burst of 10-20 guns, each shell has a 1 in 20 chance of a hit, the shells have a horizontal penetration capability of 20 and a vertical one of 2. The ship being hit received two hits, the first penetrating the left armor bulkhead by the 'x', while the second hit missed off the armor of a main turret.

This sort of thing continues for quite a while with varied messages including torpedo attacks and a couple of "CL strikes", then GAME OVER and a score sheet of losses and damage, and finally a points total for each side.

CALL THE EXPERTS!

It took a chat with an enthusiast of naval wargaming plus the invaluable help of "The Electronic Battlefield", in which one of the best chapters works through the early stages of one of the WW1 scenarios, before I appreciated what Battlecruiser really can do... and what the snags really are.

First the good points, the package does enable you to construct a very wide variety of simulations of the kind played on a wargip with model ships... without the need of a real armada of models (expensive, and all that painting!), without the paraphernalia of rulers, dividers, etc., etc., and without the need for two other people of like interest, one opponent and one umpire, who have the same evening free.

The battle area can be open sea or can have coastal strips and/or islands. Different kinds of engagement are possible: Axis or Allied Transport, a convoy action in which the aim of one side is to get their merchant ships safely off the appropriate edge of the map, Axis or Allied Battlecruiser in which one side scores points by getting merchant ships off the correct map edge and the other where the points come from sinking or damaging opposing ships. Note that in WW1 the German Navy is called Axis and the Royal Navy Allied in WW2 German or Italian ships are available to one side and British or French ships to the other.

Either a computer selected fleet can be used or you can pick your own of up to twenty ships. It is not a limitless choice though, every ship "costs" a certain number of selection points of which you have a limited budget set by the type of game and the handling level chosen; obviously, a powerful but costly "costs" many more points than a destroyer. The data, which you can set, also limits choice as ships are not available before they came into service historically. Ships can be modified and retained, so that if you have, for example, James Fighting Ships of World War II to hand, your fleet can be highly accurate.

When the fleets have been deployed, orders can be given to individual ships or ships can be grouped in divisions and orders given to a whole division. The computer then takes over the tedious part of watching battles using the calculations of rate of movement, rates of turn when a change of course is ordered, and the even longer process of what happens when a salvo is fired, which normally needs much time drawing and calculation of tables. The battle can be paused every two minutes of game time to allow examination of the conditions of your ships and to issue fresh orders if required.

SNAGS?

Looks fine, so what are the snags? The first minor one is that it is assumed that the players have some idea of how different kinds of warship were, or should have been, handled i.e. where do you put battleships, cruisers, etc. in relation to one another. A couple of pages in the manual on naval tactics would not have gone amiss.

The second and major snag is what caused my initial expectations and comes from the relationship of the gun ranges involved to the size of the screen display. The battle area is a 80 x 60 grid, each square being 1000 yards across; the screen display is a 20 x 30 window of the grid. Battleships carried guns with ranges of 40-500 yds, and though engagement at extreme range was uncommon because it was inaccurate, opening fire at ranges of 20-300 - 10,000 yards did happen in fact and does happen in the simulation. This means that the ship firing at one of yours can be two screens away. Add to this the fact that a large battleship scenario can end up spread over different parts of the map, it will be seen that trying to make out what is going on through the small screen window can be a bit difficult. One possibility is to make a 60 x 60 based on a piece of card and one counter, card out-cuts or even very small ship models to mark positions. The basic simulation is, I think, good enough to reconstruct the trouble if you have any interest in naval history to the world wars.

As a bonus the wargaming software mentioned above can be fully improved that for tonight a computer just to have Battlecruiser and Wargip available.

BATTLECRUISER, along with several other computers, is available from Mike Better Software who kindly supplied the review copy.

BATTLECRUISER

Publisher: SSI

Price: £16.95

Available from Mike Better Software

THE TIPSTER



EASTER BONANZA



The Easter bonanza will be here in about a week bearing stinking (uh-huh, ha-ha) great quantities of lovely chocolate and making people feel blessed and, in many young (and not so young) cases, sick before

THOMAS

THOMAS: Well I can't promise that I'll actually wear a fluffy white bunny costume while writing this issue but what I do promise is that The Living Daylights tips that were mentioned last issue will appear this time (honest!) Getting on with the serious stuff we have a good mix of tips which include some for a golden oldie such as Digg (Hunter) and the solution of Stranded. So lets dive in and see what this six foot bunny's brought you.

AUSSIE MEDIATOR

From 12,000 online email codes the answer to a question set you back in November 1987. Chris Day of Ipswich, Australia replies to this question by giving the solution to stage three of Mediator. After you have the banner hung on the telephone and the alarm disarmed. If the bird comes to visit your banner then hang on the highest rate and the bird will fly back.

MAD JAX and BOUNTY BOB

Robert Barber of Wimbarna in Coastal Queensland tells you that Colin Hunt's brings a brace of tips for Mad Jax and Bounty Bob (Strike Back). If when you get near to NEARMS CTR in Mad Jax push up immediately on the joystick and your car will go straight through the wall and onto the next stage. For Bounty Bob use I immediately press 1 and START both together you will skip to level 4. On level 3 immediately after picking up the coffee pot hold down 3 and START and you will skip to level 8.

ENGLAND ... ENGLAND .. JAMES BOND ... JAMES BOND!

For the budding Gattica's and Lineker's and impersonators of "Universal Exports" most well known "sales person" alike, Daniel Kozelas of Kingston brings you tips for World Soccer and The Living Daylights.

First off we have a way to cheat the soccer pundits in **WORLD SOCCER** by turning off Jess MacDonald and just keep hitting the play button. Do this for 2 or 3 seasons then SAVE. When you play most of your men will have increased significantly.

The Living Daylights are no more a problem thanks again to Daniel as he gives us the way to gain your "007" points.

- Level 1: Not available
- Level 2: Night Sights
- Level 3: Hard Hat
- Level 4: Bazooka
- Level 5: Nothing much
- Level 6: Not available
- Level 7: Bazooka
- Level 8: Chatter Blaster

Level 1: Just push the joystick up and right and hold it there. When you reach the point where you can no longer run, move the sights to the bottom of the screen, change your weapon and shoot the ROSS man.

Level 2 and 3: Just activate your special weapon and keep running and jumping. **DO NOT STOP TO SHOOT!**

Level 4: Activate your special weapon and first move your sights to roughly where the milkman is and keep tapping the joystick until you find him. Then shoot the helicopter and immediately run to the end.

Level 5: Move your sights over the source of the balloons and hold down fire.

Level 6: **DOESNT EXIST FOR SOME UNEXPLAINED REASON!**

Level 7: As level 4

Level 8: Turn on your special weapon, run a few steps, turn it off and then run to the end. Grand Whisker will be standing there, shoot him and you have completed the game.

THE VALLEY

Never be lost in The Valley again because Matthew Statham of Leigh-on-Sea brings help to this game. As this game is a CD-ROM lead game lead it up and then call the 1000 so that E-5800. This enables you to cast 3 spells, when your Pxl is at or over 88. You could normally only cast one spell but this allows you to cast three spells.

INTERNATIONAL KARATE

Now all the way from Sweden comes some help for International Karate mastery of Tobias-Johans of Uppsala! Tasty and so here are few easy points are needed for each belt:

- Yellow belt: 4,000 pts.
- Green belt: 12,000 pts.
- Purple belt: 18,000 pts.
- Brown belt: 28,000 pts.
- Black belt: 48,000 pts.

When you get to the tricky bit of jumping and dunking these early receiving things coming at you it is surprisingly easy if you know how. If you are the white player the combination of incoming missiles are:

RIGHT-RIGHT-LEFT-RIGHT-LEFT-LEFT-RIGHT-LEFT

If you are the red player all the directions are reversed.

ONE MAN AND HIS DROID

D. Murphy of Moghul Westside has been busy with his code cracking equipment, so much so that the M.O.D. has issued a national security order on him, but he still manages to struggle as the complete post-wards to One Man and his Droid. So under extreme secrecy help they are:

- | | |
|------------------|---------------|
| 1. NOT AVAILABLE | 11. BEASDE |
| 2. BUBBL | 12. BEMOC |
| 3. WAFB | 13. BING-BOAG |
| 4. FNDGK | 14. HOLECOBAM |
| 5. BEMTC | 15. CLARY KCI |
| 6. DARRD | 16. COMPO |
| 7. MFDQWQMG | 17. CASAM |
| 8. FAWWAF | 18. BISSCOPE |
| 9. ECTOPHASM | 19. COMBUTE |
| 10. BOCOROS | 20. IDACRQDA |

STRANDED SOLUTION

From the home of what are considered great football teams (I can't comment that much as I'm a rugby man myself) comes the solution to STRANDED supplied by Richard Humphreys of Merseyside a long time ago. (see we hadn't forgotten you then).

As always the solution is written backwards so that DEEP LERBO + FRED GERBA.

W-TEG LEUP-N-D-W-N-DBMLC GERT-TEG
ETUHCARAP-D-S-S-E-U-U-S-PMUJ-TEG REBAL-
PMUJ-S-E-N-TEG KCPKCOL-N-W-W-S-TOONS
TOBOR-OG KCOLRIN-K-CP KCOL-PORD LEUP-
LUUP REVEL-N-W-N-W-N-KCP KCOL-E-E-TEG
TUS-W-W-S-S-S-E-E-E-N-W-W- S-S-TEG LAT-
STRO-N-W-W-W-W-N-KCP KCOL-N-PORD LAT-
STRO-HSUP GER-S-E-S-S-TEG YEX-N-N-E-N-HSUP
ETHW-S-S-KCOLNU RQOD ... (much more empty).

Simple huh? Well not every thing in life is as difficult as trying to predict when the England cricket team are going to win a Test match!

SPY HUNTER

From Yasser Maki of Leigh-on-Sea comes a hint for Spy Hunter. When you start off, if you go right so that you're car is off the road and in the trees on the edge then you can stay like this for ever without being killed, it does work because Yasser stayed like it for two hours and then got bored and had to turn the computer off. How can you get bored of Spy Hunter? It's a brilliant game!

THE ZETA BOMB

EXPOSE ON A DISK BONUS

Now to the first and place for a complete expose on the New AMT User Disk Bonus game of Issue 47, namely The Zeta Bomb by Benjamin Arnold of Ebbw, so hold your breath, grab hold of the trigger and here we go. The chess mode is activated by holding down START, SELECT and OPTION which passes the game. Then simply press the START key to release power and you will be able to fly through anything and your fuel will fill up automatically when it runs out. If you want to turn off this mode then it can be switched off with the same procedure.

When you have to kill the missile, you have to shoot all the teeth in his mouth, and also his eye at the top. If the chess mode is off, then all of the "fish" that come out will drain your energy so be careful.

Finally, when you come to the bomb at the end, you will see the letters "EXPLODE IT" on the side (in the playing area) and "DEFLUSE IT WITH AIR" at the bottom. Shoot the letters in the alphabetical order of D I E I P I I T L. Finally one last hint. When you have shot all the letters in the right order, the amount of fuel that you have remaining is added to your score. Therefore to get a maximum score, with the chess mode on, shoot all of the letters apart from the I and then wait until your fuel has run down and then returned to its maximum and then shoot the I and it will make an enormous score possible. With this method Ien has said that he has managed scores in excess of 200000.

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TUTORIAL SUBROUTINES

PROGRAMMING FOR SPECIFIC TASKS

The fundamental program for this month's article was used to me by Miles Thompson, and many thanks go to him for the program and the remainder of the programming principle that it illustrates very effectively. In the last issue the "homework" tutorial showed how a short program could fulfil a specific task, and the database listing here illustrates the same ability of a straightforward program to achieve a dedicated task. The program is not as short as the homework listing, but as you look through it you will see that there is no complex code - in fact when the whole database is typed in the code which handles the data will be quite brief compared to the data itself.

The simplicity of this program stems from the fact that it is targeted at a very specific requirement, the display of one person's catalogue of videotaped films. It is not written as a program which anybody can use to build a database (like the address book database which was covered in three articles back in issues 37 to 39) but as a one user program with the data embedded in it. It is in exactly the opposite end of the scale from the commercial database which you might find on an office PC; here we have a simple listing which effectively and cheaply meets a specific requirement, while the PC version has to be big and powerful to meet a large

variety of requirements and this means it is expensive and not only that but it needs expensive hardware to run on. So if you have a specific requirement that you think your computer could help you with, don't be afraid to try a little basic prog ramming. Your computer is not super intelligent, but it can manipulate and display data and calculate much faster and more accurately than you!

THE DATABASE

The program is very simple. Don't be put off by its length as a lot of the lines are included as examples of data and need not be typed in by you. Just type lines 1 to 118 and 0808 onwards - everything in between is effectively data, and you can make a framework to put the data in with the second short program, List Maker.

Line 10 sets the values of a set of variables which are the line numbers for the later GOSUB commands.

Lines 20 to 28 show a title in rows.

Line 100 calls subroutines at lines 10010, 10011 and 08280 in turn.

Line 110 goes to the line number appropriate to the letter key pressed in the RP subroutines. They are spaced apart by 200 with A at 200, B at 400 and so on. This creates plenty of space for data to be fitted in later.

I have put in some dummy data representative of a list of videotaped films and their run times - don't ask to borrow a copy of the film, the names are fictitious if I have only put data in for letters A,B and C and "Do nothing" statements for D and E. All other letters require filling in with your own data. The format of the data can be changed to suit our requirements as long as each line is only 80 characters long.

I will use C as an example to describe the form of data as it is the only letter for which I have typed in enough data to go onto a second screen.

Line 200 is the REM statement inserted to show where in the listing the C data starts.

Line 208 calls sub-routine BA to draw a line across the screen below the heading.

Lines 210 to 267 are print statements which print single lines of embedded data on the screen. You will notice that the line numbering is not even. I did this deliberately to show that you do not need to maintain an even spacing, but can go back and put new data between the old lines at a later date, or delete lines if you wish. The only limit is a total of 20 lines on one screen.

Line 268 is inserted at the end of a screen of data if there is more of the same letter to follow. It is NOT needed if there are less than 20 records for the letter concerned. All it does is call sub-routine BA to draw a line across the screen, BR to prompt for a

COMMUNICATIONS UPDATE

I have had a letter from James Finlayson, who used to run the Ark Bulletin board. He tells me that the Ark is now called The City and has a new number 021-355-1107. It supports lots of rates from 900 to 2400 and is open 24 hours. It is mainly for B-Bin Users, with a small BT service, to give them your support. There are not too many people putting themselves out for the B-Bin. Ask me from time to time those who do need encouragement if they are to continue phoning away. The Ark Connect Link (in the Page 6 public domain library) is about the best readily available software for that if it contains, and James is currently working on an update.

continued on page 30

key press), **BC** (the key press sub-routine) and **BD** (to call the screen colour and **BD**).

Line 0000 is the **KEM** command to highlight the start of the second screen under the **C** heading.

Line 7000 is the start of **000** (the more data follows in lines 710 and 720).

Line 7300 is the last line of the **C** screen. It calls the sub-routine for the line across the screen to be drawn and to prompt for a letter key to be pressed, and then returns to the main calling routine at line 100. A duplicate of this line must be included at the end of each letter's data.

After the data come a few lines containing simple sub-routines as follows.

BB - Line 30000 - Prompts for a key **A-Z** or space bar to be pressed. The program functions so that a letter key takes you to the data for that letter, while the space bar takes you on to the letter after the one you are currently at (so back to **A** if you are at **Z**).

BB - Line 40000 - Another prompt, this time to press any key. This is used to take you on from one screen of data to the next under the same initial letter.

BA - Line 50000 - Draws a continuous line across the screen.

BF - Line 60000 - Gets data from a key press in the variable **R**.

BB - Lines 10000 to 10000 - Checks the value returned in **R** by the key press sub-routine. If **PC02** (the space bar) has been pressed, so **R** is made equal to the previous **PC01** value plus one, this means an one letter. If **R** is in the range 50 to 115 there is a new one letter has been pressed and this is converted to the upper case equivalent by subtracting 32. If **R** is now out of the range 65 to 80 **A-Z** to **Z** then a number or other key has been pressed so we arbitrarily go to **A**. Finally in line 10000 the new **PC01** value is set equal to **R** before we return to the main part of the program.

BC - Lines 10000 to 10000 - First in line 10000 we reset the graphics mode to 0. Next we set the screen left margin to zero to get 40 characters on a line, and then switch the cursor off. Then in line 10040 we generate a value **COL**, which will give a different screen colour depending on which letter has been selected. Locations 710 and 712 define the screen background and border colour and location 700 defines the brightness of the text. The colour value for 700 is set to be different from the background by four, thus ensuring a satisfactory legible contrast. The final line prints the heading line for the selected letter across the top of the screen.

LINE WRITER

Now we have finished with the main program we will take a look at the short one. This is rather more clever and it writes part of the main program for you, so I hope you have not typed it all in before you read this bit! Back in line 55 I wrote a program that modified itself using the fixed read mode, and here is another application. The program writes lines that form a framework for the data entries for each letter of the alphabet. Let me explain how it works.

Line 00000 sets up a **PC00**-**PC07** loop for the 28 letters of the alphabet.

Lines 00010 to 00040 clear the screen and then display line line 100, 200 and 300 of the main listing followed by **CG00** on a separate line.

Line 00050 moves the cursor to the top of the screen, sets up the fixed read by the **PC00** to location 040 and the border saved read by the **PC07** command. What happens then is the computer writes from the program and reads the lines on the screen into the program in memory. When it gets to the **CG00**

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In line 00050 starts the program again for the next letter of the alphabet.

Once the alphabet is complete the program moves on to line 00060. This just clears the screen and lists the line numbers of the data routine on the screen. Now when we check forward read the line numbers are scanned, but they have no associated data alongside them so they are deleted - the result is a self-deleting program - don't say '87' and see warning - be sure to save the program before you run it so you will have to start again from scratch!

This line writer can be added to the main program and run by a direct command **CG70** (2000) instead of **CG00**. However it is probably safer to run it on its own than **CG00** (the resulting database framework to tape or disk, **LOAD** the main program and finally **ENTER** the framework to combine it with the main program).

I am always pleased to get letters so please write me. I would be particularly pleased to hear of other applications of the fixed read procedure. If you want to write with a copy of about basic programming please include a stamped addressed envelope for a reply.

W000 00

**Ian Finlayson, 60, Roundstone Crescent,
East Preston, West Sussex, BN15 1DQ.**

XL/XE TYPE-IN

SPELLBETTER



This is a simple spelling program for children aged 8-10 approximately. The program also allows adults to create their own spellings files and save them on disk or cassette, so it can be adapted to suit older or younger kids.

This version has a built-in file of 25 records, created with data statements. There are a couple of spare files on this issue's disk - SPARE.BET for the 5 year olds and OLDIES.BET for big people!

PLAYING A GAME

Try your luck against the STARZ in this dice game. Press the joystick (right) to toss your two dice. Then hit 85, 853, 853 or 853 that the STARZ will get a lower score when it tosses its dice. The game ends when either player runs out of money.

The STARZ starts off with 875, but you have to earn your balling money first by getting some spellings right. You'll be shown a sentence with a word blanked out plus 3 spellings of the missing word. Choose between them by pressing 1 or 2 on the keyboard. There is a \$5 reward for each correct answer and there are 15 sentences altogether; you press space to move from one to the next.

by

Ann O'Driscoll

MAKING A NEW FILE

This option allows you to make your own file of 25 new records, to be saved on disk or tape. Each record has 3 parts:

1. A sentence up to 38 letters long about the word being tested.
2. The word itself, using the right spelling key to 22 letters long.
3. The same word, using an incorrect spelling key to 22 letters long.

You get the chance to verify each record after input. When the records are ready you are asked if you want to save them on disk or cassette - just press C or D and follow the on-screen prompts. When saving is complete you are returned to the program menu.

LOADING A FILE

This option allows you to load and use a previously saved file instead of the 25 built-in sentences. Disk users may either input a filename or get a list of files on the disk which use the extension .BET - this extension is given to all the files made with this program.

You are returned to the screen where the file is loaded by; press START at this stage to use the loaded data.

OTHER POINTS

The program only uses 15 out of 25 sentences each time, so the spellings tend to vary for consecutive games.

While the data statements for the built-in records use capital letters, the program can also cope with lower case words which may be more suitable for younger users.

That's all

SPEED ZONE

If you're a speed 'em up fanatic, **SPEED ZONE** is going to go down a treat. It's a no nonsense, Dodge 'em and blast 'em vertical scroller of the traditional variety - no gimmicks, no fluff, just 8000 fast-paced action!

According to Masterbrink, a region of space known as the North-Atlantic Assembly, or "Speedzone" for short, is an area notorious for mysterious disappearances - a sort of Bermuda Triangle in space. A wavy ship has been dispatched on a mission to investigate the problem, but no sooner does it enter the Speedzone than an ominous

ship appears on the long range sensors. Tinned confusion results as enemy vessels, bearing with assassins. There more, and more ... Within a clicky, the enemy ship's defences start to attack and is launched, and guess what's in the cockpit? Trigger finger at the ready ... The battle is on!

As you'd expect, the purpose of your mission is simply to blast the ever-present waves of incoming missiles.

They arrive on screens from all angles before lining up to formation and inevitably sweeping increasingly towards you. You can move the vessel in all areas of the playfield but can only shoot upwards. If you fail to avoid collision with an alien your energy level, denoted by a bar at the base of the screen, is considerably reduced. If you run out of energy altogether you lose a life, but fortunately there are ten held in reserve. This double



ended boss technique adds a great deal to the playability rating of Speedzone.

The graphics are quite well done, although they could be a lot better. The background consists of a fairly simple scrolling starscape and a small target symbol, which changes after each stage. On the first level it's a planet for a Pac-Man? and subsequent systems include a US War Police ship and a satellite. The design of alien and the Starfire ship is rather a visual disappointment, especially when

compared with screen shots of the specialised version on the tape. It's a pity that programmers of total concentration always seem to ignore the Starfire's superior capabilities. Sound effects aren't exactly overflowing in abundance but at least they're of a reasonable quality.

If you're looking for another good shoot 'em up to add to your collection, **SPEED ZONE** should be high on the list of possibilities. Minor gripes aside, this is one of Masterbrink's better efforts.

Title: **SPEED ZONE**
Publisher: **Alternative**
Price: **£1.99** cassette
Players: 1
Loading: **3'18"**
Reviewed by **Paul Dixon**



Why the Penguin has a peculiar problem? Well, out for his regular morning stroll, he accidentally falls through a hole in the ice and becomes trapped in an underground mass of freezing currents. He desperately needs you help to escape from the dangers of deep crevasses, low-flying ice blocks and moving icebergs. In case you hadn't guessed, **WINTER WALLY** is a platform game based on Penguin Perry's exploits to avoid an icy fate. The quest is divided into

a series of individual screens and the objective on each is simply to work out the best level usually the only way to negotiate the obstacles with a combination of waddles, bounces and jumps. The hazards require a great degree jumping ability, an accurate sense of timing and in particular a good measure of perseverance. There's a time limit on each screen so you have to be quick too, although you can freeze the action if you want to take a break. Some of the ideas are quite original but the

WINTER WALLY

problems are easily solved by trial and error - especially since an auto-save/load feature allows you to return to the starting level from the title page. At first the game seems quite addictive but the big disappointments come when you complete the ninth screen and simply get transported straight back to the beginning again. There's no on-game sequence and no increase in difficulty on the second cycle - no incentive to play again. The author of Winter Wally - Steve Matthews - was also responsible for Monkey Magic, a game reviewed in the last issue and also published by Alternative Software. Both products share the common characteristic of being good ideas that appear to have not been followed through a rushed implementation. As far as the graphics are concerned, Winter Wally isn't exactly a masterpiece

piece of visual engineering but its clear and colorful screen designs are no worse than those of other budget games I could mention. The sound, however, is fairly but adequate.

It's a shame that Winter Wally wasn't developed into a comprehensive platform game. As it stands, the game will only appeal to those players who don't expect to progress beyond the ninth screen for a long while to come. If you're the sort of person who can suffer the only fish-berries that without resorting to cheat codes, I'm afraid this one's not going to challenge you at all.

Title: **WINTER WALLY**
Publisher: **Alternative**
Price: **£1.99** cassette
Players: 1
Loading: **3'18"**
Reviewed by **Paul Dixon**

RUFF AND REDDY

RUFF AND REDDY IN THE SPACE ADVENTURE is one of a new series of games from Hi Tec based on famous Hanna-Barbera cartoon characters. With original title material in each short supply, Hi Tec deserves a lot of appreciation for their continuing Atari support.

The space adventure begins when Ruff and Reddy agree to see Professor Pignocchio Puckler Barkat. At least off something goes awfully wrong and the rocket spins wildly out of control, eventually crash-landing on a distant planet inhabited by small blue aliens called 'Lill-Puans'.

These turn out to be anything but friendly and tell Ruff that he won't see Reddy again unless he can rescue all the Lill-Puans who've gone missing while exploring their planet. Without much of a choice, Ruff embarks on the hazardous search to help free his friend.

The game is a multi-screen arcade adventure set over four zones of the alien planet. Each level includes puzzles to solve and varying amounts of alien to collect. There are also bonus objects to watch out for but the important thing is to find all the Lill-Puans before the count-down timer hits zero. Naturally there are plenty of obstacles too and you need to figure out a way of negotiating these without making mistakes. You only have three lives to reverse and when these are gone, you're forced to re-start from the very beginning. The first level is



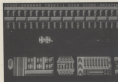
reasonably easy after a bit of experimentation but the subsequent stages become increasingly more complex.

Although the graphics are generally very good, they're not a patch on the 'Conan'-class screen shots shown on the cassette tape - as we all know, there can be no explanation for this other than a lack of programming effort. On the plus side, the joystick response is excellent and page flipping between screens is very fast - as of course it should be it's also very

pleasant to encounter some music and sound effects of the high standard that has been sadly lacking from many incorrect stage offerings.

Ruff and Reddy is a highly addictive, fun and well implemented arcade adventure of the sort that hasn't been seen for far too long. Next issue, we'll take a look at another release in the series, Yag's Great Escape. Keep an eye open for Hong Kong Phooey and Atom Ant - both are said to be coming soon, for your Atari.

Title: **RUFF AND REDDY**
 Publisher: **Hi Tec**
 Price: **\$2.99 cassette**
 Players: **1**
 Loading: **14:30"**
 Reviewed by **Paul Alton**



MAD JAX

you start on route. Underhanded, in addition to travelling at the speed of a learner combine lawnmower driver on a particularly dry day, your vehicle has the considerable disability of a fuel consumption to match - and that's assuming a very leaky fuel tank! It's therefore vitally important to keep an eye open for extra supplies and to be especially careful not to carelessly destroy them. Additional lives and weapons can be obtained similarly by driving over the corresponding symbols. As Red you're armed with a single lead-firing cannon but it can later be upgraded to provide rapid fire in two directions.

Towards the end of each stage the vehicle enters a 'runny' 'yip' section where the aim is to dodge a series of moving factors - there are no advantages here but no fuel supplies either, so if you forget to

fill up to advance then you're heading for disaster! Good luck in reaching the limit of the end of a stage and you'll move onto another where the factors become a little more vicious. The scenery, however, remains almost identical - the graphics and sound is generally more considerable scope for improvement.

Mad Jax is by no means a bad game but it's not as appealing as some of Red Red's better known releases. It starts off rather slowly but gets more interesting in the higher levels, so perseverance is the key to getting your money's worth of enjoyment.

Title: **MAD JAX**
 Publisher: **Byte Back**
 Price: **\$2.99 cassette**
 Players: **1**
 Loading: **16:30"**
 Reviewed by **Paul Alton**

A number in the series of Red Red Software releases from Byte Back. This particular one was due to be called 'Drunk Kameo' but due to software shipped Red Red to the post with a similarly titled package, so it had to be re-named.

MAD JAX is described on the cassette tape as an 'offensive-fun jumping, heart stopping, hard driving, hectic steering wheel war' - but don't get too excited as you could be in for a disappointment. The story explains that the earth

has finally succumbed to man's destructive influence and the remaining humans have been forced to set up domed cities to manage the surrounding radiation. These are now being attacked by a mysterious aggressor and you've been asked to go and put a stop to the nonsense.

The game could be described as a futuristic version of Spy Hunter - your objective is to steer a vehicle through a constantly swirling landscape whilst avoiding or eliminating the terrible enemy machines.

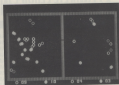
MAXWELL'S DEMON

One of the unexpected side-effects of the decline in commercial 8-bit support is the improved availability of software that might have otherwise been forgotten in the mists of time. **MAXWELL'S DEMON** and **MEMORY MANIA** were released in one package by UK company Gentry Software in 1982, both games having previously appeared on the Datacube label. It's one of several titles that have recently become available in the U.S. at greatly reduced prices.

The concept behind Maxwell's Demon couldn't be simpler. It consists of a blank

screen with a solid border and a central vertical divider. Bouncing around the screen at high speed are a number of solid and outline circles, representing hydrogen and helium molecules. The purpose of the exercise is to separate the two molecule types into their respective halves of the screen, by first positioning and then opening a "Demon Gate" in the central divider so that molecules of one element can pass through to the other side. Obviously, you have to be careful not to allow the wrong type through. In case you're wondering why anyone should want to separate helium and hydrogen molecules, the answer is that Maxwell's Second Law says it can't be done (although it doesn't say it can't) and this is your chance to prove it. And chances it makes a relaxing change from solving puzzles?

Memory Mania is based on



the popular sliding tile puzzle games. There are a number of pictures scattered on disk and having selected one you can choose the number of pieces you'd like it broken into. Hit the buttons and they break - all the bits get thoroughly scrambled up, leaving you to sort out the mess by transferring the separate bits to their original locations. If you get stuck you can call up the original view or if it's getting late (it's always) a partially solved puzzle can be saved to disk for continuation at a

later date.

Both Maxwell's Demon and Memory Mania use high resolution graphics and the technique known as "anti-aliasing" to achieve extra colors. This trick isn't too successful on the British PAL TV system and the result is a strip of black and white display, but it doesn't really detract from gameplay. Both games are extremely straightforward, but in terms of addictiveness and having appeal they have got to be recommended. Most you don't get hooked!

Title: **MAXWELL'S DEMO**
 Publisher: **Gentry Software**
 Price: **\$4.95 each**
 Platform: **1**
 Loading: **15A**
 Reviewed by **Paul Dixon**



Now, you may feel **FOUR GREAT GAMES** from Synesoft '86, that's the claim on the packaging anyway - preferably, none of the games turns out to be greater than that!

PHANTOM is unquestionably the highlight of this compilation. The game is set in a series of buildings which are viewed from overhead to reveal a maze of rooms and passages. As a proponent of astro-physics specializing in psychic phenomena, your mission is to locate through tunnels of ghostly inhabitants a source

of transport to the basement. You can tap the apparatus with a blast from your "nuclear accelerator" but beware: power bills are low and the batteries. Alien contact results in the rapid increase of your ECU rate - if it exceeds 99 you become a ghost yourself! The resolution of tunnels is hidden by areas where you can't see; there is a title screen, but excellent music and graphics compensate for the loss in playability.

For those who'd prefer something more traditional, **BO-BOUNE** is an original adapta-

FOUR GREAT GAMES 3

tion of the old VCS **Boonville Tennis**. The basic idea is to keep a ball bouncing backwards and forwards between two players who are each equipped with a joystick-operated bat. The unique feature of Boonville is that the screen is split into two halves, giving each player an end-on 3-D perspective viewpoint. The court is bordered by automatically animated spectators and the intro screen accompanied by a super tune by Richard Murray, whose previous work has featured in several Red Kat titles.

In **COUNTERDOWN** you're recruited to help Commander Zak dodge radioactive particles as he attempts to collect the necessary tools to disarm a deadly bomb. At first the task seems a double but on higher levels there are nastier traps, hidden loads and several other obstacles. The fourth game, **CAVEMAN**, was first

released in 1983 by Birmingham-based Galois Computers. It's a hidden and levels game similar to **IndoBunnies** on Apple II, which was recently cloned by Atari. Your job is to guide "Arthur" around the platform, dig holes to trap the pursuing natives and wait in readiness to attack them over the head with a sword. Despite the game's age, the graphics are surprisingly good!

How Great Games? Well, not quite, but certainly a great value-for-money package at under a pound for nearly 100. If you don't have Phantoms or Boonville, this compilation is a must!

Title: **FOUR GREAT GAMES 3**
 Publisher: **Microvase**
 Price: **\$9.99 complete**
 Players: **1/2**
 Loading: **11:55** (intro)
 Reviewed by **Paul Dixon**

AMAZING MAZES revisited

We forgot to include the diagrams which should have accompanied John Secory's article in the last issue, so here they are.

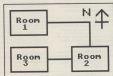


Figure 1

	N	E	S	W	NW	NE	SW	SE	UD
1 STONE	1	3	3	3	4	3	1	3	2
2 HOPE		2		2		3	4	3	
3 KEY	2	3	3		1				
4 BOTTLE			3	3	1			2	1
5 SWORD			3		4				

Figure 2

Sorry about that, John, and our apologies to all those who may have been confused.

contact extra... contact extra ...

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ST FILE



Lots of new releases lined up by SEGA either already out or released over the coming months on several different labels. Two new games on a new label from Nintendo are ADVANCED MASTROPPA (MAGLANTO) which is set in 1846 and simulates real world battles in the West. Battle, Sea and Empire Channel with 15 different missions and RAMBO ROCK (ROBBO), a new take on the now popular Rambo games complete with VCR mode in which you can play back the action. Both these on the Future label. SHADOW GAMES is another Ninja game taken from the Sega arcade original in which Ninja and Samurai get into the battle with easy precision. On a slightly more peaceful theme SAMURAI 2 is presented with Gangs back in the simulation there is CYBER-COM II, designed by the author of Carrier Command, set in the future when a Peace-keeping computer has control of all the world's weapons but goes mad and is transferred from the Great Defender to the Great Destroyer (sounds like a better weapon).

SUPER MORMAC II is another Sega conversion to add to the ever growing number of racing games with "unbelievably realistic screens". But they have all said that haven't they? Then we have BANG COOL THE ANIMATOR, a follow on from Droid, in fact you get the original Droid game thrown in free! All the usual fantasy classics are in this one or two player game, if you don't like the old established fantasy world, how about trying ROBORON ZOMBIES FROM THE CRYPTS

So levels, six hundred screens, pitfalls, false walls, hidden doors and traps. You can game the theme from the title. Looking much further ahead keep an eye out for LOSERS from Lucas Arts, creators of Indiana Jones and the Last Crusade and Jak Striker. This one is a fantasy adventure where you enter the world of the Blowers, a race that enters the fabric of life itself. Looks interesting. A lot more down to earth but dealing on the same side is MAN OF STEEL 1978 a simulation of the Vietnam War from Dandy. We believe this is Dandy's first foray into simulations. You play the President and Commander-in-Chief in a number of scenarios including The Tet Offensive, Khe Sanh and one in which you choose either President Nixon or Johnson and monitor the military banks. This is based very much on historical fact and covers the full 10 years of the war. Maybe the next simulation will be the Gulf War in the Gulf Trouble II that game will have released by the time the disc heads and Accolade are up and running on their own with TIT TALK II, THE DOLL and several very nice CALIFORNIA CHALLENGE, THE SUPER-CARS, EUROPEAN CHALLENGE and MUSCLE CARS. If you want a driving simulation, that list should keep you quiet for a long time. They are out now and will be reviewed next issue. Accolade should have also released ALABA, MASTERS OF THE DOME, a long long list! Let's finish off with some more Dandy stuff to look out for in the coming year: SHALL I GO (SODOR) and SODOR are both conversions from Atari arcade machines, the former allowing you to watch your boat in a fantastic back to back game for two players while the latter finds you as a super-powered flying machine in a world ruled by terrorists. You have to deliver each enemy as a robot, alien, strider and decepticon machine! Which side did you say were the terrorists?



THE DUEL - Accolade's latest offering in the road racing stakes

LOOM - some excellent graphics in a fantasy adventure produced by Lucas Arts



ELVIRA - much enhanced and released at last

CAR-VUP - a 40 level platform epic from Core Designs



EMULATING THE IBM

PC SPEED

IBM-style emulation

In the following example, the IBM-style system is emulated on the IBM-style monitor. Please note all colors by changing the color of the text and the cursor. The altered color can be seen on the upper left of the screen.

Color	Value	Color	Value	Color	Value
Blue	0000	Green	0080	Red	8000
Cyan	0080	Light Green	00C0	Light Red	C000
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0
Dark Blue	0000	Dark Green	0040	Dark Red	4000
Light Blue	8000	Light Green	C080	Light Red	C0C0

What on earth do you want a PC for? This was the question I was asked when I told a friend that I had just fitted PC Speed to my IBM SPBM. I explained as best as possible that there was a great world of services software out there with a wealth of PC support. This did little to modify his mind, he realized that his SPBM could, with the same equanimity as a good deal of the machines at his place of employment, emulate another man's life!

I did not point out to him that one of the prime reasons for obtaining the emulator was to be able to play Inferno games at reasonable speed, and to enable myself to use some of the other interesting, strategy software that seems more readily available on the IBM than the SP. To me that is good enough reason for having a PC Emulator but, of course, it does open up a whole new world of more

serious applications if required.

Having explained the why, what about the how? PC Speed is a hardware conversion, as opposed to the emulatable but painful to slow PC Data card I received about a year ago. The cost comparison of a circuit board and one bracket.

The first of these brackets has to be soldered onto the IBM Memory Management Unit in order for the second slot and the board to be inserted. This is not necessarily an easy fit and indeed my SP's manuals are

never uncovered by heat sinks or other metallic parts. Fortunately I know someone quite adept at this who fixed it for me. Dealers do offer a fitting service for the reserves and I believe fitting is slightly easier in SPs.

I took a couple of tries to make sure the board was seated properly and then SP was ready to try its first big show program. First I had to insert the software that would write the emulator and change Dr. SP into IBM IBM. It took some time to set this up the first time since there are many problems in making the SP perform colour-wise and mouse-wise. All the projects were adequate and the disk drive whirled. The processing was snappy for IBM DOS Disk appeared. Well here is another lesson to be learned as with PC Speed and all other emulators I have met, DOS is not supplied. Fortunately I happened to have my own DOS 3.3 inserted and all was well. The second drive was reconfigured and even the mouse was reconfigured, although it was far too effective and I quickly disconnected it.

The advertisements for the hardware assure the user of total sound compatibility and a Norton rating of about 4 which is almost true. I am sorry to say that the sound emulator is not perfect and indeed is a little slow and a smidge too dark, nevertheless it runs my programs beautifully. Indeed speed wise it compares very favourably to the IBM SPBM (14.1s and 14.6s) I have come across. The screen updating is a little farty but nothing that cannot be adjusted to. In comparison to my, only recently

acquired, XT laptop the screen updates are slow.

I would not recommend this upgrade to anyone whose prime concern is graphics oriented or heavy number cranking actions. On the other hand the system runs word processing very well and as yet I have not found a package it dislikes. Much as I would like to come next about the hard disk compatibility I cannot do so since I do not have such a board in my stable.

The cost aspects of the system cable and DOS software that I need but this work well but the one peculiarity of the machine is that regardless of DOS type it always assumes single sided single density floppies. There are ways round this either by using proprietary knowledge or using the logical drives of DOS with the correct format switches. I assume that any reader considering purchasing this item would understand MS-DOS and its peculiarities sufficiently not to have this explained further. Should any reader have the system already and not stumbled across the answer as accidentally as I did please get in touch via New Atari User and I will try and recreate a batch file to help.

I have both using this system for the last seven or eight months and basically I am very pleased with it. I suspect that the instructions as translated from the German make the installation harder and I fancy that the printer set up for palette needs much more explanation since I still use the default settings. On the other hand it does give a cheap way into a different area of the hobby. Exploring DOS has given me new confidence in understanding Teles and Autobooks, indeed even Prater now makes more sense!

I am aware that there are now improvements to PC speed in the shape of AT speed but I am not convinced that for the extra cost the facilities will be greatly enhanced, since I fear that graphically it will take some time for anything better than the current CGA emulation to appear. Indeed using the SM 14 monitor a better grade of Hercules graphic appears anyway.

It would seem that emulation is just that—emulating or pretending. If you need a proper IBM compatible then that is what should be bought but if you only require something that allows you experiment with DOS or catch up with work machines then emulation is an excellent idea. It is also a great deal cheaper.

HARDWARE:	PC SPEED
SUPPLIER:	GESTNER (Bristol)
PRICE:	£79.00 (retail)
Reviewer:	Dennis Howarth

USER FRIENDLINESS

Once installed the emulator is reliable and very compatible

SOUND & GRAPHICS

The sound is not perfect, although graphically slower than standard the quality of CGA and Hercules is good

VERDICT

A worthwhile buy if you need more than a standard IBM facilities, better colour than early Amstrad PCs

CAPTIVE

It has taken water later, but finally the REAL Dungeons & Dragons game has started arriving. There have been lots of games tagged over the last couple of years as being as good as Dungeons & Dragons, but most have been a disappointment. Not so with *Captive* - it has the same playability, quality graphics and addictiveness as the original game.

The plot this time is that you are a prisoner on a remote space station in the year 2548. You discover a laptop computer which will allow you to control four remote devices. With very little in the way of instructions you must control these devices as they fight their way through enemy bases scattered throughout the galaxy: desktop combat bots (meeters - Grenades, Walkers, Imperial Walkers, Tanks, Televisions, Jobs workers, Floating Bombers) beware these - most are very quick), Druggers, etc.; spend their ill-gotten gains on better weapons and body components; spend their experience points on better skills; and map the vast underground complex so that they can destroy them once you have found the key to reaching the next one.

The fighting in *Captive* is very similar to *Dungeons & Dragons* - you need to develop similar techniques of attacking and dodging in order to conserve your shields and reduce the level of injuries, otherwise you will run out of gold! You also need to be careful how you spend your experience

points as you will not be able to use the powerful weapons you need to survive on the higher levels.

Being technologically based, *Captive* does not have magic, however! It does have lots of exotic bits of machinery to plug into your device - Shields, Anti Gravs, Cameras, Mappers, Best Finders, Power Sappers, Magna Swans, and so on.

You need to experiment with these to get the most out of them - e.g. right-click on the Mapper screen centres it on your left click on the centre of the camera view moves the camera remotely, and the Best Finder is invaluable for both finding items and also getting out of them when you have them stuck!

The puzzles and mazes are not generally as difficult as in *Dungeons & Dragons* - there are fewer controlling barriers, buttons or doors which you must experiment with and you find the right combination, and endlessly repeating passwords which have to be found around the base (usually by killing somebody). The Mapper is a great help in checking which bits you haven't reached yet; although it only shows a small area at a time, it can be scrolled to display all the areas you have explored - you still need to make enough maps to show where the best things are and a few other important features, but it is much easier to explore than many similar games.

As far as Role Playing is concerned, *Captive* is as good as in *Dungeons & Dragons* - i.e. if it moves - kill it! *Mission* is as big as the whole of *Dungeons & Dragons* and great fun to play through magic and spells as satisfying from the point of view of puzzle solving. After blasting your way through ten bases you reach a Space Station and if you finally reach the end of that level maze, something more size matters with a consequence along the way, you can guide your device to your cell to escape yourself.

only to find you have been snatched away to another remote technology! End of *Mission* 1 - only \$1,499 to go-generated



by clever algorithms so that no one can be named! They reduce the average playing time to something like 40 years! I suspect that you may have run out of new monsters to meet and new skills to acquire before then - but never fear, Mindcave are planning to release new *Mission* books to give you still more variety!

- **SKIN'S SHINE** - Superb graphics - a great variety of villain monsters - plus lots of cool sound effects
- **GAMEPLAY** - Well designed maze-driven exploring and fighting in the style of *Dungeons & Dragons* - but with lots of extra goodies too
- **VERSATILE** - Great fun to play - highly addictive - well recommended

GETTING STARTED

As it is a little obscure, you may like some help to get going:
Plug your chips into your device! The manual says to connect your device to the laptop bag on the floor as the very top of the screen! Find the floating green dot and click on it.
Golden letters
Items in your chest on the little diamond
Levels 0-99 - more GARD
Go to the big round door - but only when nearby and use the code on the screen but not on the door.
Shields you can push the wall which has colors along the bottom - right click on it.
Power Points reach them from each your *Dungeons & Dragons* character.
All the first monsters with your item
 Follow the left hand wall (push another robot until you reach a stop) - they lots of walls - they are powerful weapons in this level and vital automatically from your inventory - watch out for enemies!
 -Wood Darts!



Title: CAPTIVE
Publisher: Mindcave
Price: £24.99
Developer: John Sweeney

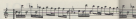
MAKING MUSIC WITH YOUR ATARI

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

Anyone seriously into making music will at some stage probably want to write their creations down on paper. This can be a very tedious manual process, so some a natural application for the computer. In fact there are a number of music publishing packages now available on the ST, and I recently managed to borrow one to try out. This was Dr. T's Copyst Application, a music scoring package offering lots of facilities and professional looking output for the relatively low price (for this type of package) of £79.95.

For the uninitiated, Dr. T is a respected producer of all types of music application programs for a variety of computers. This package is one of a family of three music publishing programs, differing mainly in the scope of the musical scores they can handle and the sophistication of the printing process utilized. They're distributed by The Synthesizer Company, 6 Herton Street, London NW8 8PL.

Copyst Application is the baby of the range, handling musical scores of up to five pages with a maximum of 18 staves per page, and printing on Epson compatible dot matrix and Hewlett Packard DeskJet printers. Next up is Copyst Professional at £225, which handles up to 50 pages, and adds support for the Atari laser printer and HP GL compatible printers. Top dog at



PRINTING OUT A SCORE WITH COPYIST

£225 is Copyst DTP, with a capacity of 100 pages and added support for Postscript equipped laser printers and certain LaserJet typewriters, for the ultimate in printing quality. The two higher level programs also have additional facilities for extracting and transposing musical parts from a score, and converting scores into sequencer or standard MIDI files.

Getting back down to earth, Copyst Application needs a minimum of 1MB RAM, a colour TV/monitor, one disk drive, and one of the supported printers. However, it's much better with a hi-res mouse monitor and two drives, and better still with a hard disk, as the program uses disk pretty extensively. If your system has 2MB RAM or more you can use Dr. T's built-in Programming Environment, enabling you to load Dr. T's MIDI sequencer program into memory alongside Copyst and switch between them as required - useful for transcribing MIDI sequencer files, as we'll see later.

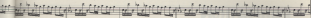
Copyst uses both mouse and keyboard commands, but most operations may be performed using just the mouse. You can also instruct notes to automatic regularly and suspension of operations. Notes, rests, 100, and a host of musical symbols can be placed wherever you want on a page, and each symbol may be added, moved, or deleted independently. The supplied set of 87 symbols should be adequate for most purposes, but the two higher level packages also include a symbol editor to create your own, should the need arise.

A complete page of score won't fit onto the screen, so a scrolling system is employed. Moving from page to page is more complicated though, involving mouse click activity, and is slow unless you use a RAMdisk or hard disk. With a few exceptions the screen display is WYSIWYG (What You See is What You Get) - the exceptions being phrasing, crescendo, and decrescendo markings, and (unfortunately) displaying of text. The markings appear in completed form, while text is shown in just one standard style. Six different text styles are available for printing, supposedly allowing you to add titles, song lyrics, performance instructions, etc. to your music, but the non-WYSIWYG nature makes it difficult to accurately position with respect to the music. On a dot-matrix printer the quality of the text is nowhere near that of the printed musical score.

TWO WAYS TO SCORE

A score may be constructed in two ways - either by building it manually using the program's editing facilities, or by importing a sequencer file containing the music and letting the program handle the basic stages of the transcription automatically.

The first approach requires you to place the staves, clefs, time signatures, and key signatures on the screen; position musical



notes on the staves, then add additional ornaments and performance symbols such as trills, dynamics, slurs, etc. Finally, guitar tablature and lead may also be added if required. The editor seems daunting at first, but if the manual contains an excellent tutorial, so it doesn't take too long to get the hang of things.

Note placement is the most tedious aspect of score production, so Dr. T has tried to speed up the process. There's a "keyboard" mode for note entry which uses the computer keyboard to enter consecutive notes of varying pitch. Chords may be input by pressing the appropriate computer keys in rapid succession. After a chord or note has been entered, the cursor automatically advances along the staff ready for the next one. There's also a "pinch" mode which automatically provides note stems and beams for groups of notes with similar durations. You will have to insert sharps, flats, and dotted notes individually though. The method does speed up the operation somewhat, but surely the best solution would have been to use direct note input from a MIDI keyboard? The program really ought to provide this as an option.

Copyist also has a "range edit" facility, which allows you to highlight a block of notes and perform various functions on them. These include erase; insert; cut and paste; move; and join up/join down, permitting streaming and beaming of all note heads in the highlighted block. Erase, move, and cut functions can also operate on subsets of the highlighted items, for instance it's possible to erase only stems and beams, move only ledger lines, cut only the notes, etc. Overall the editing facilities are very good, but achieving accuracy with it takes a little practice.

SEQUENCER FILE TRANSCRIPTION

The other way of producing a score is to let Copyist construct one from an existing sequencer file. Not only will it take files produced by Dr. T's own sequencer (BCS - Keyboard Controlled Sequencer), but it will also read Steinberg Pro-24 pattern files, and Standard MIDI files. This process has to be broken down into several stages, each having a successful pair of pointers to be set to ensure the file transcribes as you intend. Even so, the final results probably still won't be exactly as you want them, so some manual editing is inevitable. Transcription can be a very 2-1-1-1-1 process too, taking over an hour to completely transcribe a complex file outside parts which use all 16 MIDI channels! It's still much faster than doing it by hand though.

As with all else - unless you're using a laser printer or very fast dot matrix printer score printing may also be time consuming. Two levels of printing are provided, namely draft and high resolution. Draft quality gives you a general idea of how the score looks, but slumps on the printing of the special symbols, such as clefs, phrase markings, and the like. The advantage is



Output from COPYIST on a 9-pin dot matrix printer

that it's relatively quick - only about 30 minutes per A4 page! In draft mode you can print the normally displayed screen, a whole page, or a complete file. High resolution mode prints a selected range of pages from the score in all their glory, but can take 40 minutes to produce each A4 page, depending on its content.

If you've never printed your own music before, then even draft mode looks quite impressive. High resolution mode is something else. Though it really is superb, producing startlingly clean and clear output even on my lousy 630 B&W 9-pin printer! Results from a laser printer using the higher levels of Copyist should be magnificent.

Overall, I really enjoyed my introduction to draft top music publishing using Copyist Apprentice, its you've probably gathered, it's not perfect, but considering the relatively low price it does an excellent job. Dr. T pursues a policy of regular product updates, so perhaps the next release of Copyist will address some of the niggles mentioned above. Copyist Apprentice has little competition at present, and if you're prepared to live with its idiosyncratic package which will add a new dimension to your music.

SNIPPETS

...the second **MIDI Music Show**, aimed at everyone interested in MIDI music technology, will be held at the Novotel Hotel, Manchester, London on 29-30 April 1991. This time tickets are £5 instead of the hatterously expensive £10 charged last year. Advance tickets are even cheaper at just £3, available by post from Westminster Exhibitions Ltd., Surrey House, 24 Eyles Street, Kingston, Surrey KT1 3JL.

...one of the new **Yamaha DX-11 drum machines** has just been acquired by John Jay. It's aimed at the same market as the PS5 home keyboards and is MIDI equipped, so I'll be looking at how you can use it with your SF in the next issue.

...thanks to **Microdeal**, who've just sent me review copies of **Quartz**, **Masterworld 2**, **Copyist V18**, and **Backup Professional**, the next issue will also see the first article of a series on sound sampling. This will also include details of some of the incredible new sample based music software just added to the Page 8 MIDI library, such as **Keytunes**, **SoundTrainers**, and the truly incredible **NotesTrainers**.

...the **Page 8 MIDI library** also has a great new PS5 voice patch editor called the **PS5 SoundShifter**. More details next issue.

...**Page 8's World of Computer Music Making** audio cassette has now completely sold out. I hope everyone who bought a copy enjoyed listening to it as much as I enjoyed making it.

That's it, out of space again. See you next time.

LEARNING TO RE

The Play and Find series of programs from Phoenix is designed to teach your child to read. I reviewed Part 1 of the series in issue 44, and was favorably impressed. Its aim was to teach the child a basic sight vocabulary of 65 words, but enhanced by a series of five books and a learning game provided as part of the package. Part 1 has now been joined by two further parts, and these are entitled 'Fred Looks at Words' and 'Fred Makes Sentences', which build on the letters taught in the original program. Phoenix claims they all conform with the requirements of the National Curriculum, and point out that children using them should do so under adult supervision, enabling guidance and encouragement to be given as required.

PROF LOOKS AT WORDS

Part 2 of the series encourages the child to start looking more closely at words already learned in Part 1. It does this by focusing on a central part of words, namely, beginning vowels and double letters, vowel combinations and endings. It's hoped to be five books provided in Part 1, and although they're not absolutely essential to close help if you've already got them. The package contains only one single-sided disk and a very simple instruction leaflet - not much for your money.

It uses the same basic learning game found in Part 1, requiring the child to match a part of a word shown on the left of the screen with the word containing it on the right. It's achieved by using the



EDUCATIONAL SOFTWARE REVIEWED by JOHN S DAVISON

joystick or arrow keys to guide a little animated man (Fred) of the title around the screen to identify the two matching parts. The screen is divided vertically into several levels, and these are accessed by moving Fred up and down a ladder as required to get to the appropriate level. This can be quite tricky, as Fred has to be guided off the ladder with some precision, and in one area where adult assistance may be required, especially for very young children.

The program displays the problem to be solved at the top of the screen - another reason why adult supervision is needed. For example it might ask the child to find all the words displayed ending with a certain letter. The required letter is shown on the left of the screen, while several different words are displayed on the right, one or more of which end in the required letter.

Initially the required word ending letter will be highlighted in a different colour, thus helping the child to find them. He

must first guide Fred to the ladder on the left, then arrange to see the words ending with it on the right, negotiating that ladder as required. A correct match earns a reward - in a puff of smoke Fred is temporarily transformed into a cute little animated character in the form of a cat, boat, animal, etc. As the child progresses, the rewards are no longer highlighted, but are left off the words instead, so the child has to be able to recognise the words without them. Also, a

number of different rewards may have to be found within the one screen. A more difficult option requires the child to type in the required words from the RT's keyboard, although here we do find old problems of the keyboard being wrong in upper case, while the children are learning to read in lower case. Not so good!

Correct completion of all the problems on a screen results in the original reward character appearing at the top of the screen to indicate the task. Several characters have to be collected in this way to complete a step, and when achieved the child is given another reward. For this the game returns themselves into a colourful 'picture book' style graphic book helping with the aforementioned character, providing some text and allowing animated action.

Exactly the same procedure and game can be used no matter what aspect of the words are under examination. And this is my main criticism of the package - it could get tedious through repetition, especially following straight on from Part 1! However, the author argues that the method used has been proved to be the most effective way of teaching these subjects without too much distraction. He could be right, but I'm not totally convinced.

READ

words. As the child progresses, the required words are omitted unless they being highlighted, so the child now has to really guess for some words.

"Make a Word Game" takes the idea a step further, by expecting the child to rearrange a given group of words into a meaningful sentence.

Yet again it's based on the vocabulary learned in the five books of Part 1, and has "easy" and "hard" options. The "hard" option at least is level can be quite difficult, as the child may have to make sense out of twelve words or more displayed in random sequence. When the sentence has been successfully constructed, the program rewards it on the Macintosh computer with all necessary justification, an area that's not otherwise covered by this series of programs (yet).

As usual, after a number of successful answers a reward is given. Prof appears in a colorful scene such as a medieval castle, wizard's tower, and space scene. Sometimes the animation here doesn't look very inspired, disappointing after all the child's hard work! On other occasions more exciting things happen though. The documentation gives us clues about what rewards to expect, so it's an area the child has to discover for himself!

As before, there's an option allowing the child to type in the words instead of guiding Prof to them. The same opportunity cost problem exists of course, but this could be solved if you don't mind mess-

ing up your ST's keys with sticky labels marked with the appropriate lower case letters. At least the child could then start to learn simple keyboard skills too.

The program uses a "star" system for scoring, both for "Finish a Sentence" and "Make a Sentence". A first time correct selection of a word earns a mid star, second time correct gets a prime star, and anything more earns only a green star. It seems the child is allowed to keep trying until he eventually finds the right

word, the program making little attempt to prompt him for the correct answer. It keeps count of the numbers of stars earned and at the end of a session displays the totals for each column. I expected the names to be written in disk, for future reference, as the program disk has to be



loaded in write-enabled mode. However, this doesn't seem to be the case, so the need for write enable remains a mystery.

PROF MAKES SENTENCES

Part 3 of the series is designed to help the child start using his basic vocabulary in sentences, and uses a new game format to do it (thank goodness). It comes on two separately footable disks, one entitled "Finish a Sentence" and the other "Make a Sentence". The basic game screen depicts a classroom, with a large blackboard on the wall. The child completes the problems on this blackboard by guiding Prof to pick out words from a group appearing underneath it, or by typing the words in directly from the ST keyboard, if that option has been chosen.

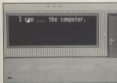
"Finish a Sentence" starts the child thinking about the meaning of phrases and sentences by having him choose and insert the correct words into examples of them. Different phrases and sentences

CONCLUSIONS

With three parts now released and a fourth part on the way, Prisma's Play and Read series is developing into a comprehensive ST based reading tutor. Generally, I like what I've seen of it so far. Each part seems well structured and presented, and has the bold and colorful graphics and cute animation likely to appeal to its intended audience.

I was rather disappointed with the sound though, as in the main this consists of just a few simple musical snippets and odd beeps and booms. Also, I felt let down by the instruction manuals, as they contain little more than very brief program descriptions and loading instructions. I feel there should be more guidance given on initially using the programs. Could do better, Prisma!

I think most children would enjoy using the programs, but very young ones might just find controlling Prof in the latter game a little too tricky. Also, I suspect they might get a little bored if unaccompanied to the programs, especially as the first two parts use an identical game format throughout. Overall though, used with care and appropriate adult supervision the programs should make learning to read an easier and more enjoyable experience. And that's what it's really all about, isn't it?



appear on the Macintosh to turn, and to begin with one word in each phrase is highlighted. A row of words appears under the Macintosh and the child has to guide Prof to the one matching the highlighted word. A correct answer makes Prof jump for joy and play his

Title:	PLAY AND READ LEARN TO READ WITH PROF - PARTS 2 AND 3
Published:	Prisma Software
Price:	\$24.95 each
Reviewer:	John S Davison

MURDERS IN SPACE

June 2005, 2005, 04:45 *Universal Times* About to blast off on the European Space Shuttle to investigate alleged assassination attempt on the Mission Commander of Space Station Progress, Will have to be extremely careful as there will be eight different nationalities represented up there.

3:00 pm (Just doled!) - seemed to take a long time - maybe I should have taken Conroy's advice and used the journals to do a manual approach? Floated through to the Work Module and met Commander Anatol, said he would explain all at 3:30 pm - minutes I should explore the vessel, get used to the lack of gravity and meet the crew.

4:00 pm Explored all but one of the 6 rooms - Lab Module 2 seems to be locked out most of the crew - wouldn't find the Camera, and the Italian girl is frozen in a cryogenic device. Tried to use the controls to wake her up - I used to operate everybody - not sure I am it right?

5:00 pm Faced that I can teleport around the vessel by clicking on the biggest in the corner of my computer - assuming what you can do with technology! Met the Commander - not convinced about this supposed "assassination attempt", but there is definitely something fishy going on up here - he says I can interrogate the crew after 8:00 pm.

My computer interface suggests what I should think about and offers me a choice of operations for each crew member so I don't have to think too hard at

the moment!

6:00 pm Started questioning the crew - some of them are definitely secretive. The Commander suggested that I check all their electronic mail, but most of them won't give me their passwords. The Ukrainian girl was the most helpful - but even she only gave me a cryptic clue to her password!

7:00 pm Most of the crew seem to have regular routines of jobs to do - some take themselves to beds for periods and I don't really know what for that is standard procedure or not. The American and the Japanese are proving very unhelpful, I have searched everyone else and explored all but a few locked compartments. Lots of personal items which might give clues to their passwords!

There are a few interesting machines but I can't seem to get most of them to work! The Square Suite bathroom needs charging - at least I was able to ping-pong on the simulator in the Control Module in case I ever do need to go outside - I can't find a code to get the Mountaintop Arm working that hopefully I won't need to this early otherwise the Solar Telescope controls are不可控的, and I'm still not sure that I have set the wide up alarms properly on the Cryogenic Life Support System!

8:00 pm Things are getting worse! My access is being lost contact with Keith - the external antenna has failed and no one seems to be bothered about fixing it until tomorrow - I wonder if I could fix it myself?

At least I have cracked three of the passwords! One of them has some coded mail - very suspicious!

8:30 pm Still not a lot of progress - some of them have told me of their suspicions of others but nothing concrete yet. Welcome Party in the Control Module - I didn't know they had wine in space! Think I'll have a couple of boxes map now. I'll set my computer to simulate a letter passage of mail!

Whistleblower! That was a mistake! The German is dead! It hasn't a clue what is going on around here!



4:00 am Oops - there were have died! Managed to repair the communication box - asked Keith for help. They asked me 20 cryptic questions to give me some idea of what I should have been doing. Am not convinced about all of their hints - I suspect some of them are either jokes or Red Herring! Still it gave me some clues as to what else I should have investigated if only I could start again ... Maybe next time I should stop time altogether so I can really investigate what happens each hour in each room more carefully!

Mojo, many tries later! At last I have worked out what I should do to save everybody and how to confront the assassin! Finally found Conroy's code in my unactivated Encyclopaedia Britannica (it still can't know everyone's secret - maybe I'll try one more time)

Warning - my blue package was missing a couple of items - if you have similar problems you can either buy new ones on CD - 229.95 or ask the leading light on 0800 238003.

- **NIGHT & SOUND** - Excellent graphics - you actually get to see all the machines on screen - lots of nice sound effects
- **GAMEPLAY** - Really all manner of items well designed and easy to play. Multiple objectives, stop the machines, find the culprit, discover everyone's secrets, save the Space Station, crack all the codes, discover how the machines work, answer the questionnaire
- **IDEAS!** - Very enjoyable - thoroughly recommended to all adventure players who like a good mystery or a tough challenge if you need to solve ALL the puzzles and not just find the bad guy!



The **MURDERS IN SPACE**
 Publisher **Infogrames**
 Price **£24.99**
 Developer **John Lewney**

PROFLIGHT

I don't usually start my reviews with accolades for the software under scrutiny, but in this case I can't resist if I've waited for many years for a flight simulation program that can hold its own against Sublog's classic Flight Simulator II (FSII), and at last I've found it! Microsoft's ProFlight really is the Best. Flight simulator I've had the pleasure to use since the NT version of FSII appeared.

Overall packaging and presentation are very impressive. The floppy box contains one single-sided program disk and a very high quality ringbound manual. This includes lots of photographs and illustrations as well as detailed instructions. The program runs in colour or hi-res monochrome on any 512K 386/NTX or above.

At first glance ProFlight seems similar to many other jet simulators now available. Like FSII, Falcon, and others it offers dogfighting with enemy aircraft, in this case using cannons, missiles, or Skyhawk missiles, and ground target bombing with the help of hi-tech bank delivery systems. This time though, the subject of the simulation is the Persian Tornado, and it has one important advantage over most other simulators...

SUPERB HANDLING

ProFlight's big plus is in its handling and flight characteristics. Primary flight controls are via mouse or joystick, with the mouse being better by far. You can almost FSII the aircraft's responsiveness through the mouse. It's the first simulator ever I've actually enjoyed flying using mouse control. It requires a few weeks, but once mastered a given aircraft and atmosphere of control (I've



previously only experienced in FSII).

Secondary control is via the keyboard, with a function assigned to almost every key. As with most flight simulators this takes some learning, and Microsoft really have included a keyboard template to make things easier. There is a few page template in the manual, though.

OK, it's complex, but the program includes several levels of assistance to build your flying skills. Firstly, there are a number of different demonstration flights and scenarios to help you learn about general flying, take-offs, and landings. Push and bank limits may be set on the aircraft's attitude so you can't get too wildly out of control while you're learning! Then, after learning about scenarios, you can do some combat training by dogfighting with other aircraft and bombing ground targets - with 'cockpit' mode set. It's a pity the Tomatoes in the Gulf War don't have this feature available! Then, when you're ready, you can switch to full combat mode and fight the enemy for real.

COMBAT TROUBLE

The only trouble I had was in combat mode, caused mainly by a few errors in the mission planning section of the manual. The main problem was that it incorrectly states that valid ground targets are marked on the map with WTEC symbols. Actually, they're TOL-LOW - at least in the review copy they were! Also, it doesn't explain how you verify what your selected target is, if you position the map cursor over a valid

target (yellow symbol) a short description of it appears whenever you're looking for a white symbol you never get to see this!

REALISTIC

One of the keys to realistic flight simulation is obtaining a high screen display frame rate, and ProFlight's author has done a commendable job here.

However, in order to achieve the high rate needed the original version of ProFlight resampled based on the graphics by using a relatively odd looking method of shading the scenery. Just before this article went to press Microsoft sent me ProFlight V1.2, which replaces the shading with solid colour - with minimal impact on that frame rate, and improving the look of the graphics in real.

The supplied scenery database covers a relatively small area, but the program's capability is actually much greater. Microsoft sent me their developing additional missions/terrain disks in follow, plus a further surprise or two still on their server but I haven't had quite in the FSII league, but does include a good selection of buildings, bridges, pylons, lakes, rivers, roads, etc.

Other visual niceties include the ability to fly in daylight, dusk, or at night - when the stars show down from an accurate representation of the night sky! You can also set weather conditions, including partial cloud cover, wind direction, speed, and turbulence.

I've spent countless hours flying ProFlight and will find it as thrilling as the first time I tried it. As far as pure flight simulation goes it's equal to FSII, and hence stands head and shoulders above all other simulators now available.

However, it doesn't (yet?) match FSII in terms of overall facilities offered, and as a combat simulator it's not as comprehensive as FSII, Falcon, or (especially) F18. For me though, the pure flight aspects of a simulator the outweigh any combat or game considerations, so given a free choice of jet simulator I'd go for ProFlight every time. It's clearly a winner, and deserves 'classic' status, and deserves a place in every flight simulator fan's software library. Buy it!

Title: **PROFLIGHT**
 Publisher: **Microsoft**
 Price: **£39.95**
 Reviewer: **John S Davison**

his DCopy performs many other exciting tasks such as conversion between 8 bit and 16 bit text files, zip file creation and extraction, file dumps and file modification. Repetier will transform any single-sided disk into a double-sided one, without overwriting the data. This is particularly useful for those users who have recently upgraded their drive or who have a large collection of single-sided HD disks and want to make use of all the redundant disk space. Other programs on the disk include a demonstration of GenPlan - a powerful replacement for GENOS which looks to be very good indeed, a mouse accelerator that's controlled by simple key presses and a screen saver that will blank out your monitor after three minutes of mouse or key inactivity. The screen saver runs from the AUTO folder and seems to be compatible with a large number of commercial applications (it certainly works well with Protext 5 on the MSDOS).

GET HACKING!

Wouldn't it be nice if instead of displaying a meaningless row of numbers when a program crashes, your ST could actually tell you what sort of problem had occurred? With **AntiBoots** - one of the **HACKER'S UTILITIES** - it can! AntiBoots is a small DOS Terminate and Stay Resident program which waits for a crash for to use the current BIOS terminology, an exception to occur and then fully replaces the bootee with an informative alert box describing the error in English. Depending on the nature of the problem, it may then give you an option to continue or abort the application - a simple, but very obviously enhancement. Other **HACKER'S UTILITIES** include a sector editor with excellent documentation, a disk verify program and a programmer's resident control system to help keep accurate and detailed program back ups. Also, Repetier is a combined RAM-disk and print spooler with several other features. The RAM-disk is immune to soft resets or resolution changes and can be preset to a range of different memory sizes and the desired file identifier. The auto boot status it will even increase the storage capacity of floppy disks by using a flag in GEMDOS!

VIRUSES OUT!

However carefully you look after your disks you can never be sure that you won't pick up an unwanted guest - a computer virus. But what you can do is take some simple steps to prevent viruses climbing aboard in your system and spreading to other disks. **THE VIRUS BARR** is a collection of the best virus detection programs available in the Public Domain and offers several other



Left - set your system up to get more of each SUPERDISK

Below - VILLER one of several utilities on THE VIRUS BARR

utilities to help detect the presence of the virus prog. **Checker**, **Super Virus Killer** from MUC UK is one of the best PD programs of its type - it can recognise 8 bootstrap viruses, 7 anti-viruses and 123 other types of boot-secter, such as those found in many commercial games and even some Public Domain demos. All of the options are accessed via literally pull-down menus. As well as the standard 'Y/N' buttons there's a selection of anti-virus bootsecters which you can write to your disks for maximum safety.



THE KILLER

VILLER is a similar program that is completely virus-free, it runs and is equipped with options to view, print and view bootsecters. Install a virus guard routine and, of course, eliminate any viruses that are lurking on your disks. **VILLER** claims to deal with no less than 18 known viruses. Other highlights include a decompilation of some of the common ST viruses - this can help you recognise the symptoms and thus deal with any problems before major damage is done - and a unique compilation of virus prevention utilities. For example, **Watchdog** is a small routine that sits patiently in memory and checks that the disk's bootsector isn't altered when it shouldn't be, whilst **Boozer** compares a disk's bootsector with a file known to contain the correct

unadvised data. The disk contains full documentation on how to operate the various utilities, lists on the best ways to use them with your system and a good deal of other information. To quote a warning from Richard Kawanabe's 'Virus' article in PAGE 8 issue 25 - 'TRY-BY-DOOMY' can become the victim of a computer virus' - but with **THE VIRUS BARR**, at least you will be prepared. One of the most effective ways to improve your ST's environment is to invest in a complete replacement desktop. The commercial application **Knockout** has gained a high reputation in this field (possibly the most worthwhile package any reviewer ever will ever purchase' - issue 47) but it's by no means the only solution. Before you fork out large pounds for **Knockout** you'd be well advised to investigate the growing number of alternative desktops in the Public Domain. Sounds to me like it could be smaller PD World type. Keep watching this space!

HOW TO GET THEM

All of the disks featured in PD World are available from the **PAUSE ST Library**. Each has a unique reference code which you should use when ordering or making enquiries. Please contact **PAUSE** if you don't have a copy of their **Accessory Shop** issues and check the system requirements for each disk. The **PAUSE** #DATA000 floppy containing a list of all disk names and contents is available from the library, priced at £7. The disks referred to in this price are:

ST10 - DISK UTILITIES 1	ST20 - THE VIRUS BARR
ST11 - CLASSIC LRU DISK	ST21 - ANACARDIA'S UTILITIES
ST12 - CLASSIC ST-500	

Prices for standard disks are £1.95 each or £2.95 each for 5.25 or more. Write to **PAUSE** #, P.O. Box 24, Sutton, ST18 1SR. Telephone 0782 216622 or FAX 0782 843322 with credit card orders.

COMPILATIONS

FOURSOMES

Three companies have recently released "Ultimate Hits" compilations each with some sort of theme. Ocean's **HOLLYWOOD COLLECTION** plays with the hit movie theme giving the computer/film buff the following: *Raiden*, *The Matrix*, *Hobbes*, *Indiana Jones and the Last Crusade* and *Ghostbusters II*. King's **FINALE**, claiming to be the best of any released compilation offers *Paperboy*, *Gladius & Galibus*, *Space Harrier*, and *Overlander*. It also states that Frank Bevan's thinking is in this set although my copy did not contain this and following my reading the instructions I felt that it was a PC only offering, although I will be pleased to be proven wrong. Finally Codemasters' **QUATTRO** offers four beloved budget games of variable quality: *Pro Powerball*, *Nero Boost*, *ISK Combat* and *Pub Trivia*.

Overall each set offers four games although *Elite* also claims 33 of different degrees of generativity, with *Finalist*'s *Space Harrier* including a 1980 copyright date within its credits. This is not to say it is not good but in the better world of 3Dx and Mega technology it is more than likely that new owners will find that the game does not stand and there as well as some more modern PlayStation or Sega Saturn may.

Having allowed for the age of the programs I will try to guide the reader through the options in these collections. **QUATTRO** is a budget compilation of older and budget priced games. These have been reviewed in the past and fit the category the same reviewers find that *Pro Powerball* is a bit of a nuisance for what it offers; it is fun and difficult to control chase game that would have

looked better as part of a James Bond arcade sequencer. *Nero Boost* is a miserable version of a race game through towns and rivers with adequate controls and fairly colorful graphics which may rewire for a while and S&S combat is a fairly sound rendition of Commando in large forward style blocks and bomb returns. For me the collection was saved by *Pub Trivia* which presented a strong quiz game converted from one of the earlier quiz machines to fit the facilities of the PC. It allows multi player involvement and seems to have a fairly broad collection of questions with some tactical play to go with it. All in all **QUATTRO** is a value for money collection for those who really are the masters for "bottom" things and want the occasional arcade flashback on the cheap.

FINALE is a collection of old hits that were very highly thought of in their day, and contains the most antiquated packaging I have seen in some time. I eventually found by scanning the serial print on the box that the classic *Frank Bevan* was actually replaced by *Overlander* on some IBM machines. So while the packaging shows five games only expect four in any particular format! This newly highlights one of my long term granules about some of the software houses and slightly suspect packaging. The games in the set are of good value. *Gladius & Galibus* is the antitypical adventure with friendly graphics and good colour use. A faithful translation from the original, even so it is a little dated and involves around the edges. I will report playing

this game and it is a little piece of history. The same can be said of *Paperboy* and *Space Harrier*. Both use the technology of their respective very well and are a worthwhile experience at any time, their inclusion in a compilation is a reasonable thing to do as they are good games that no longer merit high individual pricing. *Overlander* was a game I found trying and annoying, a handling tick game with little to really recommend it. Still I suppose that compilations should be allowed one problem entry. As with the previous piece of software can last value if you do not own any of these games already.

HOLLYWOOD COLLECTION offers four fairly modern games albeit that one of these new appears far less in the new power pack range. This is an attempt to place slightly more modern and more stimulating gameplay at an affordable price. The major disappointment is this is *Hobbes*, if only because it does not show the ingenuity of software planning the other three offerings do. All the games have strong graphics and some elements and with the multitude of other titles being published some of them stand out too long to complete. My personal favourite was *Harrier*, with its small sprites and interesting mode of activation for rope climbing. Ocean maintain their policy of strong soundtracks and video scenes of leading characters within the play frames to good effect. *Ghostbusters II* gives the best of a film set, it's sets and difficult but playable scenes.

Of the three compilations *Hollywood Collection* is the one which offers the best value for money for any newcomers who have not bought the originals or even for those of us who felt the film licenses were over priced. There is still a little originality in some games and thus of the three this has to be my favourite compilation.



● **GAMEPLAY** - All are of least adequate, most are very playable if altered

● **LOOK & GRAPHICS** - Variable, Ocean open to the hair but other shows are the youngest games

● **VERDICT** - *Quattro* and *Hollywood* are very good value and recommended. *Finale* seems acceptable for older but quite classic

HOLLYWOOD COLLECTION

Raiden, *The Matrix*, *Hobbes*, *Indiana Jones and the Last Crusade*, *Ghostbusters II*

Ocean £19.99

FINALE

Paperboy, *Gladius & Galibus*, *Space Harrier*, *Overlander*

Elite £24.99

QUATTRO

Pro Powerball, *Nero Boost*, *S&S Combat*, *Pub Trivia*

Codemasters £12.99

Reviewer Damon Howarth



WELLTRIS

Alexey Pajitnov is apparently a member of the Soviet Academy of Sciences, and is also a famous Soviet mathematician. He is now also the author of two excellent computer puzzles, his original one which many of you will have heard of - Tetris.

This new puzzle involves a three-dimensional view, as though you were looking down a well. At the bottom of the well there is an eight by eight grid. The game's overall concept is very simple. Various different shapes will randomly appear at the top of the well and slowly fall to the bottom. Using the keyboard, you must control where the blocks will fall so that they fit into the available squares in the grid at the bottom. In order to advance this you must move the shapes around the well's perimeter, thus placing the shape in the exact position

you require. In addition to this you can rotate the pieces as they fall. The combination of these two control methods will enable you to place the pieces exactly on the grid where you want them (provided that they will fit). In order to score points you must position the pieces so they form lines which stretch fully across the well bottom, either vertically or horizontally. When a line is formed, your score is incremented and the completed line is removed from the well.

At times (usually most of the time when you are just beginning) you will be unable to fit a piece into a gap in the grid at the bottom of the well. When this happens you have a choice of two options. By dropping a shape down a corner of the well, it will split into



two separate parts. If this does not help you are forced to let the shape continue into one of the well's walls. When this happens the offending wall is removed from play for a number of moves, thus making your dilemma nearly worse!

Puzzle games of this type are very definitely an acquired taste, and because of this there will be many people who cannot get on with Welltris. I found it to be very addictive, and once you have the knack of the controls it is both enjoyable and very stimulating to the old grey matter! Presentation-wise, the game is nothing startling. The graphics are average as is the sound, but this does nothing to weaken its quality. It's brilliant!

FACTS

The **WELLTRIS**
Publisher: **Intelligence**
Price: **\$24.95**
Developer: **John Bonson jr**

SIGHT & SOUND

Nothing stunning at all. The graphics are both average and the sound is adequate.

GAMEPLAY

If you enjoy mental puzzles you will love this. If not it will drive you nuts. I loved it!

VERDICT

My personal verdict is that Welltris is superb. However, people here will find the game a little slow.

FACTS

The **PRINCE OF PERSIA**
Publisher: **Demois**
Price: **\$24.95**
Developer: **John Bonson jr**

SIGHT & SOUND

The animation is stunning and the sound effects are superb.

GAMEPLAY

Great - apart from the fact that you go back to the beginning each time you die.

VERDICT

Welltris is a superb game. If it were not for the above



Hands up all those people who remember Karateka? Now that was a long time ago. Most of you won't have a clue what I'm talking about, but there must be some who remember one of the classic arcade/farwest adventures of all time. Well, after all these years, we now have a sort of pseudo sequel written by the original author.

This time you play the part of an heroic adventurer who must rescue the beautiful princess from the evil and apparently 'occasionally decent' but never that nice Grand Vizier. You have easy instructions by which to rescue the pretty maiden from the evil Persian's grasp.

PRINCE OF PERSIA

The game begins with a superb cut-scene sequence as the prince rescues the Grand

Vizier who he wants liberty from, and then appears a little distressed as the computer takes and your character comes into view, in a dungeon.

You must work your way up through the various levels of the dungeons to find your love. Along the way you will encounter variously guards, strange prisons, and artifacts which will be of use. You must engage in sword fights and avoid many of the cunning traps which have been set to prevent your escape.

Apparently, the author, John Mochner has spent many hours watching movie clips to bring you some of the most realistic graphics ever seen in a computer game. He didn't do

too badly I can tell you, as the original has a stunning I have never seen anything quite like it. It is second to none and tremendously lifelike. The sound is also excellent, and as with pretty much every other recent release the spot effects and music are superb, and the quality is very high indeed. The sound of clanking steel is especially realistic.

An arcade adventure game, Prince of Persia is fairly typical in terms of playability, and you will either love it or hate it. Personally, I think it is brilliant, but I do have one quibble. When I do save my character from that place you may have heard where they have to go back to the beginning every time they die? Why do they keep doing this is why it is so annoying! This game would be amazing if it weren't for this silly feature.

SNOWSTRIKE

The year is 1999, and the President has decided war on the drug barons of South America. To do battle with the Colombian drug lords a special fighter has been developed to fly both land and sea based missions with the objective of destroying the drug plants and shipments. As you could well imagine these missions are very dangerous because of the immense resources which the drug barons have at their disposal. Only the best US pilots are capable of doing the job.

You take the pilot of an F14 LCR 'Cobra', a fighter and terrain pilot who must go into battle and carry out 'Operation Snowstrike'.

On first impressions, 'Snowstrike' appears to be either one of two different styles of game. It could be described as a light/cockpit simulator in the vein of F15 Strike Eagle.

Alternatively it could be viewed as a simple shoot 'em up in the style of SkyFox/Wings II. It's not sure which

it is closest to a relatively simple simulator or a tremendously difficult game!

You have various levels of difficulty and weather conditions to choose from, and also the choice between either a sea based 'shipyard busting' mission or a land based mission to knock out the drug factories. Your final option is to choose your own pilot from a list of men with varying point values from complete idiot to outright mad. This option is quite important as it governs the level and quality of assistance which your accomplice will give you.

The main game screen is very similar to a flight simulator, you have the appropriate in-

struments at the bottom of the screen and your view of the outside world at the top. Control is with a combination of mouse and keyboard to control the plane and its various weapons systems. Basically your mission is to survey and your instructions and knock out any enemy planes which may try to get in your way. Upon completing the mission you must return to base in order to receive further instructions and to refuel.

Presentation-wise, Snowstrike does not stand in any department. The graphics are flat, yet fairly simple and the sound effects and music are adequate yet nothing startling. It's not bad though.

FACTS

Title: SNOWSTRIKE
Publisher: Egos
Price: \$19.99
Developer: John Davison jr

SIGHT & SOUND

Adequate for the style of game, although not sure in scoring

GAMEPLAY

Exciting, it's basically an add on to control shoot 'em up

VERDICT

A game which is not quite as addictive as it looks from a simple game, but not anything either

FACTS

Title: WORLD CHAMPIONSHIP SOCCER
Publisher: Elite/Edge
Price: £19.99
Reviewer: Damon Hayward

SIGHT & SOUND

All of these present in one package although the chessy control set may be odd

GAMEPLAY

Fast paced and difficult, some things require a bit of thought

VERDICT

A good effort, worth trying if your soccer desires are strong



WORLD CHAMPIONSHIP SOCCER

A soccer game that looks like Kick-Off which has been developed from the Sega game machine. Elite Systems have used their expertise in converting arcade games to produce a conversion that seems to work rather well.

The options in this one or two player soccer game include such things as choosing your own international side based upon the last World Cup episode and selecting a team by the relative strengths of players. To make life even more entertaining and thereby allowing a strange simulation effect the various teams have a grading to show roughly how tough an opposition they

should be. Scotland, the host team, looks tall enough to lead successfully. World Cup qual-

ifiers in recent years, rate lower than Northern Ireland and the English. It is however a little distressing to see they have difficulty matching up to the Cameroon team in statistical power! Apart from that little quip the control for the game is exemplary although a little slow. The graphics are nice and clearly and represent teams colours well.

Unlike the current paradigm of Kick-Off I and II the game does not have goals, red cards and the like and neither does it include weather factors. On the other hand it does have the statistical base rather described. It is very pleasant to discover those ratings actually affect play. It is far easier to

play with Brazil and Italy than it is to even score with the U.S.A. and Scotland. The computer seems to have genuine talents and is able to plant the striker in the right place while your goalkeeper develops tendencies to throw it out forward. Apart from that and the fact I never actually seem to score a game against the computer the game does well and maintains interest. I felt that the computer was perhaps a little too strong in the early stages and that, even with the weak teams the goalkeeping from the computer was too effective. I must admit that I never even managed a goal although Brazil did did field the U. S. A. in a last minute winning goal effort. For better than Italy's 0-0 defeat of the Brazil.

I am quite happily recommending this to any soccer fan.

NIGHTY BOMB JACK

A long time ago and many miles hence away there was an innovative platform arcade game called *Bomb Jack*, in which a little sprite-like creature leapt and landed on a variety of various buildings, like the *Hydra*, collecting apples and defusing bombs. This game had many sequels all with very similar themes and very similar moves. Needless to say it was successful in all incarnations. Even more interestingly I might add that the computer world also received many versions of this classic game. *Mighty Bombjack* is the latest in the line.

This particular version is based on a fantasy adventure setting as the little bug goes to rescue a fair princess from the evil Doctoria a final demon. It goes because he is the youngest brother of the princess and all of his siblings

have failed.

On looking at the packaging I was surprised to see that all screenshots were actually taken from the Amiga, certainly a bad sign since it means that the ST screens are bound to be the best. This was certainly true of the original as I prepared myself for the disappointment. Happily this incarnation is better than the original and actually has a background and some interactive elements of powers and goodies. Once play begins and the joystick wobbles you can just how to move the small figure about the screen; there is quite a good platform based adventure lurking behind this sequel.

The graphics, which are in each game all important, are definitely more careful and better than I had expected.



There is a strong use of colour and a reasonable sound accompaniment, although I did feel all items that the rest of the hero could have been more positive.

In this version not only do you need to avoid the monster as you collect items you also need to open chests by leaning on them and thereby obtaining various useful bonus abilities.

The game does not present the typical challenge of work as beyond the five Palace but presents a more puzzle oriented. But the real type of game I found it quite enjoyable and a good representation of its type, far better than the original.

FACTS

Title: **NIGHTY BOMB JACK**
 Publisher: **Elite**
 Price: **\$19.99**
 Developer: **Damon Rowboth**

SIGHT & SOUND

Both are adequate for the game at hand, neither really create noticeable systems.

GAMEPLAY

Smooth scrolling with precise controls that become vague at times.

VERDICT

Definitely acceptable, but falls in the way of novelty to recommend it.

FACTS

Title: **S.T.U.N. RUNNER**
 Publisher: **Domark**
 Price: **\$24.99**
 Developer: **John Davison jr**

SIGHT & SOUND

The graphics are slow and ugly and the sound is quite atrocious!

GAMEPLAY

Could be argued that it is unplayable due to the sluggish nature of the graphics.

VERDICT

Not offered. An eight bit game that is more than capable of producing something better than this.



In this arcade machine conversion the basic idea is a sort of futuristic *knights* run, where instead of a single you pilot a 'S.T.U.N.' ship through the twisting and dog-eared passages of another world.

Through these passages you will encounter a variety of obstacles ranging from difficult slopes and curves to enemy S.T.U.N. craft whose only wish is to hinder your progress.

Along your high speed path you will find a number of green stars dotted along the floor of the tunnels. If enough of these are collected then you are given a weapon known as the 'Shockwave', which will obliterate everything in your

S.T.U.N. RUNNER

path. The shock wave must be deployed upon the removing all obstacles, so your

craft is also equipped with a laser for destroying anything which gets in your way! Surprisingly this arsenal you also have the capability to force your craft up to tremendous speeds by moving over a 'Turbo Boost Pad' which will take your craft to nearly light speed and make it temporarily unstoppable by obstructions.

Your view is from just behind your craft, thus giving you a three dimensional view of the tunnel as it spirals towards you. You must simply negotiate the twisting passages and try to reach the end. Just as with a *knights*, you should follow the outside line of the tunnel to maintain your speed.

The graphics in *S.T.U.N. Runner* are quite disappointing. A game of this type could be quite amusing especially if it ran smoothly and fast. This implementation is quite a let down. The graphics are just far too sluggish to make the game look 'right'. On top of this the sound effects are dreadful. An attempt has been made to have some digitized speech every now and then, but it is simply impossible to work, and what is being said - it is mostly noise.

I have not seen the arcade original of *S.T.U.N. Runner* so I have no idea how close this version is. I can only imagine that the graphics are quite stunning and that it is much faster than this conversion. Speed is the main let down of the ST version, the movement is far too slow to make the game playable for long.

METAL MASTERS

Whenever I receive Intergames software I always expect something a bit different and a bit special and rarely am I disappointed. Recollections of Japanese late night mecha and giant robot shows slipped into my subconscious as I read the robot-riding instruction book and eagerly watched as the first disk loaded to excellent music and effects.

The painting of a huge robot with its small operator was a wonderful sight and set the scene. Finally the ST accessed the second side of the set and the game would begin. I was in control of one of three mecha robots as beloved of Gundam and Transformer fans everywhere. The match was ready to begin. From my limited metal budget, I had to buy and equip a foot robot to represent me in the battlefield. I bought it a laser arm and a

metallic boxing glove hat. The huge robot, perfect, unprotected sitting to back of back, still we could hit it!

The screen changed, into whirled and the construction scene was completed when I saw my huge opponent. This would be tough! The fight was bitter and control was a similar experience to *Ikaburari* style combat games. My robot was crushed. I lost but was eager to try again.

Eventually by winning a few I had enough to upgrade to a mecha tougher machine but as in all such things the computer had a tougher one. Winning two in a row put me on a bonus screen which allowed me to trial up little humans and their peasy tanks and helicopters in a battle simulator. I did find the game had a built in secret for newbies



when played in one player mode which allowed me to progress a long way into the game with little challenge. The game could become quite challenging in the two player mode and certainly offers a strong one player challenge if you don't figure out how to cheat.

Although this is really only a variant on the best 'em up threeer Metal Masters is presented in a novel and imaginative grabbing style. It certainly rates as my favorite of the games I reviewed this year and I am happy to recommend it to any person wanting a change of pace in their combat gaming.

It certainly had me hooked from the word go.

FACTS

Title: METAL MASTERS
Publisher: Intergames
Price: \$24.99
Reviewer: Simon Haworth

SIGHT & SOUND

Both are strengths, control and usability.

GAMEPLAY

Fast fun and addictive.

VERDICT

A mecha fan's delight. Buy one immediately!

FACTS

Title: TOURNAMENT GOLF
Publisher: Elite
Price: \$79.99
Reviewer: John Davidson jr

SIGHT & SOUND

The graphics are slick and smooth, and appear to be very realistic. The computer sound is a bit expensive in this respect.

GAMEPLAY

Considering I'm not a golf fan I enjoyed it very much.

VERDICT

I loved it if you're a golf fan you would probably enjoy it even more.



I've never been a big fan of golf. I don't like watching it on TV and I've never been able to get the hang of playing, either on the course or the driving range. Should I really be reviewing this game? *Tournament Golf* from Elite is described as a 'golf simulator' which allows you to take part in a tournament across three world class courses against fifteen other professional players.

To add to your game, you have been treated up with a buddy who will give you useful advice when you need it. Now, as I've already said I'm not a very experienced golfer, but I do know that I have never

TOURNAMENT GOLF

seen a pretty tall, dressed in golf-rudely with long legs and a skirt that would serve well as a ball!

Do golf clubs really allow this sort of thing? Am I missing something?

On loading the game you are greeted with an advanced password protection system which has you chomping through the manual searching for a single word. Once you are 'in' the game you have a multitude of options before starting. You can select your level of play and also whether you are practising or entering the tournament. Once the game has started your view of the proceedings for the larger part of the game is from directly behind your character with the fairway stretching out in front of you. On the left

hand side is a plain view of the 'hole' which you are currently playing. When (SP) you reach the green, the view changes to a third-person view of your character as he tries to sink the ball.

Graphically the game is very good indeed. The animation of your large and detailed 'golf' character is smooth and realistic. The sound is also of a very high quality, comprising mostly of sample spot effects. The crowd cheer when you hit a great shot, and gong in a suitably elegant but manner when you get a put.

To play I found the game surprisingly hard. The control method using the mouse and a series of icons is easy to get used to and overall I found it a pleasure to play. Golf may not be that hot but all things to take it up!

MATRIX MARAUDERS

This game bears all the hallmarks of a Progressive game: well-packaged with a substantial box and fairly detailed instruction book together with strong screenshots on the box. The promise of good things inside is borne out fairly well, the loading screens are good and keep the attention during loading. The game gives forth the now expected repetitive screen animations and remains set up. The question is though what sort of game is this?

Basically what we have is a space junky run game, using a 3D course reminiscent of the *Freeway* series of games. The control system is different from the series allowing a player to control the head of the pilot and the ship independently. Oh yes, the player takes the part of a somewhat suicidal space racer in a futuristic sport that gammas-

ters not only one winner but only the one survivor. The standards of scrolling and presentation only reach the average and are on an odd course to all the good you may work to be described later.

Some of Progressive's latest offerings are starting to show signs that the design team are looking to the old ideas and trying to break new life into them. The last few games have just about worked and again this manages the same car-like-egg type of performance.

The opening screen, wherein the player prepares to take off and sets up his ship with some of the expensive and expensive arsenal of devastation, are very well received, or minimal of many early TV and VCRs. So too the controls which utilize joystick, mouse and keyboard giving a



complex learning curve for the beginner. Your in-flight objectives appear to be threshold, to win, to destroy or disable the opposition in order to achieve just 1 and finally to pick up as much bonus cash as possible while circumventing the very tricky and old-trick course. On the bright side it is possible to play against a human opponent if a table is set up allowing two players with their own machines to join in life and death combat.

I felt that this game had a great deal of top class but very little entry top class: the controls are untested. A game of intense funness is done: the ship a good competitive about 100 runs.

FACTS

Title: MATRIX MARAUDERS
Publisher: Progressive
Price: \$24.99p
Reviewer: Graham Howard

SIGHT & SOUND

Probably excellent, great scrolling and great longevity, most but just acceptable.

GAMEPLAY

Very solid with some good ideas, it isn't 'hook' me though.

VERDICT

Not the best overall space game available but nonetheless a worthwhile effort worthy of some notice.

FACTS

Title: POP UP
Publisher: Infogrames
Price: \$24.99
Reviewer: John Swinney

SIGHT & SOUND

Good value graphics, nice sound effects.

GAMEPLAY

Highly addictive joystick-driven arcade game.

VERDICT

Great fun.



BUILDING BLOCKS! Another easy game from those that

French guys at Infogrames - this time you get to be a bawling ball trapped in dozens of levelish mazes. Each maze is just one screen full of platforms and objects: some objects are deadly, some are tools, some must be collected before the exit will appear.

Pop-Up is completely joystick driven; the button gets you bouncing, left and right allow you to turn to the left, down stops you dead. If you land on a spiked platform, each one of the little baddies that look backwards and forwards, get stuck bouncing between two inclined platforms, or fall off

POP UP

the bottom of the screen, then you lose a life. Falling off the bottom, or into nasty places,

is difficult to avoid as many of the platforms disappear after 1, 2 or 3 bounces!

You need to collect extra lives and tools along the way - hammers, keys and water drops get rid of vertical poles, walls and fires - though many of the poles need more than one blow to destroy them - not easy when you are bouncing on disappearing platforms!

It starts off easy, but soon gets NICE hard - some of the later screens can only be solved by getting every single hammer and key EXACTLY right! This is made slightly frustrating by the fact that the ball doesn't always seem to react immediately to commands to turn or stop, usually

causing you to lose a life! Maybe it is me, or my joystick, but the game seems very unforgiving!

Fortunately, if you are frustrated with starting at level one and dying on level thirteen every time, you can just press B to switch to the number you wish - you never know which level you will get next. There are some really nasty levels up there - I have seen some of the ones in the righties - and at least one looks impossible!

Pop-Up is a very simple idea which has been well implemented - it is easy to get into, and keeps you coming back for one more try to see if you can reach the end level in the best tradition of arcade games.

As a bonus there is also an editor which allows you to create your own levels which keeps the interest going.

MIDISTUDIO

This MIDI sequencing program has been around for some time, but has recently been slashed in price from \$279.95 to \$199.95, bringing it firmly into the "budget class" for such programs. The package includes a single-artist program disk and a rather hefty 22-page instruction manual, which unfortunately isn't exactly a model of clarity. MIDISTudio runs on a 512K 80286 PC in standard or high resolution, and also requires a suitable MIDI-equipped synthesizer, of course.



After our unwanted types of MIDI data from phrases. Note velocity can be manipulated too, with leveling, randomizing, change by (good) amount, and fade in/out provided. I found quantities to be MIDISTudio's weakest function as a slight always seems to work as expected. I suspect this may be connected with the program's rather miserly resolution of only 24 clicks per beat.

It's worth noting that any "destructive" editing operation performed on a phrase can be reversed if required by restoring the original version of the affected phrase from a special buffer. This can be quite a lifesaver when needed!

TWENTY TRACK

It's a 20-track, phrase-based sequencer, which means you use it to build up a complete piece of music from smaller musical elements (phrases) of any conventional size—typically a few bars. You record each phrase separately, either in real time at any convenient tempo, or in step time, and then arrange them in any order on any tracks you choose to form the complete musical piece. There are no record or playback looping facilities incept in phrase edit mode, so all recording is done on a "one-shot" basis, and phrases requiring repetitive playback have to be "arranged" manually first.

Arranging the phrases is simplicity itself. Using the mouse, you just drag the required phrases from the list of phrases already recorded and drop it on the required track in the appropriate position. Phrases may be added, deleted, inserted, or copied easily too. This function has a friendly visual interface, so you can actually see the phrases you're manipulating on the tracks. The display may be scrolled and zoomed to the appropriate position and level of detail you require. This whole process is one of the clearest parts of the program, and is a delight to use.

Each track may be set to play back on any MIDI channel using any MIDI program number (and therefore any sound on your synth). This can be subsequently exemplified to select different sounds "on-the-fly" by program change commands embedded within phrases.

Each phrase in the piece need only be recorded once. It's repeated in the music you just create it by dragging it from the phrases list again and dropping it on the track where needed—a great timesaver! The program holds up to 100 unique phrases, providing enough scope for most popular music requirements. Like complete musical pieces, phrases may be saved to disk and reloaded as required, so it's possible to build up a phrase library—particularly useful for drum rhythms.

EVENT EDITING

Once recorded, a phrase may be altered using MIDISTudio's editing facilities. Some people might think these a bit primitive, as they work directly on the MIDI event list, without the benefit of grid or wave edit options sweetened found in other sequencers. You can change the note pitch, velocity, and start and stop timing data (in fact, there's a link here). You can also delete or add events, including notes, program change, and certain controllers (including continuous controllers such as pitch bend and after touch). Editing is performed using the mouse, or in some cases input may be read straight from the MIDI keyboard. The editor also allows you to work at the phrase level, so you can copy, split, merge, append, transpose, quantize, and

MIXING DESK

In use the program operates via a main list of screen windows, the contents of which depend on the functions selected. Virtually all operations are mouse-controlled, although there are keyboard equivalents if you prefer them. Its most impressive display is probably the "solo screen", designed to mimic a recording studio mixing desk. Major sequence functions operate via "tape recorder" controls, a mouse click on the appropriate button controlling play, record, fast forward/reverse, etc. Each track also has a mouse-operated volume slider, allowing you to control the volume of each independently. These only work with synths which recognize MIDI Controller 7 commands (though, my Yamaha P55-650 and YF-300-001, so I couldn't try out the sliders). Each track also has an associated activity light, which flashes to indicate MIDI playback activity on that track. If necessary, I enjoyed using MIDISTudio. I particularly liked its phrase-based approach and the ease with which you can build a complete musical piece using the facilities. My only real criticism concerns its slightly clunky operation (because the lack of visual editing aids—particularly a drum editing grid, and its lack of looping facilities, but none are real show stoppers).

At its new price, MIDISTudio offers excellent value for money, so if you're looking for a sequencer make sure you check it out. You could save some money.

Title: **MIDIStudio**
 Publisher: **Loftbook Computing**
 Price: **\$199.95**
 Reviewed: **John S. Davison**

STOS

COLUMN

The company that won't release games if they have been written in STOS ...

The company that releases their own STOS written programs ...

512 colour routines for you to use ...

plus a bit of news

SCANDAL!!

What an awful theme for this issue's STOS COLUMN! It all started up there in Manchester at Manchester HQ ...

Once upon a time, Nick Harper Development Assistant and budding games tycoon, wrote a game - using STOS - called *COLOURS*, and without raising words it is pretty spectacular and by far the best STOS game ever written. Now young Nick had a little trouble getting this game published. Admittedly the pseudo-caricature elements of the game were not suited to some companies current labels, but eventually he managed to get *SOFFLEIN GAMES* (the brilliant company responsible for many of the 8-bit ATARI's best games) interested. That was until they found out it was written in STOS. "Nudge nudge!" Anyway it was a really long story about how in an extract from the rejection letter Nick received:

"Thank you for thinking of us as writing our thin demonstrations of your wit & we are always interested in your talent.

It's afraid that we cannot use your program "Colors" because of its being written in STOS instead of assembler. We did like the game idea and the graphics very much as I told you on the telephone but it is our policy not to use game generators to produce games."

AKKKKKKKKKKKKKKKKK GAME GENERATORS! How is just travelled back in a time warp 5 years? How can a PROGRAMMING LANGUAGE be classed as a game generator? If programmers keep libraries of routines and utilities such as sprite routines to produce products, does this mean that packages such as LATTICE 3, BEYOND 3, TURNING PARCEL or AMES are just glorified "GAME CREATORS"?

"Well we've got the end to SOFTWARE BUSINESS so should that be PROGRAM MODEMS? I don't know, but at the time of writing (according to the trade mag CTRON) ATLANTIS SOFTWARE is being welling budget title to *SYSTEMS PLUS*, a

game familiar to readers of this column as being one of the most addictive and playable pieces of software around. Next month's issue is for the second exciting episode of our saga: *COLOURS*, WILL IT EVER BE PUBLISHED? ...

CHEAT ... CHEAT

Anyway, the above mention of *ATLANTIS* brings me on to cheat codes for the hit game *SYSTEMS PLUS*. Type this code in:

"DON'T F BSK"

When I say exactly I mean kill the space in between the F and S of *FBKSK* is supposed to be there. After doing that try pressing G on the keyboard to get loads of weapons and repair buttons.

ALL THOSE COLOURS

Okay now for the programs. First up this time is another program from the great Terry Massey, this is a replacement to the 512 colour routine published in the last issue, which you need to run this program. If you don't have it please Page 6 Publishing and order a book issue now (you won't want to miss this one!).

Last time I took you through how to create a multi-coloured screen using *STOS 512*. This time Terry has given us a program which displays all 512 colours on screen just like on *Dragon King*. There is a slight problem in that the colours of the master disk with those produced by the program making the master look a bit like the cancelled-off colors from the *PREDATOR*. But this is easily solved by designing your own mouse pointer using the *STOS* sprite editor. Type in *PROGRAM 1*, this is what to do:

LINEs 10-40 Terry's credits

LINE 60 Loads the *STOS 512* routine from the last issue

LINEs 90-100 Set up the screen

LINEs 130-200 Set up the colour bank using the command we looked at in the last issue

LINEs 200-250 Draw a line so we can see which colour we have selected.

PROGRAMS

LINE 280 Starts up the 512 routine, see the last issue for full details.

LINEs 310-360 Contains the main loop, **Line 330** is the one which calculates the colour which is underneath the mouse pointer.

LINE 400 Stops the 512 routine.

LINE 450 Ends the program!

Not too hard to produce an impressive display is it? Next time I hope to have got another 512 colour utility as if you haven't got it yet, make sure you find a copy of the last issue by hand!

ANIMATION

Any old Atari 8-biters out there? Remember how we used to produce animations using PAGE FLIPPING? Well if you are new to the term PAGE FLIPPING, let me give you a brief description of what it does. Do you remember when you were young and computers with the power of a 2081 still filled office blocks creating little moving matchstick men in the corner of a school desk by drawing lines in one position, turning the page, drawing him in a slightly different position and so on for almost 30 pages? This is the basic behind PAGE FLIPPING on a computer, you set up a number of screens, draw some things moving around on them and then display each one in turn.

Francis (I don't actually write some very good PAGE FLIPPING demos in AMIBOS on the Amiga), and the programs in this issue are actually derivatives of those written by Nick Harper (I'm around, doesn't he!). Type in programs 2 and 3, they are both very similar and use DEFINES from the BITOS accessories disk in a file called ANIMATE.DSK. The first one is for PROGRAM 2 which contains a few variables to allow screens with 1 meg or more to specify the number of screens they wish to flip.

LINE 80 Gives credit where it is due. "Frankie" is an endearing term for Francis (I don't).

LINE 80 Sets up the screens.

LINE 90 Loads the Sprite file.

LINE 95 Gets the Sprite palette.

LINE 91 Sets up some initial variables. NUM is the number of screens to flip, the

```
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780 *** *****  
790 *** *****  
800 *** *****  
810 *** *****  
820 *** *****  
830 *** *****  
840 *** *****  
850 *** *****  
860 *** *****  
870 *** *****  
880 *** *****  
890 *** *****  
900 *** *****  
910 *** *****  
920 *** *****  
930 *** *****  
940 *** *****  
950 *** *****  
960 *** *****  
970 *** *****  
980 *** *****  
990 *** *****  
1000 *** *****
```

Program 1 - displaying the 512 colour palette

more screens you have the smaller the effect is. NUM is the number of the starting Sprite that we wish to put on the screen, FIRST is the number of the finishing Sprite. The program will cycle through FIRST-FIRST+NUM-1 sprites in turn with different speeds.

LINE 90 Opens up all of the screens. The more screens you have the more screens you can have open up to a max. of 141.

LINE 95 Clears the physical and logical screens.

LINEs 70-90 Set up a few more variables.

LINE 100 Initializes all the slow subblock systems and the automatic Sprite update.

LINE 110 Is the start of the loop.

LINEs 120-130 Do a bit of maths to work out where to put the next Sprite.

LINEs 140-150 Stack a Sprite on a screen, copy it into the background and then flip it to the front.

LINEs 160-200 Change the screen and Sprite numbers and then check to see if they are in the correct range.

LINEs 210-220 Some more maths/average checking for the next Sprite.

What do you think? Not bad huh? This method is how many demos and games have been written in the past, so if some body says to you they have written a demo with 65536 Sprites on the screen, tell them you can do that - with 51200!

NEW PRODUCTS

Okay it's time to catch up with all of the BITOS related news and product launches. There are now TWO different BITOS newsletters, one done by James Fothergill who is offering a disk which contains some new (unpublished) BITOS entries along in all new subroutines, and the other is a new mag (called BITOS Magazine) which is put together by Dick, Philip and Brenda Guy and is pretty nifty. If you are interested in finding out more about these two take a quick look to the end of this column for an address.

If you think that paper is a dead form of communication and prefer to get your help, news, tricks & tips on assembly language and BITOS from a disk based

MYSTICAL

You are a novice magician creating the rest of his education. During the course of your studies at the temple of the Great Wizard, you gradually cause the disappearance of all the plants and scrolls that have been carefully catalogued over the years. As you can well imagine this does not make you the most popular novice magician that ever lived! If you want to obtain your magician's diploma and return to the Lord High Grand Very Great Wizard's favor, you must go out into the big wide parallel worlds and recover as much of what was lost as possible.

As you can imagine though, there is a tricky side to this problem with this. The parallel worlds are inhabited, and indeed dominated, by unscrupulous gobs who are jealous of any power which is not their own. So as you can imagine, your quest is not to be a simple quest which is at hand however. The Great Wizard, despite being snuffed with you, agrees to let you use the spells and the potions (before you have found them) for your own self defense. As well as this he will allow you on your travels in his giant floating crystal ball.

Your magician character must advance through the dimensions in a setting which scrolls vertically from top to bottom. Along your travels you will meet many hostile characters who have been sent from the gods to destroy you. You must either avoid these characters, or

dispose of them by waving one of the many spells at your disposal. These spells range from the simplest petrification spell to causing war thunders which swallow up your attackers. All of the spells cause amazing consequences and in some cases must be used to be believed! Once you have managed to travel through the dimensions successfully you must place yourself at the center of the magical portals and wait to be transported on to another setting. In all there are four different worlds for dimensions which must be explored, and each of these worlds has three different settings.

Throughout the different worlds, not all of the spells and potions collected must be used, as some can be stockpiled for later use. This is especially useful for your encounters with the gods who appear at the end of each world. The principle is no different from many other games containing 'rest of level guardians'. You must simply avoid everything the god can throw at you whilst trying to cast spells on both him and his minions. If you are successful the Great Wizard will appear in his crystal ball and take you on to the next world.

The graphics in 'Mystical' are probably its most impressive feature, as they are quite superb. Each character is wonderfully drawn in an amazing cartoonlike manner, and everything is animated extremely smoothly. Another to a major aspect of this game and the graphics manage to capture a fantastic 'feel' for the whole game. All of the hostile creatures are tremendous. There are walking trees and little throwing monks, along with Little Red Riding Hood's and ugly swamp things! The sound is also extremely impressive, from the gurgling sounds as your magician takes a swig from a bottle of potion, to the bubbling as he reads a spell. All of the sounds are sampled, from the straggled footsteps to the various belches and growls of the creatures. The music also uses sampled sound and captures



"The graphics are .. most impressive ... quite superb"

the atmosphere of the game superbly.

Basically, 'Mystical' is nothing more than a vertically scrolling shoot 'em up, it merely differs in its setting. Like so many other games you must move along collecting your weapons, and at the end of the level you must defeat the 'guardian' (in this case the god). What makes this stand out a little from the others is the fact that it is not set on some far away planet battling the evil aliens, instead we are treated to a fantasy situation which is considerably more fun than your average game.

Overall, I was very impressed with the quality of 'Mystical'. It is presented in a very professional way. The graphics are of a superior quality, and the sound is superb. In terms of gameplay, I found it to be extremely playable and highly enjoyable, my only quibble with the whole thing is that it takes a very long time to load.

- **WANT A SOUND** - The graphics and sound are some of the best I have seen. They are fun and add greatly to the game.
- **GAMEPLAY** - A typical shoot 'em up in a different environment. Very playable indeed!
- **FEELING** - A superb game of superior quality.



Title: MYSTICAL
Publisher: Infogrames
Price: \$24.99
Reviewer: John Denton jr

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