

ST FORMAT

INCORPORATING

ATARI **ST** REVIEW

**MASSIVE
ST ANSWERS
SECTION!**

MAGIC VS GENEVA

The top two multitasking systems go head to head

APEX MEDIA

The most impressive animation package of all time? Believe it!

A WORLD OF INFORMATION

Hook into the oddities and wonders of the Net with our guide to all things comms...

7 SENSATIONAL ST PROGRAMS

SEE BACK COVER FOR
FULL DISK DETAILS



- Step by step guide to creating your own bulletin board!
- Internet sites and bulletin boards explained and explored!
- Bulletin board etiquette and networking tips
- AtariNOS - how to get the most from your Net software

COSMIC ENCOUNTERS!

Top meteor action in Bloodhouse's Stardust



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value



The Gold Standards

Last month's STF carried a round-up of the products that, over the years, had been awarded the accolade of an ST Format Gold. We were delighted to see that 22 of our titles achieved this high status, and 16 of them are still current products! Who else can give you the professionalism, the attention to detail and, above all, the commitment to the ST/Falcon market than the company that sets the standards...

10011101
00110110
11110000

Programming

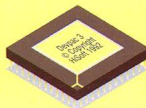
Lattice C 5 90%



HiSoft BASIC 2 90%

HiSoft Devpac 2/3

95%/91%



Az

Word Processors

papyrus GOLD

91%



Utilities

Diamond Back 2/3 92%/95%

Harlekin 3 94% XBoot 3 92%

SpeedoGDOS 4 92%

Diamond Edge 90%



Video/Music



VideoMaster 92%



Quartet 94% Replay 16 92%



Books

The Atari Compendium 91%

Modern Atari System Software 90%

A Golden opportunity...

Now for the best bit ... order any of our Gold titles and receive a free golden gift according to your order value; spend over £30 and receive a 1lb box of Terry's All Gold chocolates, spend over £60 for a gold-plated carriage clock (worth over £15) and order over £120 of goods for a Lorus gold-plated bracelet watch (value at least £35). Order before 30 November 1994 and we will engrave the last two gifts with up to 10 letters of your choice - a truly golden opportunity!

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HiSoft Devpac 3.10	£79.95	Harlekin 3	£59.95	
HiSoft BASIC 2.10	£99.95	XBoot 3	£34.95	VISA
Papyrus Gold	£129.95	VideoMaster ST RGB	£99.95	
Diamond Back 2	£29.95	VideoMaster Falcon RGB	£129.95	MasterCard
Diamond Back 3	£49.95	Replay 16	£129.95	
Diamond Edge	£49.95	Quartet	£49.95	
Modern Atari Sys S/W	£19.95	The Atari Compendium	£39.95	

Please add £3 P&P in the UK (£6 for next day delivery). All prices include UK VAT.

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Up to 10 letters
for engraving:

Please rush me the following software for my Atari computer

Product

Price

P&P

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Name:

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Card No:

Expiry and Issue #:

15 How to download free software, chat with other ST owners and even receive technical support - we escort you gently through cyberspace. Plus, we take you through a step by step guide to setting up your own BBS.

A WORLD OF INFORMATION

AtariNOS

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MagiC vs Geneva

26 Which is the smoothest and most powerful multitasker for the ST? The top two operating systems battle it out head to head. Peter Crush referees the latest gladiatorial challenge.



■ Multitasking on your Atari has never been more accessible, now MagiC and Geneva have arrived. But which is best? We know.



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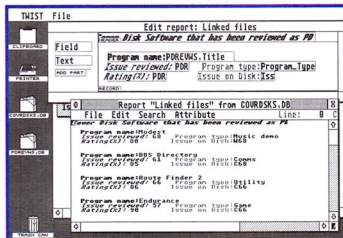
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A guided tour of the Internet, a trip round the nation's BBSs and a step by step guide to setting up your own bulletin board - it's all here!

26 MAGIC VS GENEVA

What can a multitasking operating system offer you? Cut through the hype with our head to head special.



■ If you want to combine databases in Twist 2, you'll need our step by step guide to achieving the near-impossible. Nick 'Monkey Nuts' Peers shows you how.

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Time to dig out your copy of Twist 2 and delve into the chilling land of linked databases.

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Get yourself an altographer smarter desktop with our guide to assigning and creating your own icons.

62 ATARINOS

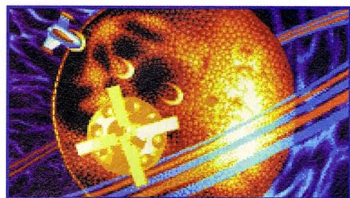
You've got your Internet software, now how do you use it? Simon Forrester illuminates all, in the first instalment of our two-part guide to AtariNOS.

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The first of our ongoing series of Cover Disk tutorials. Nick Peers explains how to make the most of the ST Disk Cat cataloguing system given away with STF 66.

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This Falcon-only animation package really has to be seen to be believed. Simply awesome!
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- 33 OCR**
OCR software can save you hours of typing, but do you have the memory and the time?
- 36 BSS-DEBUG**
If you're one of those god-like people who understand machine code, take a look at this new debugger.
- 40 PUBLIC DOMAIN**
Pacman on Es 2 and Tomtar, Serenade Menu 17, Fruity and Match It, Noughts and Mad Crosses, Grand Prix Manager, Falcon Utilities, Modest, Chinese Horoscope and I Ching, Ozbomb Modules 3, RAE Tutor, Even More Falcon Utilities, Magnet 9 and Gullback, and UFOlogy.



■ Stormin' Asteroids action with the most colourful shoot-'em-up this side of Vulcan. Yep, it's *Stardust*.

- 46 STARDUST**
Are you constantly harassed by malevolent meteors and churchill comets? Yup! Well you won't need this top, new Asteroids-style title then.
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Four tables, eight players and a host of high scores, but can it beat *Obsession*?
- 50 SPACE QUEST**
It's been re-released but have Kixx put the work in to make it a *Monkey Island* beater?
- 51 SPELLBOUND**
Pysgnosis' platform-generating machine grinds into action. Question is: who threw in the spanner?



■ *Spellbound* is yet another cutesy platform game by the looks of it. Read on to find out how good it is.

ST Answers

Clive and the gang tour the ward for seriously disturbed STs... Well, someone's got to do it!



REGULARS

- 6 COVER DISK**
What's this? Oh, it's the Cover Disk pages with the one and only Nick 'Lightly Salted' Peers. For the exciting details check out the panel on the right.
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In-depth report on the specs and promise of the Eagle and Falcon Mark 2. Plus Unisys' proposed GIF tax and a special *Obsession* demo offer.
- 52 ST ANSWERS**
My God, it's huge! With eight pages dedicated to your technical problems (and our solutions, of course) you can be sure both you and your ST stay sane and healthy.
- 69 READER OFFERS**
Grab yourself a copy of the brilliant *Stardust* for just £19.99 - going once, going twice, sold to the alien in the back with three heads.
- 70 SUBSCRIPTIONS**
Why trek down to the newsagents in the pouring rain when you can have the delights of *ST FORMAT* delivered directly to your door? (Er, to get a pint of milk? - Jill)
- 72 READER ADS**
Your shop window to the ST world. Pick yourself up a serious bargain, get shot of that kit you never use, leave messages and join ST clubs and groups.



■ Hints 'n' tips galore with our stupendous Gamebusters section. This month we've the complete solution to the platform star, *First Samurai*.

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Your complete guide to everyone in the ST multiverse - all the addresses, phone numbers and e-mail addresses you could possibly need. Ever.
- 74 GAMEBUSTERS**
Get in the gaming know with the complete solution to *First Samurai*. Plus snippery tips for *Epic*, *Dynablasters*, *Prince of Persia*, *Toki*, and *Double Dragon 1 and 2*.
- 79 BACK ISSUES**
You better be quick! They're selling out faster than platform shoes in a pygmy colony - no, really, that's what our publisher said.
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Simon presents his individual view of the world, STs and the deep pot of trouble that is Valentine's Day!



COVER DISK 68

THIS MONTH...



MAGIC STORYBOOK:
Thrilling engine for creating your own audio-visual stories. Fantastic! Uncompressed size: 577K

BBS DIRECTORY: The Yellow Pages for all BBSs everywhere. Get yourself on-line now! Uncompressed size: 281K

PICSWITCH 1.01: View, dither and print pictures from 20 different image formats, then export them in IMG format, giving you maximum versatility and usefulness. Uncompressed size: 216K

TAQUIN: French sliding puzzle-up for all STs. Colourful, manic, and addictive. Just one more go then... Size: 55K

STOSSER: A highly civilised document text display. No, really! It presents text files with pictures and background music. Uncompressed size: 98K

JUMBLE-UP: Takes any *Neochrome* or *Degas* low or high resolution picture and jumbles it up into a 50-piece jigsaw for you to solve. Supremely frustrating. Uncompressed size: 132K

AUTOBOOT: Prevent your programs from auto-booting with this tiny program. It's easy when you know how! Size: 2K

MENU: Dearchive and transfer your Cover Disk programs quickly and easily with our easy-to-use *Menu* utility. Size: 10K

BACK UP: Prevention is better than cure. Make that vital backup of your precious Cover Disk with this indispensable program. Size: 13K



Production controller Claire Thomas
Paper controller Fiona Deane
Disposable security guards Simon Chittenden; Mark Glover; Jon Moore; Chris Stocker; Simon Windsor; Jason Tildley; Ollie Gibbs
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COVER DISK

GET STARTED WITH THE ST FORMAT MENU PROGRAM

ST Format Program Extraction Utility - Written by Software

1. Format Cover Disk 35
Select the program you wish to copy, press **Serial** and follow the instructions on screen. After the file has been formatted successfully, press the **ESC** key to exit.

2. Select the program you wish to copy from the list. Press **Serial** and follow the instructions on screen. After the file has been formatted successfully, press the **ESC** key to exit.

1 Put the Cover Disk in Drive A, and double-click on the ST 66.PRQ icon. Once the ST FORMAT logo appears, press any key and you're faced with an Options screen not unlike this one.

ST Format Program Extraction Utility - Written by Software

3. Select the program you wish to copy from the list. Press **Serial** and follow the instructions on screen. After the file has been formatted successfully, press the **ESC** key to exit.

2 Once you've made your selection, you're faced with your file selector. Select Drive B (TOS 1.02 owners should click on A:) and replace it by typing **B:** before clicking on the Close Box icon.

ST Format Program Extraction Utility - Written by Software

4. Select the program you wish to copy from the list. Press **Serial** and follow the instructions on screen. After the file has been formatted successfully, press the **ESC** key to exit.

3 If you have a single drive you'll be asked to insert disk B (your blank disk) into Drive A. Do so, and once your file selector displays the information concerning Drive B, click on OK to proceed.

MAGIC STORYBOOK

BY: Jayne and Richard Dunn
MACHINES: All STs (TOS 2.06 with STOS Fix 3)
FALCON COMPATIBLE: Yes (with STOS Fix 3)
MEMORY NEEDED: 512K
RESOLUTION: Low
UNCOMPRESSED SIZE: 577K

Getting started

Magic Storybook is auto-booting. Once decompact to your blank disk, just switch your ST on with the disk in your drive.

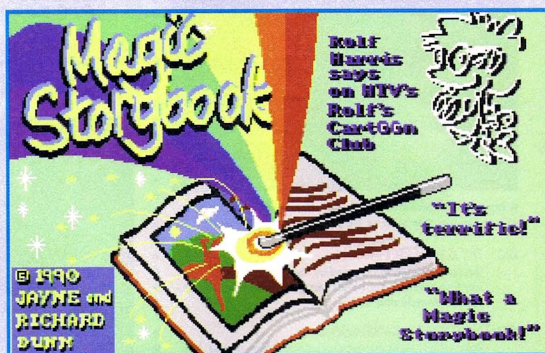
About the program

Magic Storybook first featured on the Cover Disk way back in issue 39. It's a superbly crafted engine with which kids of all ages (and that includes most members of the ST FORMAT team) can create their own stories, which are then brought to life with animated graphics, sound effects and text in true multimedia fashion.

Three example stories are provided to give you an idea of how it all works - once the pro-



■ Adding details, such as foreground characters, is a cinch with *Magic Storybook*. Even Jill could do it.



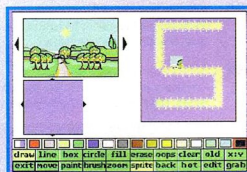
■ Even Rolf Harris likes *Magic Storybook*, and he should know, being a children's TV presenter and everything.

gram has loaded just move the mouse over the story you want to try and it'll load in. You then see the first screen of whichever story you've selected, complete with animation and sound effects to give you a rough idea of what the program is capable of. Clicking on the mouse takes you to the main editing screen.

Editing

Here you see a backdrop for the selected story's first page. You can paste foreground objects on to each page of the story, and *Magic Storybook* is clever enough to enable you to paste objects behind and in front of other objects. Once done, clicking on the Play icon shows you how the whole picture looks when animated.

You can also add sound effects from a predefined selection to give the story more atmosphere



■ This is the editor program, which enables you to create your own backgrounds, foreground characters and even animations!

and also alter the text - perhaps you'd like to gear one of the supplied stories to a different age group. Any mistakes can be removed by selecting the Oops icon, then clicking on the element to remove, which flashes when it's been highlighted.

Grubby fingers

The program has two settings to prevent little kiddies from doing too much damage to the stories

Getting Magic Storybook on to a single disk

To decompact *Magic Storybook* on to a single blank disk, you'll need to format your blank disk to 80 tracks and 10 sectors. There are numerous programs that do this, some of which

have featured on recent Cover Disks. *Fastcopy 3* appeared on Cover Disk 62, *Disk Kit* on Cover Disk 66 and *KAOSDisk* on last month's Cover Disk. The *Magic Storybook* files have

been archived in two separate files to make it possible to dearchive them, but the *Menu* program will automatically make the necessary arrangements for you, so don't fret!

Don't forget

Write-protect your Cover Disk. Slide the black tab so you can see through the hole.

Make a backup using the *Back Up* program on the Disk. NEVER ever run software directly from the Cover Disk except *Back Up*.

Many Cover Disk programs are compressed to fit them on the Disk. Use the *Menu* program to copy and extract them to your blank disks. Step-by-step instructions are given just to the left.

Read the instructions in these pages and in any document file that is on the disk. They're there for a reason.

If you have any general problems with your ST, consult your manual. If you're still stuck write to: ST Answers, ST FORMAT, 30 Monmouth Street, Bath, BA1 2BW.

ST Format Program Extraction Utility - Written by Detmar Software
 Please: the short-name stay on your Magic ST!
 Please select the DESTINATION for this program
 Press any key.



4

Once you've clicked on OK, you'll be faced with another dialog box telling you to insert disk A (your Cover Disk) into the disk drive. Do so before clicking on OK to start transferring the program.

ST Format Program Extraction Utility - Written by Detmar Software
 Please: the short-name stay on your Magic ST!
 Please select the DESTINATION for this program
 Press any key.



5

The relevant files will be loaded into memory before you're told to insert disk B (your blank disk) into the disk drive. Do so, and click on OK to start saving the files to your blank disk.

Self extracting LZH archive (22 KB by Stefan Gross)
 Extracted: 1 megabyte
 Extracted: 1 file
 Please any key
 Press any key the program specified has been transferred across.
 Press any key.

6

If the file is compressed, you will be told that the files are unpacking (see above). Once done, you will be told of the successful file transfer and you are returned to the Menu screen. Press [Esc] to quit.

you've spent hours altering for their enjoyment. When the program is set to 5+ no editing, printing, loading or saving can be done, while several other options from within the other menus are also disabled, just to be sure.

Clicking on the 5+ icon turns it into an 8+ icon, which means you can use these settings. The Edit icon is still disabled however, and to run the editor you must create a blank disk labelled 'Editor' and copy the AUTO folder across to it. Once there, delete MSBK320.PRQ, then re-boot with the 'Editor' disk in the disk drive.

When it's loaded, select 'Load' and insert your *Magic Storybook* disk into the drive when prompted to enter the 'Workbook' disk. Select IDEAS (or NOREGYET if you've saved an edited file) and when you return to the main menu, click on 'Edit' to begin editing backgrounds, sprites and even animated sequences. We'll be covering the editor in more depth next issue, so for now give it a whirl. It's largely self-explanatory.

It's shareware!

If you enjoy *Magic Storybook* you'll undoubtedly want to register it to lift it two restrictions (it can't be run from hard drive and you can only save edited stories with the filename NOREGYET). It costs just £10, for which you also get a 20,000-word manual, two new stories, a complete demonstration story to help you use the editor and a utility mixing character and sprites from any of the stories. Abbreviated instructions, along with full details of how to register, comes in the READ_ME file that's also included.

Next month we'll be featuring an in-depth tutorial on how to get the most from *Magic Storybook*, as well as including the files for 1MByte STs - which combine both the editor and game programs into one. Watch this space, and all that.

THE BBS DIRECTORY

BY: Mark Westguard
MACHINES: All STs (TOS 2.06 with STOS Fix 3)
FALCON COMPATIBLE: Yes (with STOS Fix 3)
MEMORY NEEDED: 1MByte
RESOLUTION: Medium/High
UNCOMPRESSED SIZE: 281K

Getting started

Once it has all decompiled, just double-click on BBS.PRQ to run the program. Easy.

About the program

The *BBS Directory* is essential for discovering which BBSs are situated where in the UK - particularly handy if you've just read our BBS feature on page 19 and you'd like to keep your phone bills down. This is the full version of the program, exclusively for *ST FORMAT*, featuring over 620 BBS numbers.

It's based around a graphical map of the British Isles, which makes locating BBS sites that much easier. There are seven options you can use to find your chosen bulletin board. You can search for an individual board by

typing in its name, phone number or, if you want to be really vague, just the area you wish to search. Alternatively, you can elect to do a central point search, which looks for a predefined number of miles around it. Just click the mouse on the part of the map you're selecting as your central point and select 'Radius BBS Search'. This enables you to find BBSs that are local, and perhaps more convenient for you.

Practical features abound!

BBS Directory also gives you a 'code search' option where you can enter either the name or exchange number and let the program find out the missing bit for you. 'Show All' displays all the exchanges listed around the country, and gives you a graphical representation of their overall distribution.

Once you've found a BBS or ten, you can then configure one of four comms programs (*Vanterm*, *Uniterm*, *TeddyTerm* or *FreeZe Dried*) with the relevant details regarding those BBSs. Just select



Apparently there are no BBSs in the middle of Wales. But this isn't a problem, there's only sheep there anyway.

'Disk Functions' and follow the on-screen prompts, remembering to have your comms disk ready. Finally, you can 'Search Results' to print or find more details about your chosen BBSs. Many come with information about the SysOp, the BBS' main interest group and its maximum baud rate.

The program was coded in *STOS*, and requires the latest version of *STOS Fix*, which featured on last month's Cover Disk, to run on STs with TOS 2.06 and the Falcon. It's a paltry £5 to register and in return you'll get the latest version of the program, complete with all the new exchange numbers following National Phone Day on 5 April (when, for example, Bath changes from 0225 to 01225) and up-to-date information concerning the featured BBSs (for example, the *ST FORMAT* BBS no longer functions, but is nevertheless still included in this version of the BBS Directory). Full details can be found in *MANUAL.DOC*.

THE BBS DIRECTORY				
8 Bulletin Board Systems Found			Page: 1	
NAME	NUMBER	LOCATION	MILES	KM
ADLIB	091 378 2659	TYNESIDE	-	-
ADLIB	091 378 2659	TYNESIDE	-	-
JACKIES PALACE	091 398 3078	TYNESIDE	-	-
LOG ON THE WATER	091 345 2345	TYNESIDE	-	-
PHOENIX	091 477 5472	TYNESIDE	-	-
THE CASTLE EDEN	091 518 1058	TYNESIDE	-	-
THE DOCK	091 4946979	TYNESIDE	-	-
THE OLIVE GROVE	091 228 0427	TYNESIDE	-	-

OK PREVIOUS PAGE NEXT PAGE BBS INFORMATION SHOW LOCATION PRINT ALL

PROGRAM INFO
EXIT PROGRAM

With The *BBS Directory*, you can find AdLib BBS - home of Frank Charlton and Andy Curtis and stamping ground for the *ST FORMAT* team. Be very careful.

ST FORMAT ISSUE 68

PICSWITCH 1.01

BY: John Brochu
MACHINES: All STs, TTs
FALCON COMPATIBLE: Yes
MEMORY NEEDED: 512K
RESOLUTION: Any
UNCOMPRESSED SIZE: 216K

Get Started

Double-click on PICSWIT.PRG inside the PICSWIT folder once you've decompacted the program to a blank disk.

About the program

PicSwitch is a powerful and flexible shareware image viewing and printing utility. It supports 20 image formats, including GIF and PCX, Degas and Neochrome, and displays in any TT and ST resolution. It's especially suited for monochrome displays, as the picture on screen matches more closely any printed output you produce with it.

Once loaded, select the picture you want to import by selecting 'Open' from the File menu. If you're in low or high resolution the picture will be displayed on screen. If, however, you're in medium resolution you'll need to access 'Adjustments' from the Windows menu

Problems?

If you can't load, copy or back up your Cover Disk then you may have a faulty disk. Send the disk and a padded self-addressed envelope to:

ST FORMAT March Disk Returns,
PO Box 21, Daventry, NN1 5BU. We pay the return postage for you.

PLEASE DON'T send faulty disks to our Bath or Somerton offices. We don't keep stocks of Cover Disks.

If you are having problems with a Cover Disk program, reread the instructions and any DOC files. If you still have problems, call the **ST FORMAT Cover Disk Hotline on 01225 442244 on Wednesdays between 2pm and 6pm only.**

Cover Disks are double-sided. If you have an old STFM and can't read the Cover Disk then you need to upgrade your ST to a double-sided drive.

If you have other hardware or software queries, contact the manufacturer or publisher. Or ring the official Atari Helpline on 0131 332 93233 between 6pm and 11pm Monday to Saturday and 8pm and 11pm on Sundays.

Do not adjust your set

What makes PicSwitch so great has to be its 'Adjustments' box, which is accessed from the Windows menu. Here's a rundown of what does what to that picture you've just imported.

1 Bri: alters the brightness of your picture.

2 Con: alters the contrast of your picture.

3 Sep: colour separation (low/med res only). The lower the setting, the finer the colour gradation. It's recommended that you use a setting of 10-15 when using 256-colour pictures in ST low resolution.

4 Display: controls how your pictures are displayed on screen. You can select a resolution (assuming it's supported on your setup), the number of colours you want displayed and whether you want to display the image in colour or as shades of grey.

5 Dither: gives you numerous dither options depending on what resolution you're using. This option is only available with pics displayed as greyscale or in high res.

and hold the mouse down over 'STLow'. A list of resolutions will be displayed, from which you can select 'STMed'. Finally, click on Adjust to make the changes and display your picture.

Processing your pictures

If you've loaded a 256-colour picture, you might be a little bit disappointed with what your ST comes up with. To compensate for this, *PicSwitch* comes with a host of image processing options to improve the display of your pictures. Most are accessed from the 'Adjustments' box (see the panel above for full details).

Dithering creates the illusion that your ST is displaying more colours than it is by shading the picture with dots. It only works in greyscale in lower resolution, but if you're running *PicSwitch* in high resolution you can subject your picture to one of nine dithering options to give 256-colour pictures 'a kind of magic' that monochrome displays could normally never do. Once you've selected your desired option, click on 'Adjust' to see what effect it has on your picture.

Printing options

PicSwitch supports Epson 9-pin and 24-pin printers, and HP Laserjet compatibles. Once you've set up your printer to do the business, select 'Print' from the File menu



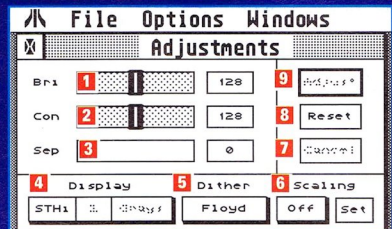
■ The program can be configured in all manner of ways. Here's one of the option boxes - impressive or what?

6 Scaling: this enables you to scale the picture as you desire. Big pictures can be scaled to fit the screen (there's even a 'best fit' option).

7 Cancel: cancels changes made since you last adjusted the picture

8 Reset: resets Bri, Con and Sep slider settings to their original positions.

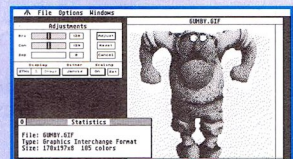
9 Adjustment: performs any changes you've made on to the drawing itself.



and you can select your printer type and resolution (up to a maximum 300 x 300 dpi on the HP Laserjet). You can also scale the image to fit the best way on the page, and render it to get the best possible shading effect (using all of the dithering options that are available when displaying in high resolution).

What else?

Selecting 'Image Aspect Ratio' from the Options menu enables you to alter the size of each pixel displayed on screen. The default setting is 1:1, but you can select 1:2, 2:1 or 4:1, which make the picture more blocky. Numerous options are also available in 'Preferences' from the same menu, including the option to configure how much memory you give to *PicSwitch* (useful when multitasking for example). The default configuration is 'use all available' so you probably won't need to access this much.



■ I am not mad! I am not mad! There's nothing like a Gumby cracking you over the head with a plant pot to wake you up in the morning.

Although *PicSwitch* doesn't claim to be an image conversion utility, you can export monochrome images in IMG format for use in DTP and art packages that support the file type (and you'll find that most do).

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BATTLE OF THE BIRDS

By NICK PEERS

As we revealed last issue, two German manufacturers have taken on Atari's TOS-based technology and produced new machines – the Eagle and the Falcon Mk 2 – to fill the void left by Atari's departure from the R&D side of the personal computing scene. Although Atari's preoccupation with the Jaguar has seen their commitment to TOS-based machines decline to the point of non-existence, these two new machines developed by independent manufacturers show that Atari technology remains a viable proposition, especially when aimed at a more specialist audience.

The Eagle has landed

The Eagle was announced by GeSoft at the ProTOS show in Germany in late November last year. It's a TT clone but with a higher specification – while it uses the TT's technology, it outperforms its predecessor by featuring a faster processor as standard. And its upgrade options aren't restricted to the TOS platform: even PC and Mac processors (due at the end of March and July respectively) can be incorporated. This not only ensures the Eagle stays with the competition, but also means that it can be upgraded to access a host of software and hardware add-ons from other computer platforms.

The Eagle's MIDI ports and compatibility with existing Atari software (such as *Cubase Audio*) make it a good bet for musicians, while its workstation-quality graphics also make it suitable for serious



■ Early C-Lab Mark 2 Falcons will strongly resemble their predecessor, at least on the outside. Meanwhile, on the inside you'll find more memory and hard drive space, as well as a bug-fixed version of TOS.

desktop publishing and artwork. Hobbyists, with a penchant for keeping up with the latest technology, will find the upgrade options a tempting prospect too.

Gasteiner, who will be the UK distributors, plan to unveil the Eagle officially at Spotlight '95, the Atari and Amiga show happening at the end of June. Call Gasteiner on 0181 345 6000 for more details about the show.

A new Falcon swoops

The Falcon Mk 2, announced at the recent London Atari show by Music Village, is more solidly based on existing Atari technology, ensuring that compatibility with the Falcon is maintained. Having licensed the Falcon technology from Atari, C-Lab (who are developing the machine) have aimed their new machine squarely at the musician with the emphasis placed on its dedicated musical technology, which includes MIDI ports and real-time hard disk recording and editing. The original Falcon scored highly in this sector – the original release of *Cubase Audio* boosted its sales by up to 500

per cent at the end of 1993.

C-Lab see the Falcon Mk 2 as being part of "the next generation of home recording products". Before the release of the Falcon, budding musicians would have forked out at least £20,000 for the equivalent technology. However, some of the original Falcon

machines suffered from bugs, which caused problems when running *Cubase Audio* and *Logic Audio*. Atari refused to guarantee the machine's compatibility with these pieces of software, but C-Lab have recognised that the Falcon can never be successful as a home recording machine if it suffers (or is reputed to suffer) from such fundamental problems, so all their new Falcons will come with ready-to-run demos of both programs to prove that they will run with no modifications. The new Falcon will also come with what C-Lab refer to as "adequate memory", by which they mean 14MBytes, as compared to the original Falcons which came with a mere 1 to 4 MBytes as standard. This makes it easier for first-time users to get the machine they want without the hassles of upgrading, and the extra memory makes the machine more viable when used in real time (in a live situation for example). The Falcon Mk 2 will also come with a 500MByte SCSI hard drive as standard, which will be fast enough to deal with recording in real time using the Falcon's direct-to-disk technology. C-Lab have obviously done their homework properly.

Prices are still unconfirmed, although it seems likely that the final price will be comparable to an Atari Falcon upgraded to 14MBytes with external 500MByte hard drive. Digital Village are distributing the Falcon Mk 2 in the UK, and they

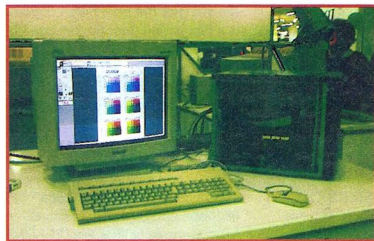
THE NEWS

can be contacted on 0181 440 3440 for the latest developments.

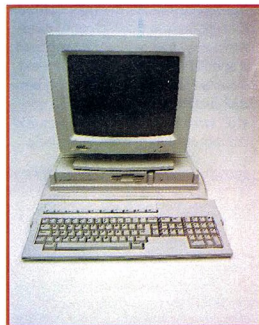
So which is for you?

The Falcon Mk 2 appears at first glance to be the musician's choice. It's been developed by a company renowned for its musical software and has been geared specifically towards musicians. Its compatibility with existing Falcon and (to a lesser extent) ST software is also a good selling point. C-Lab are already considering the Falcon's multimedia capabilities as a future selling point, boosted by the machine's excellent graphics and sampling facilities.

The Eagle is a machine geared to the future. Although based on TT technology it should appeal to musicians as well as graphic designers. The upgrade options are attractive, and if you want a machine that can keep up with the pace of technology the Eagle may well be the one for you, if you're prepared to pay for it.



■ Here's the Eagle showing off at the recent ProTOS show in Germany at the end of last year.



■ The TT was Atari's first leap from 16 to 32 bit technology, and was a powerful, if expensive machine. The Eagle could well be its saviour.

Direct impact

Even as we write, Impact Software are putting the finishing touches to *Team*, the realistic, 3D, STE and Falcon-only football game, which we previewed in issue 66. Impact, who have been operating independently for about three months now, will be selling the game directly for £24.95. If it lives up to expectations, *Team* should be

one of the better games of '95. (Slight understatement - Nick)
Unfortunately, various problems prevented us from bringing you the Cover Disk demo this month, but with a little luck we should be able to bring you the full review and a demo shortly. For more details contact Impact Software on 01280 850450.

■ Two of the world's finest teams prepare to do battle in *Team* and Nick is getting impatient. But where have Birmingham... ouch! Geroff!



COBBLEDICK'S A GENIUS

DUNCE'S CAP SOFTWARE, through which Dave Cobbledick published his renowned PD and shareware games, have recently closed. Dave Cobbledick is now planning to publish PC games through a new company.

The withdrawal of a programmer is, of course, a loss to the ST community. Dave decided to make his move because the response in terms of people registering the software he was releasing was abysmal. Be warned - if you don't

support software producers, they'll stop supporting you.

It's not all bad news, though. Before Dave left he distributed the source code of his work to several PD libraries: Merlin, Floppyshop, Caledonia and Goodman, to name but a few. You can buy copies of Dave's ST software (although he no longer offers guarantees on his work) directly from Merlin PDL - no prices have been announced yet. And if you do have a PC, and are a fan of puzzle games (Dave's spe-

ciality), you could contact him for a list of his new PC titles. The address is: Genius Software, 245 Rosalind Street, Ashington, Northumberland, NE63 9AZ.

■ Dave's games have bought entertainment, happiness and 'pairs' games to the world.



Obsessed with the Everglades

THE HEADLINE MIGHT NOT WORK but Richard West, the man behind Everglade (the Scottish mail order company) has recently announced a special offer on *Obsession* - last issue's *FORMAT* Gold-scoring pinball-fest. You can get a demo version (which comprises the Aquatic Adventure table) from Everglade

for a measly £2.99. If, having played it, you decide you like the game, just return the demo disk with £21.94, and you'll receive the full version absolutely free! (Er, *run that one by me again?* - Karen) Write to Everglade at: 68 Telford Street, Inverness, Scotland, IV3 5LS, or call 01463 240168.

NEWSDESK GOES ON-LINE

THE COMPUTING INFORMATION agency, NEWSdesk, will be on-line from the beginning of March (as opposed to being a mailbox service for anyone with a need for information). This means that as well as being able to receive the latest, most useful information at the speed of an electronic packet, you'll be able to post your own details and info in the same way.

Among the companies who're supporting NEWSdesk with accounts of

their latest activities are Hewlett-Packard, IBM, Mercury, Hayes, Hitachi, CIMdata and Olympus. Early on in the service's life, as well as posting their usual news, companies like Digital, GPT and other divisions of Hewlett-Packard will be 'going live' on the net.

You can find further information about this service, along with details of some great special offers for peripherals, by e-mailing vtrelfa@ipmg.attmail.com.

No such thing as a free GIFT

CONCERN SPREAD RAPIDLY through the on-line community recently when Unisys announced that they were planning to tax the GIF image file format. Although the standard has been in public domain use for over seven years, anyone producing commercial software that uses GIF files will now have to pay a \$1 licence fee, followed by a royalty of either 1.5% or \$0.15 on each unit sold, whichever is higher.

Following the furor surrounding the announcement, Unisys/CompuServe made it clear that their plans are not quite as radical as they initially appeared. Unisys are currently applying for a patent for the LZW compression system, which is behind the GIF

format, and therefore have the legal right to impose the tax. However, having been free for so long, it does look like money-grabbing tactics to establish charges at this late stage, particularly as CompuServe have encouraged its widespread use and royalty-free licensing for years. Unisys are currently in financial difficulties, but they continue to argue that this is a move to protect their intellectual property rather than to make a quick buck.

Microsoft have announced their intention to devise a similar image format that doesn't touch on the Unisys-patented LZW system, so expect to see a few more confusing and incompatible image formats on the ST soon.

DOOM ON THE ST?

YES! HOT ON THE heels of the stonkingly brilliant *Obsession* Unique Developments are releasing the first ever *Doom* clone for the STE and Falcon. Entitled *SubStation*, it looks like being another smash for Unique Developments, proving once again that the STE and Falcon can easily keep up with the big boys in the fast moving

graphics and gameplay stakes. *SubStation* will run on 1MByte STEs and Falcons, and feature an option to link up to four machines via the MIDI ports. You can then play against three others or in teams of two in the battle for

■ *SubStation* is due out in April from UDS, publishers of the *FORMAT* Gold winning *Obsession*. With that kind of pedigree, it looks like being a winner all the way!



SubStation, 2,500 metres under the sea. For the uninitiated, *Doom* is a fast-paced, first person perspective game in which you run around a realistic 3D environment killing everything in your path. Mindless, violent fun!

Obscene publications

WORD HAS REACHED US THAT the *Mega Archive* CD-ROM from System Solutions contains textfiles detailing pornographic acts, described by the Police as being a

contravention of the Obscene Publications Act. System Solutions have stopped selling the CD-ROM and a new version is being prepared for release as we speak.

MEMS SHOW IN APRIL

THE SIXTH ANNUAL MUSIC AND MIDI Show will be held at Olympia 2 in Kensington from Friday 21 to Sunday 23 April. Supporting the show are MIDI producers Music Sales, Heavenly Music and Time and Space, and the larger names in the music industry will also be there, including Roland, Digi Design and Harman.

As well as loads of top show bargains, you'll be able to attend semi-

nars, tutorials and clinics on all aspects of electronic music, from setting up your MIDI system to refining your studio. Tickets are available on the MEMS hotline ☎ 01369 707888, and by booking early you can reduce that £8 price tag to a mere £5. It's the music event of the year, and it's tailor-made for you. If you're into music, be there. (And if you're not, why are you reading this?)

A GOOD OMEN

IF YOU'VE PROGRAMMED ON more than one computer format you could probably go on at great length about problems with compatibility. And if you've ever had to convert a game to run on another format, well... However, Esquimalt Digital Logic Inc have just announced the release of OMEn, an Open Multitasking Environment that provides a standard platform across all computer formats. This means that programs written on your ST in the OMEn environment can be run on a PC (from within OMEn) with no conversion troubles. *Theoretically.*

The system, although still essentially in the development stage, has been released on the ST, is running on the Apple Mac and is in progress on the PC. As it's completed on more and more formats, software you write with OMEn will

be usable on more and more machines. The package will be released as shareware, enabling you to run OMEn-compatible software free of charge, and if you pay the registration fee you receive manuals and software tools to develop your own programs.

Not surprisingly, there are still many questions that remain unanswered, particularly as to exactly how flexible and usable the language will be. When you write a system to run as standard on several machines you run the risk of creating a system that works to the level of the worst machine – you could end up with Falcon software that only runs to the standard of a 512K ST. We'll be able to tell you more when we review it across a number of formats. It's an intriguing idea, and one we're looking forward to testing in practice.

ANOTHER ULTIMATE SOUND SYSTEM

AS IF YOUR ST DIDN'T HAVE enough of a sound system under its belt, Yamaha have recently released the MU80, a 'desktop tone generator, digital FX and EQ module'. For those of you who never really understood MIDI-ese, this is a synthesizer capable of creating 660 different instrument voices, as well as 18 drum kits.

The AWM2 (Advanced Wave Memory) gives the box an excellent output, while 64-note polyphony

avoids note-stealing. Signal processing has also been taken care of – the MU80 has a 5-band graphic EQ, plus four independent effects processors, and the 43 FX algorithms include reverb, flange, distortion, pitch shifting and other modulation effects.

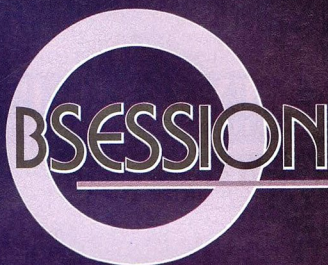
Of course, the standard MIDI functions are supported, with two independent inputs, each giving an input for 32 parts. Mac and PC owners will be able to use the direct-to-host adaptor supplied, but the ST can use the box directly anyway.

The MU80 costs £699 (sounds a lot, but it's a similar price to other comparable products), and you can get more information via the Yamaha-Kemble Product Information Direct Sales Line (phew) on ☎ 0908 369269. Expensive, this music lark. **stf**

■ Have you ever noticed how the more expensive a box gets, the smaller and more insignificant it looks?



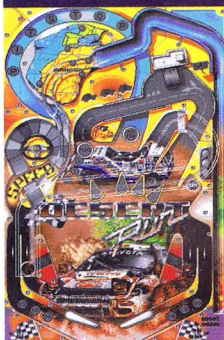
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A WORLD OF INFORMATION

We told you how to get into comms a couple of issues ago. But once you're there, where can you go? And what's on offer? Clive Parker and Simon Forrester reveal a new world of data, information and, of course, *Star Trek* pics.

You read the Internet feature back in issue 65, went out and got yourself an *Demon* Internet account and spent several nights hunched over your ST 'surfing the Internet'. So, what are you going to do with it now? After all, there's only a finite number of Atari sites you can possibly visit, and you've already been to most of them.

There's something you should know. Just because you're using an ST or Falcon to access the Net doesn't mean that you're restricted to visiting Atari sites. Oh no. You can visit *any* site on the Net, using *any* kind of computer. That's the whole point. Of course, the Internet is a brilliant way to get the latest PD and shareware software for your ST and Falcon, but

there's so much more out there for you to explore.

It's very big

The Internet is so big that it's impossible to explore the entire infobahn. If the Internet remained the size it is today, you wouldn't have time to visit every site in your lifetime. And it's still growing. At the moment, there are over three million computer systems connected to the Net on a permanent basis. Pretty big, huh?

Add to this all the people using modems to connect to the Net on an occasional basis, and the number rises to somewhere between 30 million and 60 million. At the present rate of expansion, Microsoft estimate that by the end of 1996 there will be more Internet

traffic than telephone conversations taking place.

The main traffic on the Internet is **e-mail**. There are an estimated 100 million messages a day zipping over the Net, and a good number of them seem to end up in my mailbox! The other biggies on the Net are the **World Wide Web**, **Usenet**, **ftp** (file transfer protocol) and **gopher**.

The Web is a graphical hypertext-based service enabling you to read text, view images, watch movie clips and listen to sound samples. Usenet is the world's biggest bulletin board system with 12,000 different chat forums. Meanwhile ftp and gopher are the two main methods of moving software and files from one place to another over the Net.

What kind of stuff?

It would be impossible to even start listing the amount of information you can expect to find on the net, but here's a taster. In Usenet, there's text-based information on any subject you care to mention, from aardvarks to zephyrs.

Using ftp and gopher you can get ST software, sound-files, MIDI files, MOD-files and all kinds of images in GIF, JPEG, PCX and TIFF formats.

And there are mailing lists. Got a hobby or interest? There's a good chance that there's a mailing list that can automatically send you information about it. All you have to do is send an e-mail and ask to join the list.

So, let's see what's out there. Engage. And so on.

Star Trek: Generations

World Wide Web:
<http://generations.viacom.com/>

If we're featuring one Web page then it has to be this one. This is an official Web page put together by Viacom, where you can find out more about the new *Star Trek: Generations* film. The Web page is available in text format, so you can use the Lynx text-based Web browser for the ST.

There's lots of behind-the-scenes stuff about the film, including biographies, *Star Trek* history and 'filmographies' of the cast and crew. You can also order *Trek* goodies like books or communication badges (at several times the price you can get them in the shops, naturally).

The Web page doesn't spoil the film for you by revealing the plot. Instead, you can find out lots

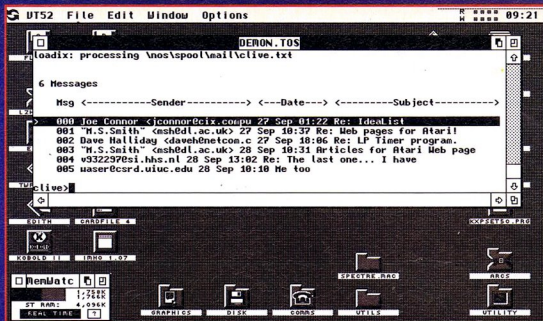
of behind-the-scenes information and download pictures and sound samples. You can even download movie clips of the cinema trailer and play them using the AVI movie player software from 16/32 Systems. The film clips are huge: the smallest is 4MBytes and the largest is over 12MBytes.

The *Generations* pages are packed with information for Trekkers keen to learn more about the next phase of the *Star Trek* mythos, but remember guys – it's only a movie.

Atari Newsgroups

Usenet: Newsgroups:
comp.sys.atari.advocacy,
comp.sys.atari.announce,
comp.sys.atari.st and
comp.sys.atari.tech

These are the newsgroups on Usenet where you can find all the technical help and news you'll ever



■ E-mail is the greatest single use for the Internet.

need for your ST, TT and Falcon. Every aspect of Atari computing is discussed here, except games. If you want to know about the latest versions of freeware, shareware or commercial software, this is the place to look. If you have a problem with a piece of software, or if your ST has died on you, all you have to do is ask and you'll get loads of advice and help. Why are ST owners so friendly?

There's also a pretty active 'for sale' and 'wanted' area where you can pick up a bargain. Good stuff.

UK Media Usenet: Newsgroups: uk-media

All kinds of chat and discussion about the state of the UK media, ranging from questions like "Does .net have a future?" to The Mellon Farmer's Hit List. The former is an ongoing discussion about .net and other Internet mags, while the latter is a weekly debate on the savage editing of films transmitted by the BBC and ITV.



■ Nip over to the comp.sys.atari.st on Usenet for the latest news about the ST world.

Japanimation Usenet: Newsgroups: alt.binaries.pictures.anime

If you like Manga videos, you'll love this newsgroup. It includes loads of images digitised from Manga and other Japanimation



■ So, the two captains meet at last. This is just one of the 40 images that you can download from the *Star Trek: Generations* home page on the Web.

ANY CHANCE OF A TIP, GUV?

1 Get a fast modem, you spend far less time on-line and you keep your phone bills down. A 14,400 modem is the slowest you should consider.

2 Always answer e-mail off-line. Connect to the Internet for five minutes, download your e-mail and then disconnect. Compose the answers to your e-mail off-line, connect to the Net for five minutes, upload them and then disconnect again.

3 Avoid slow sites. Some ftp and gopher sites can be painfully slow at sending files. To keep your bills down, stay away.

4 Avoid overseas ftp and gopher sites. Most of the major software

sites in the US and Europe have mirror sites in the UK where duplicates of all files are kept.

5 Plan your on-line session. It's no good going on-line and meandering from site to site – that's a recipe for high phone bills.

6 Don't be fooled into joining a commercial on-line service like CompuServe, Delphi or CIX

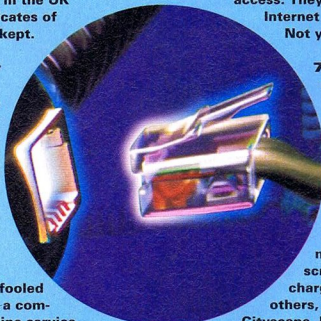
who charge by the hour for access. They aren't full Internet providers. Not yet, anyway.

7 Avoid Internet providers who charge hourly connection rates. Get an account with a provider who has a fixed monthly subscription charge. Among others, Demon, Cityscape, RedNet and EasyNET have fixed rates.

8 When you choose a service provider, make sure you pick one that has a local access number. BT are considering charging all UK calls at local rates, but it's not likely to happen soon.

9 It's cheaper to connect in the evening and at weekends (don't you watch those annoying BT ads?). The problem is, everyone else connects at the same time. Oh well.

10 Get hold of a copy of .net magazine every month for all the latest news about the Internet. They've got an absolutely top-notch writing team, including a brilliant award-winning technical editor who... (That's enough of that – Karen).





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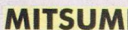
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videos, along with original Manga-style pictures created by Japanimation fans worldwide.

The images are uploaded as uuencoded text-files. You have to download the text-files and use a uudecoder program to convert the text back into a binary image file. It's not a difficult process, and the results are worth the hassle.

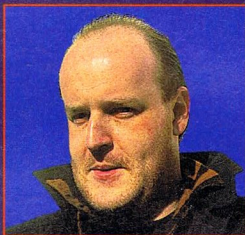


■ A typical long-logged Manga hero, downloaded yesterday.

Atari IP support e-mail: frank@tachyon.demon.co.uk

Demon Internet are the only Internet providers to supply Internet software for the ST. Now they have a new technical support guy who deals with their ST queries. Take a bow Frank Charlton – STOS genius, ardent Trekker, occasional ST FORMAT reviewer and co-SysOp of the AdLib BBS.

If you have any problems with installing or using the ST Internet software from Demon, you should e-mail Frank at frank@tachyon.demon.co.uk. And if you look in the demon.ip.support@atari-news-group.com on Usenet, you'll find Frank lurking inside. And if you can't get e-mail up and running, the number to call is 0181 343 3881.

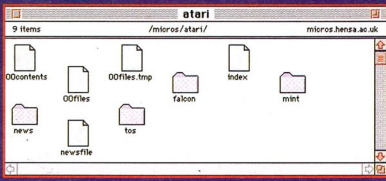


■ He may well curl his lip, but he knows what he's on about. Maybe.

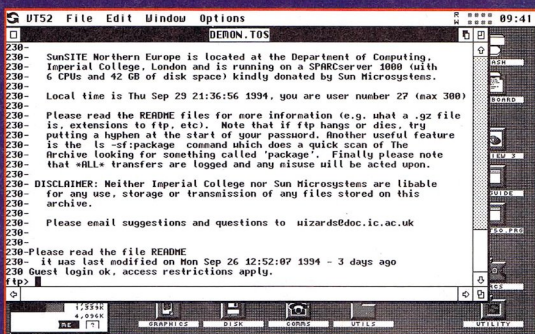
UK Micros ftp: micros.hensa.ac.uk/micros/atari/

Organised by Daneesh Bahbuta, this is probably the most comprehensive archive of ST shareware and freeware in the UK.

There's an amazing amount of stuff here, which is split up into sections for the ST and Falcon030. Each section is then logically subdivided into the specific areas, including graphics, MIDI, MODs, programming, utilities, Desk Accessories, word processing, fonts and many, many more.



■ Look at all that ST software just itching for you to download it. This is probably the most comprehensive archive available.



■ Using ftp on your ST enables you to get software from absolutely anywhere in the world. In this case we're connected to, er, London, just to be exciting.

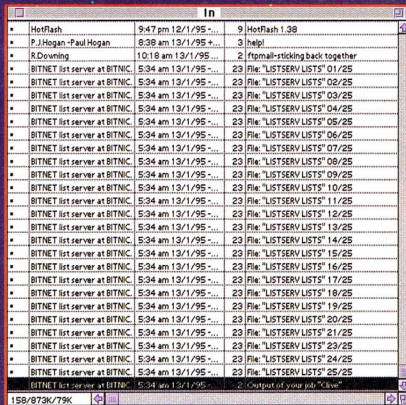
All the software is updated as soon as new versions are available, which means you can be sure that any program you download is the latest version. This site is a must for your ftp hotlist.

Getting the FAQs right ftp: sluaxa.slu.edu/pub/millesjg/newusers.faq

Any newbies are recommended to ftp this document today – it may well save you loads of time and trouble navigating the Net. A bit like ST FORMAT, really.

This document is a FAQ – a compilation of frequently asked questions. There are hundreds of FAQs on the Net, perhaps millions, about any subject that people ask questions about. This particular FAQ is full of questions that newbies tend to ask, like, "If I download an image created on a Mac, can I view it on my PC?" or, "Do I need to run UNIX on my Spectrum to access the Net?"

Apart from anything else, this FAQ contains a comprehensive list of every technical term you're likely to come across on the Net. It's a valuable source of information.



■ Just one tiny part of that list of mailing lists. I warned you. It's a very big list indeed! Let's not be half-hearted about this.

BOARD WITH THE NET?

Simon Forrester grumpily shuns the world of the Internet in favour of bulletin board systems. "You netcybermatrixsurfers don't know you're born," he mumbles. (Just get on with it - Karen)

You can't have missed the Internet, unless you've been sojourning on Mars for the last year. But computer communications didn't start with the Internet, and the Net isn't the only way of relaying information around the globe.

Aeons ago (back in the early '80s) the bulletin board was in its heyday. A bulletin board isn't a part of the Net, it's a single computer sitting on the end of a phone line. The main element of the BBS is its message base, a system whereby everyone who rings the machine can add their thoughts to ongoing forums on various subjects. Because anyone can link into the BBS, they form a forum for all sorts of interesting subjects, much the same as parts of the Net do. And there are literally hundreds of BBSs, many of which are linked together.

You can also find a wealth of file libraries on BBSs, into which you can upload PD or shareware, and download anything

there that you find interesting. And these libraries can contain anything, from programming utilities to on-line magazines to popular TV scripts. You can be sure there's a BBS somewhere with a file on the subject you want.

This is partly because anyone with the motivation, a spare ST, a big enough hard drive, a modem and a phone line can set up their own BBS system (see page 22). And because these boards are run by individuals with no obligation to make money (unlike much of the Net) the material you find there is not charged for. But there's no such thing as a free file...

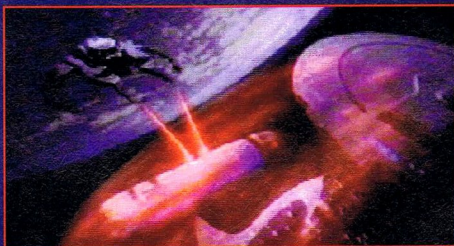
Paying your way

Even though you don't get charged, it'd hardly be fair if these systems allowed you to take copies of as much information as you wanted without giving anything in return. You're encouraged to contribute, and the more you upload to a BBS the more you can download. If you send information (programs, files, docs) you earn privileges to take what they've got on offer - for example, if you upload 1MByte you might then be allowed to download 4MBytes. The way to get the most from a board is to give the most.

So when you log on to a new BBS, find out what they don't have.

Then, before you start pillaging their hard drive for anything that interests you, send them something nice. We cover etiquette more elsewhere, so read and pay attention!

For now, we've chosen a few boards at random from the thousands available, making sure we visited boards with an ST-specific slant, but



■ Just one of the thousands of pictures you can find on bulletin boards. It's also a great excuse for another gratuitous *Star Trek* mention.

NETWORKING

One part of the BBS culture is networking, the process by which bulletin boards are linked together and can pass mail between themselves, which is particularly handy for users on different boards. If you're using a FidoNET BBS, you can send an electronic message to someone using one of the hundreds of other FidoNET boards. This networking isn't as instantaneous or efficient as the Internet, because the boards aren't linked by permanent lines, but what network there is works through the relaxed transfer of information over standard phone lines at unpopular times of night.

Each board on a network is a node, so a node list is simply a list of boards available on FidoNET. Addresses take a numeric form, with each board having a serial number. You can, with a bit of work, get on to some BBS networks via the Internet, but essentially they're BBS networks.

it's dead easy to just log on to any BBSs yourself and have a quick look at what they offer.

Ad.Lib

■ 0191 370 2659

The official *ST FORMAT* BBS.

SysOp Andy Curtis has spent a lot of time getting this ST-orientated board to reflect the different points of ST interest. Ad.Lib has a specific *ST FORMAT* message section, which is supported and used by the *ST FORMAT* team, and is the ideal way to get information and give us your feedback.

High points:

ST FORMAT message base: All the latest gossip, news, opinions and feedback on *ST FORMAT*.

Red Dwarf scripts: Frank Charl-

BBS-ETIQUETTE

As you should know by now, bulletin boards are run by independent people who make little (if any) profit from the activity - they're run on goodwill. For that reason, you'll get along a lot better if you bear some basic codes of conduct in mind...

Carrier

● Never, ever, ever drop the carrier mid-session. The carrier is the telephone link between the

two machines - you can drop it by hanging up. If your modem hangs up and the BBS isn't ready, you'll probably crash it. Wait until the BBS hangs up before turning your modem off.

● Should you drop the carrier, always call back and leave a message of apology, partly to check that the board hasn't gone down.

● Never walk away from your ST when it's online. Even if your ST's doing something, you can be sure it'll stop to ask you a question and you'll leave the system hanging around on the phone when other people could be logging on.

File transfers

● Always upload as much as you download. It's not difficult - you'll always have the odd PD or shareware program you can send in return.

● Never break copyright when uploading - you'll get yourself and your SysOp in trouble.

● Check the content of what you send. There's a lot of dodgy material floating around on boards, and when you do send something along make sure it's going into the relevant file area.

● For the sake of your phone bill and the BBS hard drive, always upload compacted files.

HOW TO DO IT

"Hi kids! This week we're going to show you how to cure all known diseases, rise to power, make a million pounds and play the violin! But first, here's Philip to tell you how to log on to a BBS!"

"Thanks, Chris. Right kids, first you'll need your trusty modem and a comms package that communicates in straight ASCII. Any of the packages we reviewed in issue 65 will do (Fizzydizz, Stalker, TeddyTerm, CoNnect and Flash). The best for now is probably *TeddyTerm* - it's easy to get started with.

"Let's assume you're logging on to our favourite board, Ad.Lib. After dialling the number through your modem (using the ATD command as should be documented in

your manual), wait for a message, usually telling you to hit a key. You'll then see the board's sign-on message prompting you for a name, with instructions as to what to do if you're a new user. This could mean simply hitting [Return], typing *NEW*, whatever.

"From this point, you'll get the opportunity to register as a full user of the board. You may need to do this before you can download anything, and it's always a good idea anyway. If you get through the registration process, you'll find yourself at the board's main menu, free to browse. Registration is either free or darned cheap (a fiver or so), and it's well worth getting established on a good few boards. Okay? Good."

ton's 'painstaking transcription' (or shameless copying) of scripts from the TV series.

Star Trek images: A Trekkie paradise - endless lists of Trek image and text-files, as well as a stupid number of Trek samples. **Programming corner:** Support for a variety of languages, and some handy utilities to smooth the creative process.

Falcon's Realm

01254 386151

With two Falcon030s, Falcon's Realm professes to cover all things Falcon. The Realm is the place to go for support from other Falcon users and lots of Falcon software.

FolkeStone

01303 249306

So what ever came out of Folkestone, apart from the ferry to



Static2 has a wealth of ST software, including the handy BBS Directory.

Calais? The long-lived FolkeStone BBS earns its popularity through its fanatical ST support...

Net access: It's not the Internet, but FolkeStone is on FidoNET, NeST and AtariNET, giving you access almost any BBS network with the minimum of fuss.

Atari Explorer On-line: An electronic Atari news fanzine, which is also available over AtariNET. Contains all the latest news on Atari and their activities.

BBS software: If Andy's words on setting up your own BBS (page 22) inspire you, there's sound technical support here, and a bundle of software to help you on your way.

Static2

01315 569734

A truly terrifying board. Attempting to guess just how much is stored and available here could send the

most hardened mathematician insane. The list of different file areas alone takes several screens to scroll through, and covers just about every topic on most formats. Among the 40-odd Atari file sections:

CD-ROM: Software and information files supporting CD-ROMs and their users, plus software archives, which are readily accessible on-line.

Games: Static featured the best selection of games that we saw for users wanting a good blast. You'll find at least 50 good games before you start looking.

Total utility support: Extra files for everything from *Calamus* to *Cyber* animations, screen savers, even calculators. The list really is endless.

Desktop BBS

01782 541305

Although it's almost a rival board to Ad.Lib, you should take a look at Desktop. Probably the most unstructured file list of all time, but the more technical side of the ST is covered in great depth, with compactors, programming notes, maths engines and the like. Also:

Sci-fi: An enormous selection of interviews, fanzines, picture files and sound samples from popular sci-fi series such as *DS9*, *TNG*, *B5*, and other less popular TV shows.

Cyberspace: Desktop runs the kind of unusual, offbeat conferences you'd normally only find people enthusing about over the Internet. You've probably heard fervent tales of foot fetishists and UFO abduction victims letting it all hang out on the Internet, and Desktop has to be the closest BBS equivalent. A lively area, worth a browse.

Calamus: Extra *Calamus* files and handy hints here, and you can share tips with a host of other *Calamus* users and experts.

Goodman: Desktop is the official bulletin board for Goodman PDL, offering a selection of the library's software plus on-line ordering and the latest Goodman news.

LOVELY LONG LISTS

If you're into the idea of visiting new boards each night, you might like a list of all the boards available. You can obtain one from Desktop BBS 01782 541305. Their zone novelist gives you information on literally hundreds of different boards, catering for any taste. Don't worry about the fact it's called a zone novelist - that's simply a fancy term for a board list that runs on FideNET.

We can't print the list in its entirety, but here are a few more numbers to try...

Aspects II	0161 708 9330
ICP Inter BBS	0161 928 9191
The Hairly Troll	0151 604 1921
Penfold's BBS	0161 202 4762
Astronomers Den	01942 831925
Gnome	01925 861133
The Abyss	01282 866835
UK Healthlink	01942 722984
Virtual Reality	01925 826710
StarFleet HQ	0151 420 6272
STRANGE***daze**	0274 481363
HardRock BBS	0114 245 9571
Faulty Towers	01235 535113
Caffeine BBS	01252 545138
The InterZone	0181 244 0106
Starbase One	0171 738 7225
Pyrotechnix BBS	0181 390 4701
Spong!	01249 817704
Temple Of Dreams	01642 674088

The Tavern

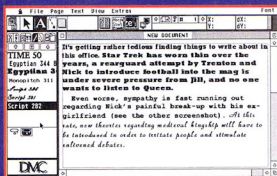
081 445 6514

When browsing through boards you'll notice that some are bigger than others. Among the granddaddies of ST boards, alongside Ad.Lib and Desktop sits the Tavern BBS, a board that covers absolutely anything and everything...

Religion: Among Tavern's CD archives you'll find electronic versions of religious texts, from the orthodox to the downright odd.

Clip-art: Essentially just monochrome picture files, this stuff is like gold dust to anyone that's getting into DTP and wants some pretty illustrations to brighten up their pages. Stacks of stuff.

Electronic books: The Tavern also sports a large electronic library for those of you who are tired of reading convenient paper prose, and would prefer to lie in bed with a ton of computer equipment on your lap. Lovely!



Calamus - you can find full, official support on Desktop, another large BBS.

- Use a standard compression system, such as Zip. No one'll thank you for saving that tasty program in a format they just can't use.
- If your file is over 700K, break it up into chunks. Not everyone has a hard drive, and those storing it on disk will need this leeway.

Messages

- You can defuse almost any situation with a well-placed smiley :-)
- Don't swear or abuse people. Unless they request it, of course. That's different.

- If the message base enables you to quote a message when replying to it, do so. This makes life much easier for people who couldn't otherwise remember what the first message was about. Like us, for example.
- Remember that what you're sending can be read publicly. If you want to say something sensitive or downright private to one person in particular then you should send it privately. Most boards have a little e-mail system that works in the same way as the message base but privately, so use that instead.

SysOp chats

There will come a time when, while you're using the board on-line, the SysOp will break in for a chat. A chat mode will take the form of a line-by-line text entry system, and you'll take it in turns to type. There are a few rules you should bear in mind in this situations:

- The SysOp always types first.
- Follow what you type with a few carriage returns - two will do. This lets the person you're chatting with know it's their turn.
- Never type while the other person is typing.

Want to start a BBS?

Yeah? Andy Curtis shows you how. And he should know. After all, he's been running Ad.Lib, ST Format's recommended bulletin board, for three years now.

Having seen what BBSs have to offer over the last couple of pages, you may well now be interested in running your own BBS.

However, starting a BBS sounds like it's akin to scaling Mount Everest single-handed – theoretically possible, but you wouldn't attempt it for fear of failure. In fact, it's much easier than you might expect. It does require a lot of time and commitment, but in practice all you need is a suitable

BBS program, your ST, a modem and a hard drive.

So what do I do?

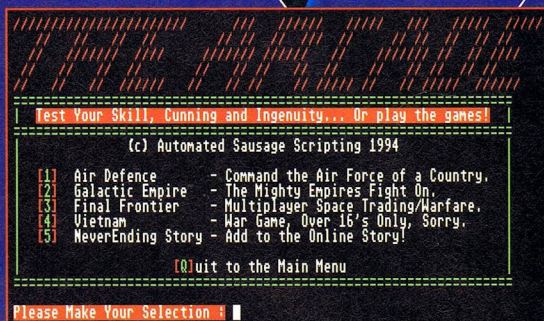
Don't let the size of the task get to you. Follow these simple steps.

- 1 Get hold of the hardware you need. Check your system against the items list in our panel below and add in what you don't have.
- 2 Decide on a BBS program to use. Log on to BBSs using the different packages and see which you like best as a user. Talk to the

SysOps and glean as much information as you can. Many systems offer a demo package – if you like the system, get hold of it.

- 3 Read all the README files or instructions for the program, then install it to your hard drive.
- 4 Go through every text-file installed to your BBS and edit it to your specs – make the system look your own.

5 Try a few local logins and see what it looks



■ Unless you're totally boring and stuffy, you'll want to include an on-line games area. There are loads of BBS games available and most BBS systems can run them. Users can battle against other users in space adventures, Vietnam War simulations and a host of other settings. Unfortunately, many of these games have been 'SysOp proofed' so we can't control who wins. Damn!

like. You'll probably spend the next few days working on all the files and menus to get them to look right, but that's all part of the fun.

- 6 Ask a friend to call the BBS.

When they log on, put yourself on the back. You're now a SysOp.

- 7 Don't be afraid to ask the help of other SysOps. Many things you

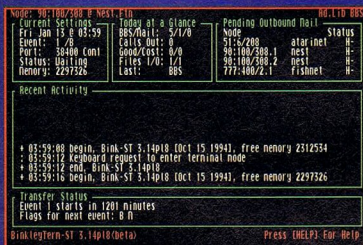
need to know aren't written down and you'll need to ask. They've all been in your shoes at one time.

Which package is for me?

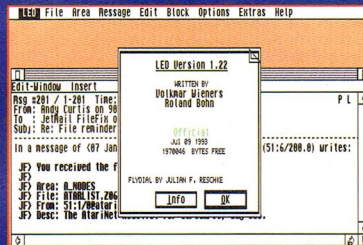
Choosing your BBS software is the tricky part. Bear in mind that if your BBS is successful you're going to be using the same software for

some considerable time, so considerations like how easy it is to get hold of and what it costs are not quite so important as they seem in the short term. What is important is that you get the right software for you and your forthcoming users.

The three key sections of your BBS are the login procedure, mes-



■ Sooner or later you'll need a front end program to deal with calls from other BBSs sending and receiving networked mail. This is *BinkleyTerm*, a PD program, which is relatively simple to set up. A great many SysOps wouldn't use anything else.



■ LED has been around for a while but hasn't yet been bettered. It hooks in with your networked mail bases and reads the messages direct. You can use it to read and reply to messages, send private net-mail, re-route messages and a host of other things. You'll be lost without it.

HARDWARE ISSUES

You'll need a few other hardware items to run a BBS successfully. The specifications of all four pieces of equipment have a fundamental influence on what you are able to offer on your BBS.

- 1 A phone line. Vital. Ideally you need a dedicated BBS line – running a BBS on your voice line on limited hours isn't a satisfactory long-term solution. BT currently charge £117 to install an extra telephone line to your house, after which it costs you the normal line rental plus any outgoing calls. This is expensive initially, but worth the expense. If a cable company is offering a phone service in your area then go for this option, you can save no end of money.

- 2 A hard drive. You just won't be able to run a competent BBS system without one of these. As well as file storage for downloads, you have to consider the BBS and associated files as well as on-line games, BBS utilities, message bases and a whole host of other things. With prices of hard drives coming down all the time there are loads of great deals out there, and we'd recommend that you get at least 200MBytes for a small to medium sized BBS.

- 3 A modem. No escaping this one. The prices of 14,400baud modems are coming down all the time and this is the sort of modem you will need to run your BBS – anything slower is impractical. You may want to go for a souped-up 28,800 baud V.34 model, but these are still fairly pricey

at around £300-450. Expect to pay around £150 for a decent 14,400 V.32bis.

- 4 Your ST. You can run a standard ST with no enhancements and you'll find a few upgrades useful. First, 4MBytes of memory ensures that all the programs you wish to run from within the BBS have sufficient space. If you can afford an accelerator to speed up the processor on your ST this pays dividends in the time taken to create large archives on your BBS. The less time a user spends waiting for a file list to be created or a message packet to pack, the better. You may also want to upgrade the serial port to handle up to 38,400 baud – indeed, you'll need to do this if you intend to run a V.34 modem, but don't worry, it's a relatively simple DIY job.

220

sage bases and file transfer areas. As you test out each package as a user see how they rate in your eyes. How easy is your first login? Does the system confuse you? Are the menus simple to follow? Is it easy to download files? Do you have to wait for long periods each time you access a new function? Questions like these will help you to build up a picture of the kind of software you want to run.

In reality, most BBS packages cost between £40 and £60, so cost isn't much of an issue. The most important thing to look for in any BBS package is support. If the author produces upgrades to the program and listens to his users then you're on a good footing. Read our potted descriptions of each package and one should stand out as fulfilling your needs.

Anxieties!

You may be worried that no one will log on after you've gone to all

ESSENTIAL BBS CONTACTS

SysOps are known for helping each other out, and you're bound to have questions. Give these a call.

Dave Meaker and Martin Stacey at The Chameleon BBS
Re: **QBBS** software and

networking files.
The Chameleon BBS
☐ 01454 881095
Internet:
◀messy@walusoft.com-
tron.com>

Daron Brewood
Re: **NeST** and **AtariNET** networking.
NeST Netmail: 90:90/0.0

Internet:
◀dbrewood@nest.demon.
co.uk>

Kevin Osborne at The Fortress BBS
Re: **Octopus BBS** Software
The Fortress BBS
☐ 0181 244 9825
Internet:

◀Kevin.Osborne@fortress.
mettav.exnet.com>

Steve Hughey
Re: **RATSoft/ST**
P.O. Box391
Alta Loma, CA 91701
BBS: ☐ 001 909 481
1927 (from the UK)
UK Support BBS: Ad.Lib
☐ 0191 370 2659

this trouble, but you're likely to be pleasantly surprised. There are a lot of Atari.com enthusiasts out there and they'll be interested in the 'New BBS on the Block'. The most important thing initially is just to be there and to gradually collect files that enhance your appeal. You may want to specialise or be a general interest BBS - it's up to you.

You can also get involved with network mailing and chat with Atari users all over the world. This will attract users who want to take advantage of your mail link - just leave a few messages in networked bases and people will soon know of your existence. One word of warning, however, don't overdo it with the adverts. People's genuine interest can quickly turn to annoyance if, everywhere they turn there is a 200 line advert for your BBS!

Das D:\RATSoft\FidoComp
FIDOCOMP v11.21.94-QBBS-Style Message Base Manager

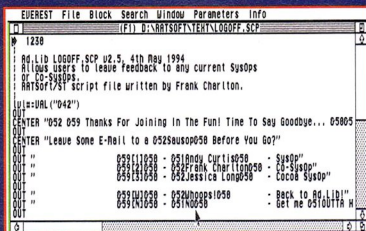
Base	Path	Total	Max	Del	Neu	H
The message base	G:\MSD\LOCAL\MESSEGE	500	500	0	500	
STOPS Common Room	G:\MSD\LOCAL\STOPS	100	100	0	100	
ST Format	G:\MSD\LOCAL\STFORMAT	215	500	0	215	
NeST's Support Echo	G:\MSD\LOCAL\NEST	500	500	0	500	
NeST Common Room	G:\MSD\LOCAL\COMMON	500	500	0	500	
NeST's Chat	G:\MSD\LOCAL\CHAT	500	500	0	500	
AtariNET ST Chat	G:\MSD\LOCAL\ATARNET	500	500	0	500	
AtariNET Sound Echo	G:\MSD\LOCAL\ATARNET	500	500	0	500	
AtariNET Technical	G:\MSD\LOCAL\ATARNET	500	500	0	500	
AtariNET GFA	G:\MSD\LOCAL\ATARNET	100	100	0	100	
FISHNET Jokes	G:\MSD\LOCAL\FISHNET	92	200	0	92	
FISHNET Comment area	G:\MSD\LOCAL\FISHNET	92	200	0	92	
FISHNET Falcon	G:\MSD\LOCAL\FISHNET	200	200	0	200	
FISHNET PC General	G:\MSD\LOCAL\FISHNET	81	200	0	81	
FISHNET PC General	G:\MSD\LOCAL\FISHNET	81	200	0	81	
FISHNET PC General	G:\MSD\LOCAL\FISHNET	81	200	0	81	
NeST Admin	G:\MSD\LOCAL\NEST	50	100	0	50	
AtariNET SysOps Area	G:\MSD\LOCAL\ATARNET	50	100	0	50	

■ It's important to keep message base size under control when running a BBS. If you let the messages pile up without deleting the old ones then your drive will soon be full to overflowing. Often your mail tossing program will be able to compress your message areas but **RATSoft** goes one better with its own system.

Networked mailing

An increasingly important part of any BBS is connection to one or more of the message networks - national, European, worldwide or just a link with your best mate. The major networks for Atari interest are NeST, AtariNET, FishNET and, of course, the fast emerging SausageNET. These networks are all run by the users - that's you if you join. You may be the end link in a chain, or you may be a mail hub, supplying mail for other BBSs.

NeST and AtariNET are two closely linked networks covering broadly the same topics. NeST has its emphasis in Northern Europe whilst AtariNET has its emphasis in the USA. Don't be surprised to see messages on AtariNET from Atari HQ in Sunnyvale! FishNET and SausageNET are more relaxed UK networks where the emphasis is on light-hearted chat. You'll find the **ST FORMAT** message echo on the FishNET if you want to join in the chat with us.



■ Like **Octopus**, **RATSoft** has a scripting language in which you can program just about anything. In this example, Frank Charlton has crafted a friendly logoff script. If your BBS system has a scripting language then you can implement almost any feature.

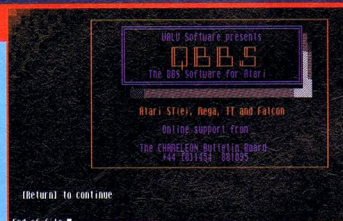
BBS SOFTWARE

The **BBS** program you choose will determine how powerful and flexible it is for you as **SysOp** of a BBS, and it dictates what the BBS users will be presented with when they log on.

QuickBBS

Written in **GFA Basic 3.5**, **QBBS** incorporates a wealth of advanced features including on-line archiving, language checking and global file search in all areas. If you set an afternoon aside you should be able to get **QBBS** working nicely by teatime. It includes an 'out of the box' setup which is quite good enough to set you on your way. The advanced menu editor offers support for common terminal modes including ANSI and 16-colour mode. **QBBS** is easily configurable to run external programs and to interface with external file transfer protocols. The biggest limitation placed upon **QBBS** is the language in which it is written, making screen output slower than its competitors, although even this is being addressed.

The details: developed in the UK by Dave Meaker and Martin Stacey of **WALU** Software. You can get a demo key by logging on to a BBS in Holland (where the original author lives). New registration sites are planned for the UK and



■ **QBBS** supports the ANSI terminal emulation as well as VT52 and ASCII. With more ST terminal packages supporting the ANSI standard the way is opened up for more pleasing graphics screens as seen on PC BBSs.

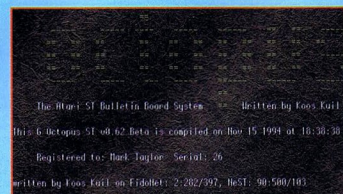
USA later in the year. Demo keys last for 60 days, after which you must wait 30 days before ordering a new demo key. You may have up to four keys in total. If and when you decide to register, the cost is around £50 depending on current exchange rates.

Octopus BBS

Octopus is relatively new to our shores and it's already making an impact. Its main feature (and what a feature!) is multitasking compatibility: it runs under **MagiC** effortlessly providing you use the **GSZRZ** file transfer protocols (shareware, available from all good BBSes). The BBS system

is probably the hardest to set up because it relies exclusively on a user-defined configuration file and a script file to control the actual BBS, both of which are only editable with a text editor. You'll need to look carefully at the examples given to work out how to give your BBS the perfect look and feel. Stick with your task though and the results can be impressive. If you have experience of programming in C or Basic this could well be the system for you.

The details: written and developed by Kooz Kuil. You can get hold of a demo version by contacting Kevin Osborne at The Fortress BBS.



■ Most BBS programmers can't resist putting a nice ego-boosting screen into their creation. Mr Kuil is no exception with his **Octopus BBS** system.

Many BBSs carry the software you'll need to join these networks, and most SysOps will do their level best to help you out. Once you've set up for one, it's simple to add others – you merely add the extra details to your configuration files. To join these networks you need the following software, all of which is carried by The Chameleon BBS.

1 A BBS software package capable of carrying FIDO-style message bases. *RATSoft*, *QBBS* or *Octopus* are all fine.

2 A front end program to intercept mail or BBS calls and make outgoing calls. *BinkleyTerm* ST is free, well tried and tested, and is the only real option for *RATSoft* users. *Semper* is shareware and features a GEM interface and loads of features. It's worth registering, at £25.

3 A mail program to decompact and install messages as well as pack the new ones. *IOS* is free and does the job well enough but is slow and difficult to set up. *Jetmail*, the shareware option, is fast, efficient and brimming with clever

JARGON BUSTERS

BBS: A host system, which other comms users can call for files, messages and, hopefully, fun.

On-line archiving: Archives are single, compressed data files, which can contain many files. Packages are archived on a BBS to make download time as short as possible. Many BBSs can create these archives while you're logged on to the system, hence, on-line archiving.

Language Checking: A language check generally means the insertion of capital letters where required. If you were to enter 'andy curtis' the language check would change this to 'Andy Curtis'. Very kind.

Global file search: The ability to search for a file on a BBS by entering a file mask or keyword. Once found the BBS should offer you an opportunity to download the file.

Advanced Menu Editor: The *QBBS* alternative to playing around with text-files for menus. It's easy to use, but some people find it a little limiting.

Terminal Mode or Translation: Most BBSs will be able to adapt to the type of software you're logging in with. The common three are VT52, ANSI and

plain ASCII. Most Atari terminals support the VT52 standard with four colours, but many now also support ANSI with four or sixteen colours – which means you can be much more creative with your screens. If you're unsure, select ASCII or try and you can be sure not to get a screen full of trash.

File Transfer Protocols: Programs that actually download the files for you. The two most common are XYZ.TTP and GSZRZ. You can set your BBS up to run with either – or both.

Multitasking Compatibility: The ability to run under *MagiC* or any other multitasking system.

Script File: A text-file written in your BBS' own language, which can be tailored to add special features to your BBS, such as an on-line insults generator.

Key Files: Those magic groups of letters and numbers that render shareware and commercial software valid and registered.

'Out of the box': As far as BBSs are concerned, this is the state of the BBS files when they reach you. Some systems come with a nice neat install program while others are just a load of archived files.

tricks. It's around £30, depending on the current exchange rate.

4 A message reader to enable full SysOp access to each base. *LED* is the only option – it's readily available with no key money to pay.

5 A nodelist compiler. Nodlists tell you the location, in mailing terms, of every other BBS in the Network. Without them, your mailing software would explode. As new BBSs join, possibly yours, new nodlists are sent out. *BTNC* adds the new information in to your setup and readies the system for mailing to the new nodes.

BTNC comes with most networked mail packages, and will compile the nodlists you receive ready for use by *BinkleyTerm* and your BBS.

You'll also need to apply for a node number for each network you join. Get in touch with a SysOp of a BBS carrying the networks you need and he/she will put you in touch with the network co-ordinator. Daron Brewood co-ordinates *NeST* in the UK, and can help with AtariNET node numbers. Dave Meaker is co-ordinator for *FishNET*.

Networking involves a lot of set-up work and a fair amount of

cash registering the programs you use, but it is rewarding. Your mail is packed automatically during the night and scheduled events see that all the message transfers are done before you wake up in the morning. And your users will love you for it!

Go for it!

Setting up a BBS costs a few quid, and takes a lot of time, but users do take the time to thank you and as you see your BBS expand, it's very hard to resist feeling proud that you created it. **stf**



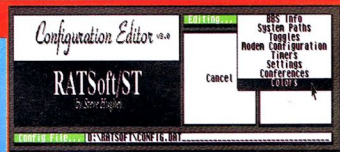
If you buy the package it's around £55 depending on the exchange rate. There are plans for a UK support site to deal with registrations.

RATSoft/ST

RATSoft has been around for a few years now. It has a more structured environment than *Octopus*, while still employing a scripting language to give you, as SysOp, freedom to expand and customise. You can be up and running with *RATSoft* 20 minutes after opening the box, but it might take you weeks to get it looking and



In any BBS program you'll need to set up different user levels to control access to sections of the BBS, particularly new users. *ProBBS* gives you this user config program. Loads of options to configure here...



Some basic parameters for *RATSoft* can be set with this easy-to-use GEM program. Programs like this take a lot of the guessing out of BBS configuration because they write the data-file for you.

feeling "just right". Features include an on-line spell-checker, advanced file batch-mark facilities, on-line humorous banners and a host of other features designed to make your users feel at home. There are GEM'ed programs for a plethora of extra functions, including one to find 'orphaned' files and another to apply a user mask to a predefined group of users.

The details: written and developed in California by Steve Hughey of Rodent Labs Software. There's no demo version available, but one is promised and may be available later in the year so if you want to see *RATSoft* in action you're limited to logging on to the growing number *RATSoft* BBSs or visiting a *RATSoft* SysOp and seeing how the package works first hand. *RAT-*

Soft 2.1a is commercial, rather than shareware, and with full printed manual costs about £50.

ProBBS

ProBBS is now PD because it's no longer supported, which means that it's a good package to start with because you can just download it, with nothing to pay. Installation requires a front end mailer such as *BinkleyTerm* and a command line interpreter such as *TOMShell* to run the BBS from. You may find it a little tough to set up, but it is a viable BBS system and well worth considering if cash is a problem.

The details: *ProBBS*, which is a fully featured BBS system, is freeware. You can download it from I'll Try That Once BBS on 01483 765378, SysOp, Mark Taylor. The file is called *PROBBS18.ZIP*.

BBS System	Current Support	Out of the Box Ease	Features	Overall Feel
<i>QBBS</i>	Yes	75%	78%	79%
<i>Octopus</i>	Yes	59%	83%	81%
<i>RATSoft</i>	Yes	81%	85%	83%

SMOOTH OPERATORS

Bored with TOS? Fancy a snazzy multitasking alternative, but confused about which new operating system to choose? Peter Crush puts Geneva and MagiC to the test...

HELLO, OPERATOR

All computers need an operating system, so they can, er... operate. The operating system provides a basic environment which runs programs, copies files, controls disk operations and peripheral devices, and does all the other things computers need to do.

Although the very first STs had to load this operating system from disk like most other machines, soon TOS was provided on a chip inside, so as soon as you switched on you were ready to

go, with no time or memory lost in loading the operating system. New and better versions of TOS have been released for the ST over the years, the latest being v2.06, and TOS 4 for the Falcon. To install these you need to open up your machine and replace the chips - this is best done professionally unless you're really competent. But the recent rush of brand new software-based operating systems just goes to show how things go round in circles. Instead of being on chips they're loaded from disk.

Be honest, when you switch on your ST you probably don't consider its operating system, do you? But it's crucial to the way your ST works, and it's one of the fields in which an enormous amount of improvement has recently been made. All STs need an operating system just to get them running - take a look at the panel below to see exactly what else an operating system does.

With most makes of computer the operating system has to be loaded in from disk before you can do anything but, luckily for ST owners, The Operating System (TOS) is present in the machine's chips and is ready straight away. TOS is perfectly sufficient for most ST users, but it's getting on a bit now, and although Atari have updated it, your ST or Falcon has potential for greater things if equipped with a newer, more capable operating system.

You can now replace your ST's operating system without resorting to open heart surgery on your ST's internal hardware. Two replacement operating systems, Geneva and MagiC, have been released and are purely software-based, loading into memory like any other program. They enable you to run your existing software faster and at the same time.

THE HEAD TO HEAD TESTS

System requirements

Will your new operating system work on your setup? For example, MagiC and Geneva both require a double-sided floppy drive system as a minimum, so check out what's needed to make sure you're not going to be disappointed.



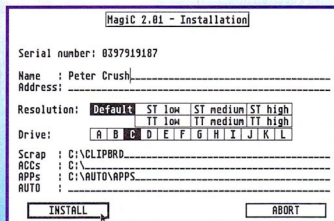
■ MagiC theoretically runs on any ST, STE or TT but needs a 2MByte system to multitask. It runs in all resolutions, and a hard drive is recommended. MagiC takes up 300K of RAM when resident.



■ Geneva runs in all resolutions on any ST, STE or TT, and functions on the Falcon too (unlike MagiC). It works on 512K machines, but at least 1MByte and a hard drive would be sensible. Geneva takes only 160K of RAM when resident.

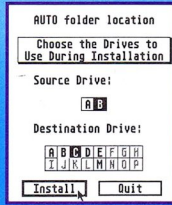
Setting up

How easy is it to install your alternative operating system? Do you need to have much technical expertise or understanding of programming? Thankfully, no.



■ MagiC has its own installation program, which requires you to select the drive to which the files will be copied. It also sets up a folder from which any programs you wish to auto-load will run and multitask.

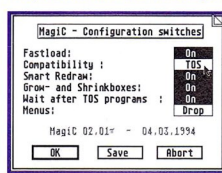
■ Geneva's installation program is also easy to use, taking you step by step with appropriate prompts. You may have to re-order your Auto folder afterwards, but the manual gives clear directions.



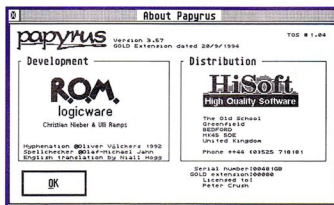
Compatibility

Any problems? Older ST programs were written before multitasking was out, and may only run in single mode, but most newer software works without problems.

■ Using MagiC we found that 1st Word Plus, Calamus 1.09, Protext and other notable programs weren't



"multitasking friendly". The solutions can be either patch programs or dropping into single-tasking mode.



■ Geneva is generally stable and handles just about anything thrown at it. A 'problem' program is Papyrus, but three cheers for HiSoft, who've just released a Geneva-compatible upgrade of our favourite DTP prog.



ALL SYSTEMS GO

MagiC

Price: £59.95

From: System Solutions

☎ 01753 832212

Reviewed and rated: **STF 60, 94%**

A total operating system replacement written in 100 per cent machine code for optimum speed, MagiC completely overwrites TOS for fast pre-emptive multitasking. It uses 'time slicing', which means it assigns the ST to the largest processing job while you can still operate other programs. MagiC runs on all standard ST, STE and TT models, but not on the Falcon, and you'll need 2MBytes of RAM to run it to its best advantage. Auto folder programs and other software load as normal once MagiC is installed. Any application can be interrupted to reveal the manager screen, which shows you the exact memory usage of every program currently running, and

memory can be freed up by 'deleting' programs. MagiC comes with its own desktop, although something like *Ease* or *NeoDesk* is recommended to extract the optimum power. Despite the fact that MagiC is incompatible with some ST programs it offers a great deal, especially with the recent arrival of *Ease*. MagiC, which originates from Germany, was released mid-1994. It's fully translated into English, and its UK distributors are Systems Solutions.



■ MagiC, as used by David Copperfield to fly around Earls Court. Or something.

Geneva

Price: £59

From: Compo Software

☎ 01487 773582

Reviewed and rated: **STF 55, 93%**

Geneva, which runs on any ST, STE, TT or Falcon, is a serious contender as far as multitasking operating systems go. Supplying a replacement version of the ST's AES (Application Environment Services), it controls windows, dialog boxes and menus, but doesn't replace the part of GEM that displays the Desktop icons you're used to. Geneva runs both GEM programs and those that are MultiTOS-compatible, and enables most TOS programs to be run, and you can have up to 256 GEM windows open at once. Geneva utilises 'co-operative' multitasking rather than the 'pre-

■ We may have opted out of the European Social Chapter, but we still appear to observe the Geneva Convention.

emptive' type used by MagiC. If you use an incompatible program, you can simply exit Geneva and return to the ST's standard GEM Desktop, and the program can be loaded from there. To use Geneva effectively, at least 1MByte of RAM is required, a hard drive is useful, and alternative Desktops such as *NeoDesk* can be used to advantage. Released here in early-1994, Geneva originates from Gribnif Software, USA, and was written by Dan Wilga of *NeoDesk* fame. It comes complete with technical support from Compo.

Geneva™

Multitasking Application Environment

By Dan Wilga

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Release 002 Dec 31 1993

Registered for:
Peter Crush
M08001307

Use, duplication, rental, or sale of this product, except as described in the Geneva Licensing Agreement, is strictly prohibited. Violators will be prosecuted.

Multiwhat?

If you're used to simply running one program at a time, the thought of 'multitasking' might be alien at first. To illustrate the potential power of multitasking, consider this scenario. While you write away with your word processing program, your desktop publishing program prints several documents,

and you simultaneously convert some image files into a new format using *ImageCopy 3*. And while all this is going on, your modem could be on-line, downloading stuff from your favourite bulletin board.

Each program runs concurrently, but you can switch between them at will. Of course, to do as much as in this example you'd

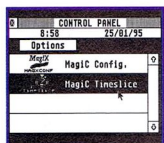
need loads of RAM – although each program is sharing the processor's time, they all need their usual amount of memory. If you use your ST for lots of different 'serious' applications, and you consider yourself a power user, then a multitasking operating system is just what you've been waiting for. But which one?

The jury's back in

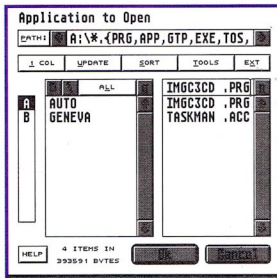
Take a look at the head to head tests to see how Geneva and MagiC compare on a feature by feature basis. Both of the contenders are impressive. MagiC is fast and slick, but until a Falcon version appears it's only usable on STs and TTs. Meanwhile, Geneva already runs on the whole Atari

Speed

Do you like life in the fast lane? After all, one of the reasons for buying a multitasking operating system is to be able to work faster.



■ MagiC impresses with its zippiness. It actually runs most ST software faster than standard TOS, even if it's multitasking. A CPX Desk Accessory, which is provided with it, gives you control over time-slicing.



■ Geneva doesn't claim to be such a speed merchant, and gives you no control over this, but you shouldn't notice much difference in the speed of your software, although it's actually running slightly slower.

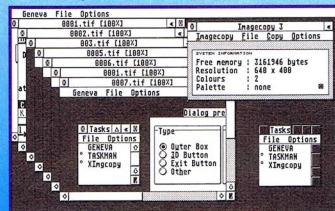
Power

Just what can these new operating systems do? What kind of power and facilities do they add to your ST?

■ MagiC can run up to 16 programs simultaneously, memory permitting. However, this includes six Desk



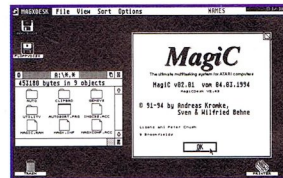
Accessories (DAAs), leaving 'only' ten other programs. If you like, you can have up to 64 windows open at once.



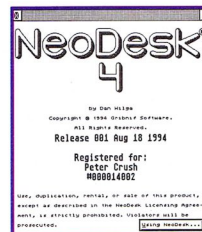
■ Geneva supports up to 256 windows and places no limit on the number of programs running together – RAM permitting. The usual limit of six DAAs vanishes – you can load as many as you wish and at any time.

Desktops

For best results from the operating system you need a suitable desktop, so forget the ST's standard Desktop – it can't be used for multitasking.



■ MagiC comes with *MagiDesk*, which isn't bad when you consider the fact that it's free and is similar in features and power to TOS 2.06's Desktop. But your best bet is *Ease*, which is specially programmed to work perfectly with MagiC.



■ Geneva needs *NeoDesk 3.04* to run to its full multitasking ability, although it can be used without a desktop if memory or time is tight. Your best bet is to use *NeoDesk 4*, which really complements it beautifully.

NEODESK AND EASE

Although both MagiC and Geneva come with their own desktops, you'll get much more from them if you run them with the commercial desktops designed to complement them.

Ease (complements MagiC)
Price: £49.95
From: System Solutions
☎ 01753 832212

Watch out for a full review of *Ease* next month.

NeoDesk 4 (complements Geneva)
Price: £59
(upgrade from v3 £25)
From: Compo Software
☎ 01487 773582
Reviewed and rated:
STF 64, 90%

range of computers and although it isn't as fast as MagiC it takes up less RAM, making it usable on the humblest setup.

A new release of Geneva is expected soon, together with an update for *NeoDesk 4*, while System Solutions have just released *Ease*, the desktop designed to run with MagiC (we'll have a full review next month).

Multitasking can open up new horizons for both you and your ST. Until you try it for yourself it's difficult to appreciate the sheer convenience and power of these operating systems. Read the in-depth reviews of both products for more info, but make sure you check the compatibility of your existing programs with System Solutions and Compo before you plump for either. It could be the best sixty quid you'll ever spend on your ST setup. **stf**

■ You don't need two pairs of hands any more - MultiTOS can do many ST jobs simultaneously.



MULTITOS

MultiTOS is Atari's own software-based replacement operating system for their Motorola 68030-based machines (which means the Falcon and the TT). MultiTOS differs from other multitasking software because it actually runs all tasks at once using high speed switching between them (others normally let you work on the top application while the bottom one freezes). MultiTOS' 'adaptive prioritisation' makes multitask operations more efficient, and it's also been written to take advantage of a feature of the 68030

processor called 'memory protection', which enables several programs to run concurrently without interfering with each other, so that if one crashes the rest of the system continues without problems. Machines with older processors (68000, 68010 and 68020) don't have built-in memory protection, so running MultiTOS on an STFM or STE is a slight gamble with some software.

MultiTOS
Price: £49.95
From: HiSoft
☎ 01525 718181
Reviewed and rated:
STF 49, 75%

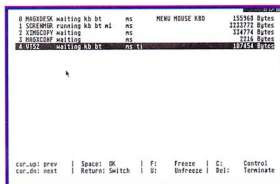
FEATURES COMPARISON TABLE

Operating system	MagiC	Geneva
System requirements	2MByte ST/STE/TT	1MByte ST/STE/TT/Falcon
Setting up	Easy enough	Pretty easy
Documentation	Satisfactory	Good
Compatibility	Good	Good
Speed	Very fast	Fast enough
Power	Powerful	Very powerful
Desktop	MagxDesk included	Can work without
Extra Features	Enough	More
File Selectors	Uninspiring	Exciting
Ease of use	Very	Extremely

THE HEAD TO HEAD TESTS (CONTINUED)

Extra features

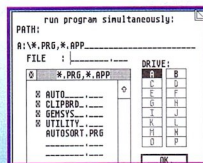
It's not just raw power that counts; all those other little refinements make a difference too.



■ MagiC can access this Manager Screen at any time by pressing the [Alternate] (Control) [Esc] key combination, so if a program has locked up or there's a dialog on screen you're still in control.

File selectors.

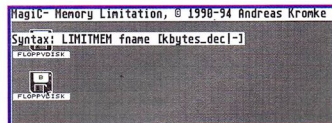
File selecting is an important matter when you're into serious ST use, and each operating system comes with its own new version. What are they like?



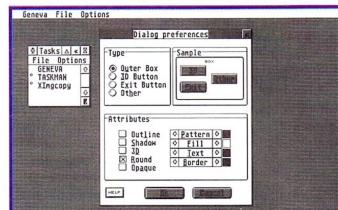
■ MagiC's file selector is basic. It does the job, but it's no improvement over Atari's TOS 1.4 item selector. You can't replace it with U/I 3, but luckily *Ease* comes with a much better selector.

Ease of use

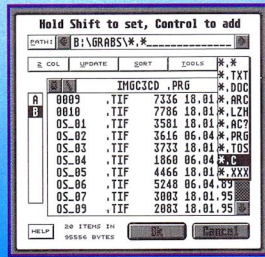
Friendliness, a quality sadly lacking into today's harsh new world. And as if to restore your faith in human goodness, along with MagiC and Geneva. Ain't that great?



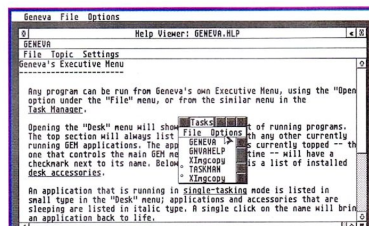
■ MagiC provides a familiar work environment, but with the added bonus of multitasking. Some extra non-GEM utility programs supplied with MagiC aren't quite as user-friendly though.



■ Geneva has many bells and whistles, like this jingly, Window-appearance adjustment thingy. You can enjoy many a long hour playing around with them.



■ Geneva's file selector is excellent - it's as good as U/I 3, if not better in many ways. For example, it enables multiple selections so that a number of files/programs can be loaded.



■ Geneva has the advantage of inbuilt on-line hypertext help, which can be displayed on screen when required. It's even easier to use with *NeoDesk 4*.

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The Falcon 030 produces images indistinguishable from a real picture displayed on your TV. Every pixel on screen can be shown in a different colour and 65,536 colours can be displayed at once, from a palette of 262,144, producing a true colour display of the highest quality.

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The Falcon can be used to create special effects, overlay pictures, lighten any that are too dark, even get rid of the unfocussed bits. Video editing and special effect techniques are both easy and affordable.

CD QUALITY AUDIO
The Falcon 030 comes complete with a stereo input into which can

be plugged a microphone, a Walkman, or a hi-fi system. To reproduce the sound, a converter mixes the eight 16-bit channels, then outputs crystal clear stereo sound at a sampling frequency of up to 50kHz, better than CD quality. The Digital Signal Processor with direct-to-disk capability, means that the Falcon can store sound samples, including the human voice, on hard disk and play them back in real time.

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Motorola 68030, 16MHz, 32-bit Processor + Unique 32MHz DSP (Digital Signal Processor)

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Which computer(s), if any, do you own? _____

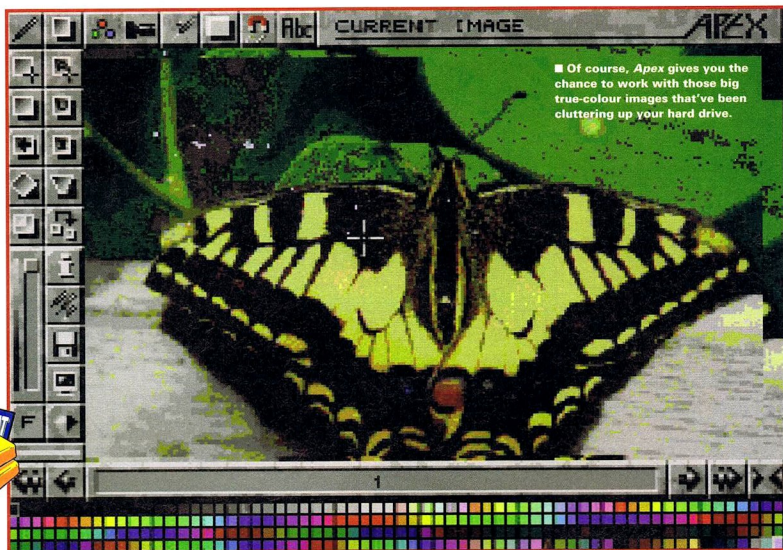
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"Its morphing, manipulation and animation routines are powerful enough to put a Silicon Graphics Indy workstation to shame." What are we talking about? APEX media, the stunning new Falcon-only graphics and animation package.

APEX



Now, it's not often that Clive gets excited about a new piece of software, but that's what he said about *APEX media* in last month's ProTOS show report. Although the Falcon is capable of graphical miracles in comparison to the ST, so far it's lacked the software to exploit its abilities. Until now.

APEX is an animation package in that it enables you to string together a sequence of images in fast succession to create the illusion of movement, but there's much more to it than that. It's also an art package (it can draw or alter frames), it's a morphing package (for those extra visual effects and movements that can't be easily drawn), and it's a digitiser (it can transfer video sequences to disk). All of these utilities are included in

the one application, accessible at the click of an on-screen button.

Load It Up

The first thing you notice about *APEX* is that it doesn't use TOS, let alone GEM. Rather than being a problem, this enables it to increase the Falcon's performance no end, because it doesn't have to bother with restrictive and unnecessary processes. As a result *APEX* is the only package on the Falcon that can handle true-colour, 24-bit images (most other packages can only work with 15-bit images maximum). And it can work with these images at much greater speeds, displaying and calculating with an almost embarrassing rapidity. Even at resolutions like 768x512, true-colour images flick past with the ease of a deity. *APEX* is also perfectly happy using images with less colours, dealing with everything down to monochrome.

In fact, the *APEX* system has a grace all of its own – it's easier to use, prettier and more flexible than anything that uses the standard TOS/GEM combinations. But that's just the beginning of its abilities...

How It works

Whereas other art packages restrict the size of the picture you're editing to the physical size of your screen, and the resolution to that of the current screen mode, *APEX* works with a virtual screen of larger dimensions than the screen image. This means you can edit images of a much greater size, scrolling around them instead of viewing them in their entirety at once. *APEX media* is split up into eight sections: drawing tools, cell

access system enables you to mix and match effects and techniques easily, without having to continually switch and re-boot software.

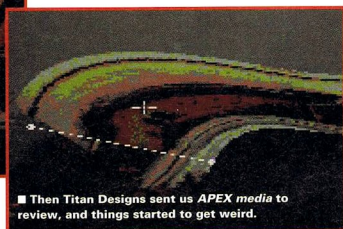
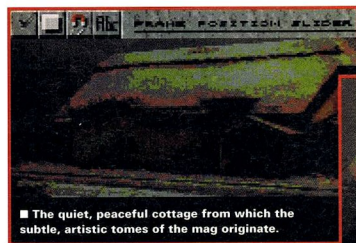
The drawing tools offer the standard art package functions: lines, fills, polygons, sprays, that sort of thing, which make it easily as powerful as

your average art package like *Deluxe Paint*. It also contains non-linear drawing tools, which deal with things like hue, contrast and brightness, as well as colour masks and area

"The simple access system enables you to mix and match effects and techniques easily"

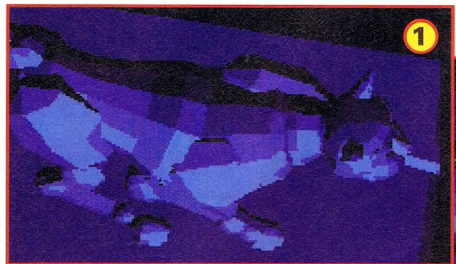
operations. Yes, *APEX* certainly caters for people who want to 'roll their own', comparing favourably with other dedicated art packages.

Given that *APEX* makes the most of the true-colour system, a colour workstation section is only to be expected. You can edit, mix, graduate and sort colours, either as RGB (red, green and blue), CMYK (cyan, magenta and yellow), or HSB (hue, saturation and brightness) shades. This lends weight to the package, enabling you to work with absolutely any colour quickly and accurately.

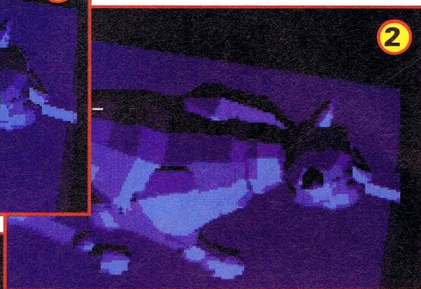




media



■ This is one of the best animation entries we've received so far. It looks a little rough, though...



■ ...but the images can be smoothed out with the help of the image and animation filtering system...



■ ...and we could make it look even more fluid by applying a motion blur.

But there's more to hand-drawn animation than simply sketching your frames. The cell manipulation system enables you to use cartoon animation techniques on your hand drawings. Using this you can treat frames or chunks of frames as cells – rotating, flipping, layering and sliding with an ease that Walt Disney would happily thaw for.

Making movies

Of course, you may not want to draw your own animations, which is where the digitising section comes into play. Though APEX might not be quite as

advanced as dedicated digitisers, it has all the features you might need. It can grab animations or stills, from just about any variation of video protocol (widescreen, MHz changes, Super-VHS, and others), with a variety of shutters, enabling you to do things like take extended shutter pictures.

The film and image filters give you a powerful range of tools to use on your digitised images – you can remove motion blur, jagged edges, bad light and anything else that might otherwise turn your crisp, sharp animation into an out-of-focus, wobbling mess.

And then there are the distortions you can apply to your images, of which there are a huge variety. APEX enables you to mathematically calculate drags, stretches and squashes, to give some effective and natural distortions. And if you're into heavily overused effects, you can use APEX's distortion system to morph images into other images, and create some deeply disturbing animations.

String 'em together

These eight sections for creating your images, taken individually or as a whole, are impressive. Even taking into account the Falcon's own resolution and colour capabilities, APEX far exceeds any other package of its type. Amalgamate those eight sections into one package and the results are stunning: every tool you're ever likely to need is included and runs with smooth efficiency. The package as a whole stretches the Falcon in

ways that no one's explored before.

But designing and editing frames is only one part of APEX. It also features a perfectly proficient animation system for stringing your final frames together. Animation control panels are much of a muchness, there being little to distinguish between them other than the general grace with which the whole package is presented. With APEX you can sequence stills, fiddle with speeds, change directions (forward, reverse, bouncing) and save out your final files in all standard animation formats (those that aren't catered for within APEX are handled using diddy utilities, which are also provided).

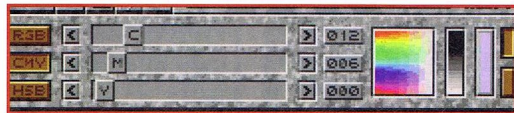
And finally...

The documentation that comes with APEX is excellent, the healthily thick manual a reassuring weight for times of confusion. And should you ever actually come to read its contents (no, some people actually do), you'll find out what you need to know quickly and concisely from its clear text and diagrams.

As the emphasis of APEX is on who people who want to produce animations, rather than Falcon veterans, a large chunk of the manual is given over to tutorials, which take you through all the basics of the package and progress to more advanced techniques in an eminently clear, understandable yet intelligent style.

APEX media is an excellent animation and art package. It's beautifully presented, expertly written, fast, effective, and capable. Buy this for your Falcon. Alternatively, buy a Falcon for this. **stf**

SIMON FORRESTER



■ The colour workstation, helping you to blend those subtle tones with ease.

APEX media

£119.95 Titan Designs
☎ 0121 693 6669
Falcon-only

Highs

- Professional results
- Easy to use yet powerful user interface
- Strong documentation

Lows

- Sorry, pardon?

Comment

It would have scored even higher, but I feel sure Black Scorpions will top even this

93%

Yup, it's Falcon-only all right

Nothing's more annoying than spending money on a powerful machine only to find that there's no software available that takes advantage of it. Although you can find demos that show off the Falcon's ability, most of the useful utilities are still held back because they're STE-compatible and therefore restricted

to the STE's capabilities. It's only recently that we've started to see Falcon-specific software with the guts to take the Falcon in directions the ST can't follow.

There comes a stage where the Falcon has to burn off the ST if its software is to fully exploit what is a powerful machine. APEX isn't an art

package or some clever image manipulation system to tinker with – it's a professional animation package, capable of professional results, the sort of thing you'd find on a Mac or a PC. This is the first real piece of Falcon software that offers serious format support, and we'll be seeing more like it in the future.

Touch-Up 2.5

Scans are messy things. They tend to come out covered in black speckles and dodgy shades.

You need the latest version of *Touch-Up*, a package that enables you to do just that.

Scanning an image is more complicated than you might expect – if you've tried it, you'll know. If you want to achieve clean, tidy scans without getting embroiled in complicated variables like frequencies, timing and paper, you need *Touch-Up*, which enables even the artistically illiterate to turn the rough-scan into a masterpiece of monochrome, erm, artwork.

Touch-Up is simply an art package dedicated for use with scans. Its tools, filters, palettes and processes are designed for tidying, highlighting, and generally manipulating scanned images (although effectively you could use any other monochrome image). It can also replace your traditional scanning software if you have a standard scanner, such as those made by Migraph, AlfaData, Golden Image. Interestingly, according to the manual, "If you have a Marstek scanner or your scanner interface has the words 'This side up' printed on the top of the green circuit board" then you can also use the *Touch-Up* software, just on a different setting...

What does it do?

The most recent update of *Touch-Up* was version 1.8, which scored 85% back in issue 40. Its score reflected the fact that it was loaded with powerful features for re-filling bad patterns, tidying up large expanses of

grubby dots, and ironing out those hand-scanned wobbles. It featured a set of standard art tools as well as filters for emboldening, thinning and tweening. Featuring a GEM interface, *Touch-Up* 1.8 made all these features appear familiar and easy to use, and version 2.5 follows in its path.

As you'd expect, this new version of *Touch-Up* features several enhancements. It now makes better and faster use of the memory inside your machine. If you have 4MBytes of RAM, then the program can now make full use of it, and it also features a caching system which enables you to do larger scans even on smaller machines.

And what else?

To make sure you get optimal results when you're actually at the scanning stage, before you begin any image processing, *Touch-Up*'s scanning system has been improved. Version 2.5 gives you more control over DPI (scan resolution), scan lengths (physical and digital size), different interfaces (for use with more scanners) and measurement (whether you're working in inches or millimetres).

The next big addition to the package is keening (great word), a process that removes those grainy few pixels that have clumped together for no reason. It works by tracking down small, insignificant lumps of pixels

and removing them completely. This obviously isn't suitable for some shaded images, but it comes into its own when clearing up line images. The feature is also fully definable – you can choose

exactly how harsh the keen is, whether it's effective on black or white and whether it works from the edges inwards.

Touch-Up can also now save TIFFs without trouble, rotate pages without those occasional crashes, and flip pages without creating too much extra white space – all of which are bugs that were inherent in the older version of the program and really had no excuse for existing in the first place. And there have been several other enhancements to make the package easier to use: keyboard short cuts, progress bars, Falcon-compatibility, increased areas for Slant and Lasso tools, and easier clip box sizing.

And something that's really great about this package (like OCR, MiGraph's other release this month) is that you simply set it running and leave it to it. You can achieve surprisingly effective results on your first attempt, especially using such obviously-named menu options as 'Clean Up'. And although you can use it while knowing virtually nothing about it, there are also lots of more fiddly elements, which you'll get to know the more you use it.

This is an excellent tool if you're interested in manipulating and tidying scanned images. The price tag may be a little high, but if you have a definite need to tidy up those scans, *Touch-Up* is the best program you could use. **stf**

SIMON FORRESTER

Touch-Up 2.5

£35 Golden Image
0181 900 9291

Highs

- Does its job
- Easy-to-use interface
- Doesn't terrify you with jargon

Lows

- Black and white only
- High price

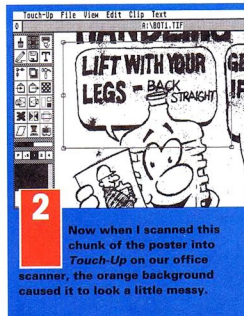
80%

DON'T FORGET, LIFT WITH YOUR LEGS



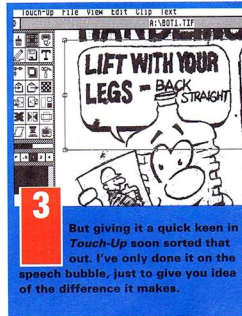
1

These attractive, bright orange posters hang in our office just above the water cooler, giving us thickies vital advice on lifting the water bottles.



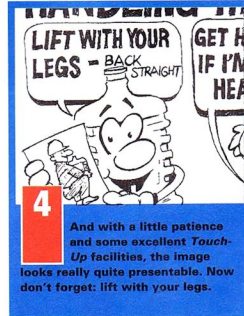
2

Now when I scanned this chunk of the poster into *Touch-Up* on our office scanner, the orange background caused it to look a little messy.



3

But giving it a quick keen in *Touch-Up* soon sorted that out. I've only done it on the speech bubble, just to give you idea of the difference it makes.



4

And with a little patience and some excellent *Touch-Up* facilities, the image looks really quite presentable. Now don't forget: lift with your legs.



OCR

Ever wanted to convert printed copy into ASCII text? Optical character recognition software, your ST and a scanner could do it all for you. Sort of.

Optical Character Recognition. In plain English that's the process by which a computer reads printed text. It does this by working out the shape of each character and calculating exactly what that character is. To put it another way, you could scan a page of text and have your ST convert it into an ASCII file for you. After all, WPs are just programs that turn ASCII files into hard copy, and this is a program to reverse the process.

Although they're using something slightly more powerful than an Atari ST, The Post Office does exactly the same thing – each letter is scanned, and the address is worked out using an OCR system, enabling mail to be sorted electronically. It saves all the hassle of a little munchkin

having to read the address and shove the envelope in the right pigeon hole.

This only works with standard characters, which means that you won't be able to scan hand-written text, but an OCR system is now available for your ST, courtesy of MiGraph and Golden Image (the UK distributor). There are a few things you'll need to use this package effectively: **A scanner:** be it a flatbed or hand scanner, you'll need something to create the original image files with which you'll be working.

At least 2MBytes of memory: you'll have problems using those larger image files if you don't.

A hard drive: to store those bulky image files. This isn't essential, but it'll make your life much easier.

And of course, you'll need your optical character recognition software...

See Janet's ball

The package itself is well-presented, installing like a dream and with no problems whatsoever. All the dialog boxes, options and features are beautifully laid out, dialog boxes appearing and disappearing without clashing or crashing. In high resolution (which is what you really should be running it in), it demonstrates exactly how software should be presented – putting ease of use and clarity before sexy graphics.

Another of OCR's strengths is its flexibility and the extent to which you

can control it. You can slow it down, taking a little longer over each exact representation, or get it to skip through the text, substituting unrecognised characters

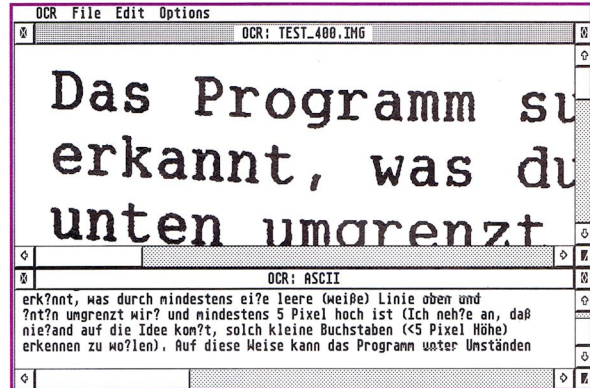
with wildcard symbols, which you can find and correct at a later date.

See Spot run

The OCR system also has the ability to teach itself. When running in Interactive Learning mode, instead of taking either a wildly inaccurate guess or leaving a question mark in the place

Generally, the only time you'll use the Scan Settings dialog box is when you need to change the scan length or dpi. However, it will appear on its own when you change the scanner dpi to a value that will no longer allow you to use the current scan length. In this case, when it appears, it will reflect the current dpi setting, and the length value will be automatically set to the maximum length allowable for that dpi.

■ The obvious test is to give OCR some chunks of its own manual, which it handles with ease, despite the tightly packed serif font it's been printed in.



of characters that it doesn't recognise, it asks for your help.

The system doesn't have to learn everything from scratch, though. It comes ready to run with 20 standard fonts, which is a wide enough range to cover anything you're likely to see printed anywhere. And you can, of course, train it to handle many more.

And it really is that easy in practice. Just scan your page and set the process running, occasionally helping the package out when it gets stuck on a word or a symbol. If you have anything other than straight text on your page then you can take the process further and mark out exactly where the text sits on more complicated pages.

See Jack's six-gun

Any piece of software that learns to read is going to run slowly. You can forget those dreams about creating electronic versions of your favourite

■ The package comes with a few files to get started on. Neither you or the ST has to understand German, either.

books, because each page takes around five minutes to process, and if you try to speed the process up you lose quality in your final result. You'll also have to consider the logistics of scanning, storing and manipulating lots of large image files. The lesson to be learnt? Don't OCR any books.

It goes without saying that OCR is a package with a limited field of use. There aren't many people with a genuine need for an optical character recognition system. But if there's an OCR-shaped gap in your software collection, you'll be pleased with what it has to offer – it's certainly competent enough to perform its tasks with little error. A niche thing, perhaps. **stf**

SIMON FORRESTER

OCR

£49.95 Golden Image
0181 900 9291

Scanner and 2MBytes of RAM needed
Hard drive recommended

Highs

- Does its job well
- Comes self-taught with 20 fonts
- Copes with slanted text

Lows

- Slow
- Memory-intensive

75%

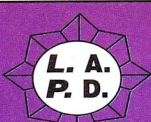
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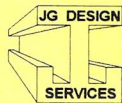
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BSS-Debug

ST FORMAT examines BSS-Debug, a Falcon programming aid that certainly has a sting in its tail...

The Black Scorpion group, already famous in Atari circles for their ground-breaking Falcon software, have done it again with *BSS-Debug*, a Falcon-only debugger that crunches its way through 68030 machine code and boasts a range of useful functions.

BSS use this product as an in-house development tool, and many prospective Falcon programmers will no doubt be keen to get their hands on one of the utilities that helped create *APEX media*. But what intrinsic use does it have? If you aren't a programmer, a hacker or a technophile, don't bother reading on, but if you have an interest in designing, developing or just exploring their Falcon software then you'll benefit from *BSS-Debug*.

How do you do it?

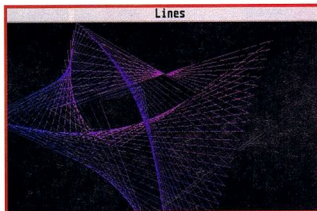
Like other BSS products, *BSS-Debug* doesn't use GEM. Instead it uses its own customised window environment, which looks like GEM but is much faster. It's also not entirely mouse-driven, but then, tasks like scrolling through a text window are faster using the arrow keys. The speed and responsiveness resulting from this design are the first things you notice when you load this rather slick utility.

Each function of the debugger is displayed in a separate text window, enabling you to rearrange the display as you like. Left-

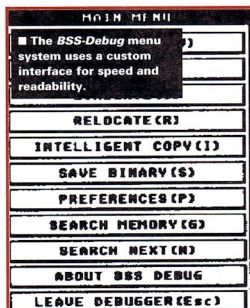
clicking the window selects it, and right-clicking pops up a menu listing all the options for that function. There are also a group of general purpose settings for the debugger.

Reverse engineering

The ethos of *BSS-Debug* is that it enables you to examine the workings of a program while it's running, rather than studying the initial source code. For that reason, it runs invisibly to the program being executed. This means, for example, that you can switch between *BSS-Debug* and a program running in a GEM window at the click of a button. It also means you can debug game programs that run in totally different resolutions. The tools the debugger provides can help you understand the active workings of your own programs, or indeed someone else's, but don't imagine it does all the work for you. You'll need fairly detailed knowledge about the internals of your machine, and an understanding of programming techniques before you can really get to



■ *BSS-Debug* sits invisibly behind programs while they run, even in different screen resolutions.



■ A completely gratuitous cat shot, just to draw the eye. Don't complain, it could've been a llama.



grips with the rigours of machine code development.

Even if you know your silicon onions, using *BSS-Debug* requires patience to set up just the way you want it. There are many system parameters, which can be altered at a very low level, and these take time to navigate. The speed of the interface helps, but there are a few surprising design omissions. All file and path names for loading and saving have to

be typed at the keyboard. A GEM-like file selector would be more convenient, and save you having to remember exactly where your files are and what they are called. Another conundrum is the lack of printing facilities. Sometimes a print-out is indispensable for working away from the machine, or keeping track of several related programs. These features will be incorporated in future releases.

Debuggers are even scarcer than other types of software on the Falcon, and *BSS-Debug* has the double-edged distinction of being the first, and thus best by default. But the professional build quality and fast operation will take some beating. With just a few extra features, it would encourage other talented programmers to put it to good use. **stf**

DUG ARMSTRONG

Jargon busters

Source Code: The original program, usually a text-file containing high or low level instructions in a language, such as C, Pascal, or Assembly.
Compiler: Takes source code and creates an equivalent set of machine-level numeric instructions known as object code.
Linker: This takes an object code file and links it with standard pre-built library code to produce executable code.
Executable Code: The final version of the program which can be run as a stand-alone application.
Assembler: Similar to a compiler, but produces executable machine code directly from low-level assembly language source code.
Disassembler: The opposite of an assembler! Takes an executable file

and retro-translates it back to assembly language source code.
Debugger: A programmer's tool which enables you to run an executable program in a controlled environment with various diagnostic features. *BSS-Debug*, for example.
Memory Map: A listing of the contents of consecutive memory locations, which are usually presented in the form of hexadecimal numbers and/or ASCII characters.
MC68000: The CPU, which lies at the heart of all STs.
MC68030: The CPU in the Falcon, faster and with more advanced features than the MC68000.

BSS-Debug

£39.95 Titan Designs
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Falcon with colour display required.

Highs

- Very fast
- Efficient interface
- Many powerful features

Lows

- No printing facility
- Documentation could be more detailed

What Else?

- Nothing else quite like it for the Falcon
- X-Debug for the ST
- £24.95 FaST Club
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89%

Tools of the trade

Each function is contained in a fast-scrolling text window.
Disassembler: Accepts any executable file and reproduces the equivalent assembler code listing. This reveals the underlying logic of a stream of unintelligible numbers. From here the program can be run with breakpoints which intelligently control the process, executing small segments of code or repeating until certain conditions are met.
Memory Dump: A display of any memory block's contents in an ordered fashion. This function also

allows the inspection of memory addresses that don't exist.
Watch: Displays the contents of labelled memory addresses. That's program variables to you and me.
CPU: Here, the contents of the CPU registers are displayed, with recent changes highlighted.
Labels: A list of all named labels and their memory address locations.
ASCII: If the sight of so much pure, logical machine code is giving you Vulcan's eyebrow, squirt at the ASCII source code file where it all started. Could be illuminating.

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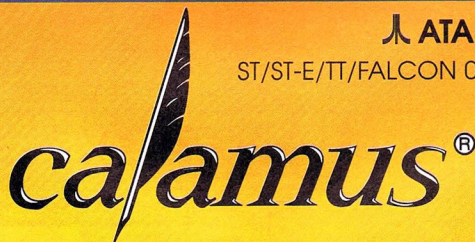


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HD Internal Drive Kit

Tired of running out of space on all those double-density 3.5-inch floppies? You need a high-density drive. Analogic have come up with a little hardware project for you...

Way back in the mists of time (issue 54 to be exact), we ran a tutorial on how to install the Bitz high-density 1.4MByte disk drive in place of the internal double-density drive your ST comes with as standard. More recently, Analogic have released their own version of the upgrade, romantically called the ST HD Mod, and it

to cope with a differently shaped drive facade, and plugging the new drive into the sockets vacated by the old one (this drive sits in place of the original drive). You then install the odd, technical-looking piece of PCB (Printed Circuit Board) with which the drive is equipped. This entails pulling back a leg on the floppy disk controller chip and soldering the wires

from the PCB to other chip legs, and to various other components on the main board of your ST. This is where you might run into problems. Soldering computer components is never

a qualified technician to carry out this installation and hand over your money knowing it's for the best. Alternatively, if you're confident, follow the tutorial in issue 54 (and if you missed it, back issues is on page 79) and have a go at installing the drive yourself, although we take absolutely no responsibility for those of you who end up destroying your machines in the attempt.

Assuming you survive the installation, you should now have a working high-density drive on your ST. The next problem you face is formatting high density disks. If your version of TOS is anything up to 1.62, you can use the *Bitzcopy* formatting software, supplied with the kit. If you have an STE with TOS 2.06 then there is a High Density Format option available from the Desktop. Easy, eh?

Yes! Yes! Yes!

Once you have your HD drive installed, what can you use it for? Well, there are all kinds of way in which owning a HD drive improves your computing power. HD disks can hold twice as much information as double-density – 1.4MBytes rather than 720K. The benefits of this extend to every package that uses a disk drive: you can process longer samples, create bigger text-files, store longer animations, in fact, if you can

store it on a disk, you can store more of it on a high-density disk.

Then there's the fact that your ST can now access high-density PC disks. It'll also make your life easier if you're using a PC emulator – most PC software comes on HD disks these days. And you can still use your double-density disks.

"If you don't know what a soldering iron is, you should find a technician to carry out this installation"

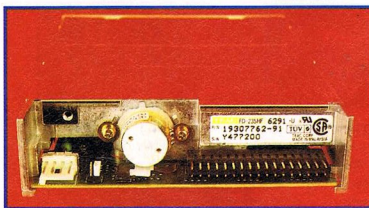
Once again, the kit contains everything you need: a HD 3.5-inch drive unit, accompanied by a small piece of circuitry which tells the ST that it's using a high-density drive and doubles the speed at which the disk controller chip runs (to 16MHz).

So if the price is right, which it is, and the benefits of a HD drive are obvious, which they are, then what's the drawback? Well, you have to install it yourself. This entails taking your machine apart, attacking the case to widen the existing drive hole

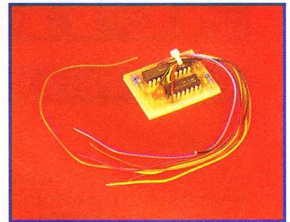
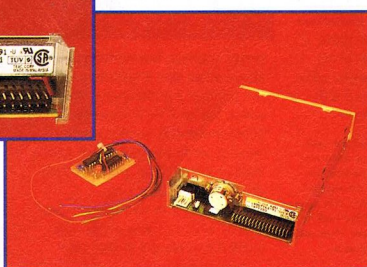
easy, particularly because the heat from a soldering iron can short important chips and other components, and we'd seriously recommend that you invest in a heat sink.

It's at this stage that we recommend you take part in the *ST FORMAT* test. If you don't know what a soldering iron is, and you've never even heard of a heat sink, you should find

■ As you can see, the drive unit is small enough to fit inside your machine with no worries.



■ The thought of sawing holes in your casing turns my stomach (and we'll take no responsibility for it, either).



■ The extra piece of circuit board, ready to go into the President's brain.

So... so... so...

This has to be a welcome modification to your ST, bringing it more up to date and into line with other computer systems. The TEAC drive is of a high quality, and the equipment seems slightly more robust than the standard Atari drive. Installation is the main stumbling block if you're a bumbling amateur, but for the technically minded it shouldn't be a problem. If you are unsure about installing it yourself, watch out for a solderless version which Analogic are promising for the near future. It'll cost you an extra £10, but it'll reduce the chances of you melting your computer.

Alternatively, there's always the Elco kit from System Solutions, but it costs £10 more and solderless versions are not available. If you're looking for a high-density drive, Analogic's HD Mod looks to be a great option. **stf**

SIMON FORRESTER

HD ST Mod

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Highs

- All the obvious benefits of having a HD drive
- High quality construction

Lows

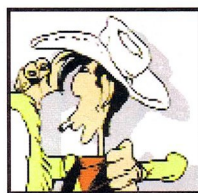
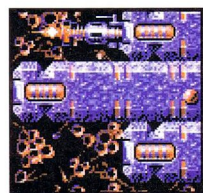
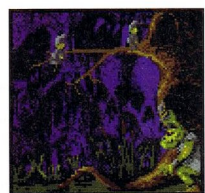
- Complex installation
- Not the best manual

What else?

- Elco HD drive kit £59.99 from System Solutions ☎ 01753 832212. Also involves soldering

85%

PUBLIC DOMAIN ACTION



With the calibre of recent PD game releases it's only fair that they get a section to themselves. Nick Peers selects only the best. He's that kinda guy.

GRAND PRIX MANAGER

FLOPPYSHOP
DISK FWS14C (£2.50)

THIS FLOPPYWARE TITLE CLAIMS TO simulate the rigours of managing a Formula One racing team, which means that if you're a budding Michael Schumacher or Damon Hill you'll find that this game isn't for you. And if this simulation is anything to go by, the management side of Formula One is deeply uninteresting. It's difficult to feel involved in a game that features screens filled with tables of statistics so boring that even Frank Williams would blanch at them. If you're not choosing drivers, you're picking chassis experts and engineers, but it's all predictable – the more expensive people you choose, the better a team you'll get and the more you'll win. Surprise, surprise.

And when you finally get to the race, you're given the option to bet on who's going to win. Forgive me for being a cynic, but do Formula One racing teams usually bet on the outcome of Grand Prix races? And would you honestly expect the likes of Lotus to bet on their own drivers when it's obvious that they don't have a hope against Benetton and Williams? The race is fairly vapid too, your only involvement being to make the decision on when to bring the cars in for a pitstop. In the good old days of the Speccy you could get hold of an earlier, simpler version of this game, which was much more fun simply because you didn't have to get bogged down in statistics. If you love

Pos	Car	Driver	Diff	Race 1 Lap 23/72
1	2	J. Palmer	---	---
2	5	A. Prost	0: 0.516	---
3	10	N. Mansell	0: 4.272	---
4	3	S. Nakajima	0: 4.524	---
5	11	G. Berger	0: 6.690	---
6	4	J. J. Lehto	0: 7.029	---
7	1	N. Larini	0: 7.212	---
8	16	R. Patrese	0: 11.411	---
29	29	J. Herbert	---	---
30	30	M. Brundle	---	---

numbers you might get some enjoyment out of this program, otherwise avoid it like, like... like a runaway car.
STF RATING: 54%

■ *Grand Prix Manager* in all its revved up glory. Now you too can experiment with chassis, engines and even nuts and bolts. Fun, huh? (I didn't think so either, and I'm completely mad.)

SERENADE MENU 17

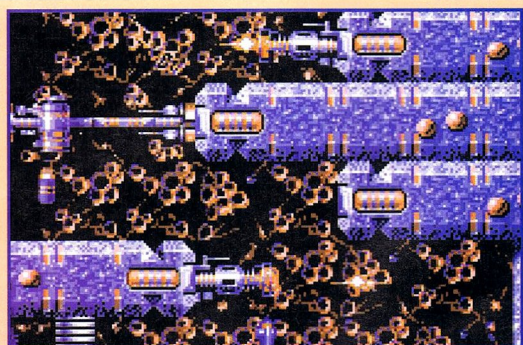
STELLAR PD
DISK MENU 17

SEVEN GAMES GRACE STELLAR PD'S latest neat compilation of games, this one leaning heavily towards the shoot-'em-up addict, once again. Even the 3D Construction Kit game, *Anarchy Academy* (STF 38, 73%) challenges you to destroy your

deserted school within a time limit. Unfortunately, being a 3DCK game it's a little slow, although well constructed. (Geddit? Sorry...) *Match Maker* is a Dave Cobbledick puzzler in which you match tiles from a hidden grid before time runs out. Dave is a puzzle creator extraordinaire, and *Match Maker* continues in the same vein as most of his previous games. *Location Universe 2* is a SEUCK game with



■ *Linda Ladybird* was getting just a mite (ho ho! - Karen) annoyed with all the unwanted attention from the ants. It would be the last time she wore 'Attract-Ant' perfume.



pretty graphics, but nothing to lift it above other SEUCK releases – fun for five minutes if nothing else. *Atax*, which scored 73% in issue 34, is another vertically scrolling shoot-'em-up, while *Viking 3*, which scored 80% in STF 64, is an addictive *Drop Zone*/*Moon Lander* cross. Believe it or not, *Kittypuk* does exactly what its name implies – it enables two players to play com-

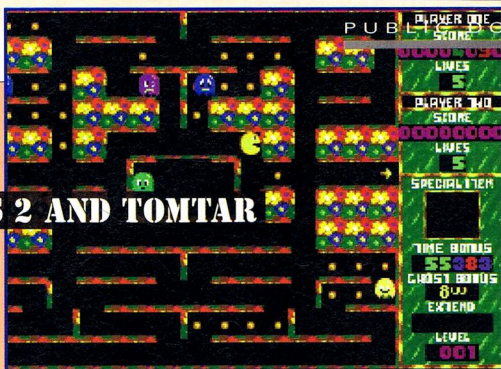
puter air hockey using a cat for a puck – you score goals by firing kitty into your opponent's net. Simplistic, but fun if you yearn for those ancient Binatone TV games systems. The final game, *Insecticide*, is a compelling cross between *Centipede* and *Daleks*, in which you control a laser-toting ladybird, and must protect yourself from waves of insects intent on catching and devouring

PACMAN ON ES 2 AND TOMTAR

**POWER PD
DISK PWR 475**

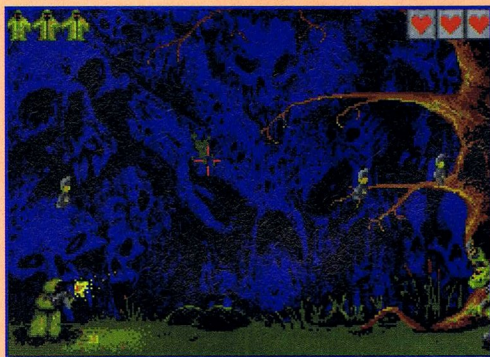
PACMAN ON ES 2 AND TOMTAR are both 1MByte STE-only games. Tomtar is a violent little number in which you stand on one side of the screen blasting merry hell at the Tomtars – little critters who are multiplying like nobody's business and converging on you at speed from behind a tree.

Occasionally an ogre appears and chucks Tomtars directly at you. Shoot him, and you're on the next level. It's all your typical simple, vio-



■ If you have an STE, but no Pacman clone, then you need Pacman on Es 2.

lent, mindless fun with lots of nicely detailed graphics, and you can soon find yourself becoming completely and utterly addicted to it.



Similar mindless fun is provided by loading up *Pacman on Es 2*. While it retains the classic gameplay of the original game, some wildly colourful graphics and excellent sampled sound (such as a *Family Fortunes* buzzer when you die and a *Roadrunner* "meep meep" when you get a power pill) update the game about as much as is possible. This version differs from the original *Pacman* clone (STF 57, 88%) by offering a two-player option, in which you and a buddy (who plays a *Pacman* in specs) compete. There are even bonuses to be won, which slow your friend. And there are 100 gruelling levels to battle through.

This is a superb disk. Each game is excellent in its own right, and together they represent absolutely hours of snarling at people to leave you alone, you're busy.

STF RATING: 90%

■ Go on, blast those poor defenceless Tomtars. You sick, sick person.

you. It's a simple case of blasting them away as they converge on your position, while pausing to admire the detailed if slightly sparse graphics.

This disk is yet another Sere-nade compilation that offers excellent value for money, and you're bound to lose at least a few hours playing it... (Much like you did this month, eh, Nick? – Jill)

STF RATING: 84%



FRUITY AND MATCH IT

TRANSPARENT DREAMS PDL

FRUITY IS A PASSABLE RENDITION OF a fruit machine – no more, no less. It features big, bold graphics, which are unfortunately let down by the poor beepy sound effects, and it offers little entertainment other than watching the numbers spin round. The game

really needs more options to make it stand out from countless other fruit machine simulators available in the Public Domain.

Match It, on the other hand, is a well-thought out variant of *Mah Jongg* in which you remove up to 144 tiles from a two-dimensional grid to proceed to the next level. The catch is that you can only click on similar or identical tiles that are either adjacent or connectable by a line with no more than two edges. It's a compelling game, and the inclusion of different levels and passwords gives it a longevity that other *Mah Jongg* games on the ST don't offer.

If you're a puzzle fan, you should get hold of this disk for *Match It* alone. *Fruity's* an added bonus that you might play occasionally.

STF RATING: 78%

■ *Match It*. Mums get addicted to this game. Mine goes berserk if she can't play it at least three times a day.

NOUGHTS AND MAD CROSSES

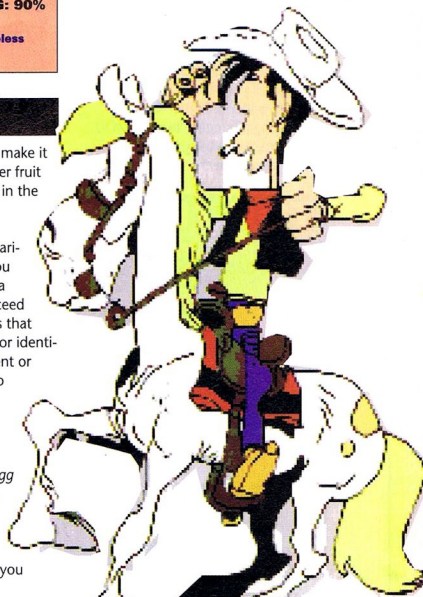
**POWER PD
DISK PWR 707**

THIS RELEASE IS A COMBINATION OF demo intro and game. The demo intro is a classic example of how demos should be constructed, featuring a relatively simple concept in gaming (noughts and crosses) being weaved seamlessly into the usual demo fare of abstract images, dancey sound and scrolly messages. The music even veers into the occasional vocal chorus, reminiscent of the Old Spice advert.

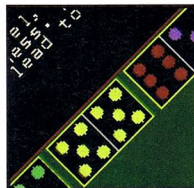
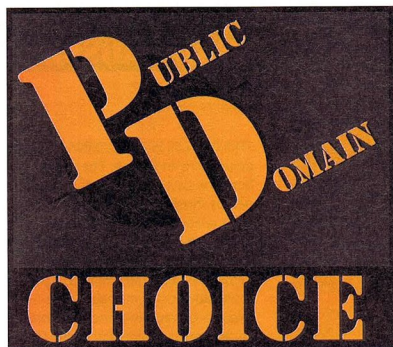
The game itself is played to the accompaniment of country music – surely a first for a game of this type? Initially you play straightforward noughts and crosses against your ST, but as you move to higher levels of play the grid starts to spin round, getting faster as you progress through the three levels. You can quickly become disorientated by a spinning grid, which makes this a particularly effective way of separating out the levels in terms of difficulty.

If you want the slickest, most difficult game of ST noughts and crosses, this is the one for you. If you hate noughts and crosses, you might still enjoy the demo, or even the country music.

STF RATING: 76%



■ *Noughts and Mad Crosses* is a Gallic creation. The cartoon of *Lucky Luke* is a bit of a giveaway, seeing as he was dreamt up by the creator of *Asterix*.



st-06:explosion
st-01:popsnare2
ST-01:funbass
ST-01:sixtease
by the Beyond.

st-04:ex800bass
st-07:milkyway
converted by js
jhsa@cc.tut.fi
st-92:tubestring
st-92:organ3

Looking for some serious bargains to improve the performance of your ST? Join Nick Peers on his endless quest to do the very same.

MUSIC

MODEST

AD.LIB PD

MODEST IS A MOD FILE ORGANISER, which enables you to create glorified lists of your MOD files. Just load in all your MOD files, and Modest automatically catalogues them for you, storing filename, song name and some information on the MOD file itself. This is useful because MOD files often have their filenames changed, which can mean you end up with the same file under several different names. Modest automatically groups them all under one alias, based on an analysis of the file itself rather than its name.

Not only does this give you a dedicated database for keeping information on all your MOD files, but it also helps if you want to swap MOD files with a friend. Rather than painstakingly listening to each MOD file in turn, it can tell you which files you have that are the same, despite

FILENAME	SONGNAME	INFO
AIRWOLF.MOD	airwolf	st-06:explosion st-01:popsnare2
DRWHO.MOD	doctor who	ST-01:funbass ST-01:sixtease by the Beyond.
LASTHERO.MOD	Zui Hou Yi Ge Da Xia	-----
STARWARS.MOD	starwars	st-04:ex800bass st-07:milkyway converted by js jhsa@cc.tut.fi
THEME007.MOD	themes from 007	st-92:tubestring st-92:organ3
FIREFOX.MOD	m.o.n by firefox	

having different names. You'll have to register it if you want to save or print anything, but it's well worth it, espe-

cially if you're serious about cataloguing all your MOD files.

STF RATING: 80%

Modest graces this month's Wonder Disk, so subscribers can try it out for themselves. What do you mean, you're not a subscriber?

TOP TEN

Transparent Dreams PDL

1 Jet Bike Challenge

2 GEM-View 3

3 Ozbornz Module disk 2

4 Ozbornz Module disk 1

5 Space Searcher 2

6 Fruity/Match It

7 Crazy Samples Disk

8 Centipede

9 Snacman

10 Utilities disk

Transparent Dreams can be contacted at: 59 Renton Road, Wythenshawe, Manchester, M22 9TQ. Call 0161 437 7474 for the latest details of their range, neatly contained in their latest catalogue disk.

OZBORNZ MODULES 3 THE NEW WAVE

TRANSPARENT DREAMS PDL DISK MOD 3

HURRAH! SOME DECENT MOD tunes, at last! This opens with a solid rendition of Duane Eddy's *Peter Gunn*, then moves on to the *Hill Street Blues* theme, which is recognisable and pleasant enough. Of the remaining five tunes, *Tocata* is the most memorable, evoking images of mad church

organists. This is a disk for those of you who have a short tolerance for dance tunes (20 seconds at a struggle), and you'll need your own MOD player.

Top tip: if you have an STE, try linking your computer up to your hi-fi using a standard phono lead. Your ST can sound pretty funky when the music's coming at you through 40-watt speakers!

STF RATING: 78%

Wot No Utilities?

There are no utilities this month, but don't fear. Next month Nick starts his 'Fine-tuning your ST' series, in which he covers all the utilities you'll ever need, and how to set your ST up to perfection.



APPLIC

FALCON

■ Everest – one of a long line of excellent text editors for the ST and Falcon.

FALCON UTILITIES

FLOPPYSHOP DISK F4555

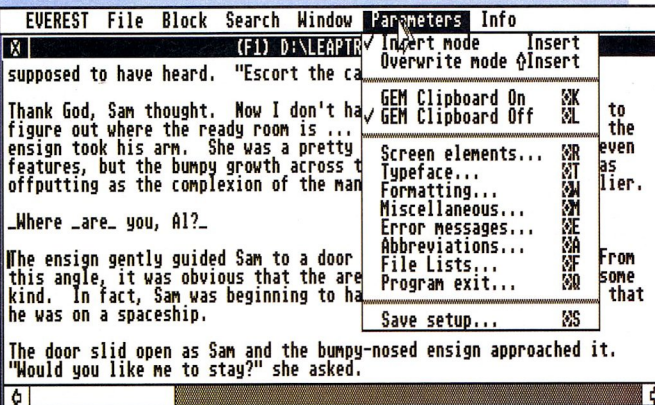
TEN VARIED UTILITIES GRACE THIS disk. The highlight is version 3.3 of *Everest* (STF 60, 85%), which is an incredibly compatible text editor, running on all setups with minimal fuss – it even supports GDOS fonts. Text editors like this create plain ASCII files and are often much faster and easier to use than the inbuilt text editors you get with programs like *Calamus* and *Papyrus Gold*.

Voxmail, a demo of which is provided on the disk, turns your Falcon into a telephone answering machine. The full version costs \$60 and comes complete with all the hardware attachments you'll need to connect the telephone, while using the Falcon's built-in direct-to-disk

technology to record your messages. Cheaper than an answerphone.

Icon Edit enables you to create colour icons for use on your Falcon's desktop, but its use is restricted to 80-column, 16-colour VGA mode, which you're likely to find restrictive. *Gamefix* is much like *Backwards*, attempting to make ST games run on the Falcon. *Browser* is yet another text-file reader.

The other program of note is *OCR*, which is optical character recognition software. This scans IMG



drawings and looks for text, turning it into a text-file. It's an interesting concept, but not a particularly powerful package, and slow in use.

The inclusion of *Everest* 3.3 makes this a highly worthwhile and

excellent value-for-money package if you're looking for a good PD text editor, and you can treat the other nine utilities as a bonus – you might need them one day after all.

STF RATING: 89%

EVEN MORE FALCON UTILITIES

FLOPPYSHOP DISK F4632

NO LESS THAN 22 UTILITIES GRACE this disk, covering a spectrum of taste and requirements. The problem with this sort of compilation is that it just isn't specific enough, leaving you wondering whether it's worth buying a whole HD disk for one small program. But anyway, to cover the highlights...

There's a replacement file selector, *Box Kite*, which enables you to select which INF file you load. Using this you can boot up your Falcon with different desktop layouts. Choose *INF* is a German bar-code creator, and there's a small screen-saver entitled *Fuss*.

There are also two programs that enable you to convert one archived file (ARC or LZH) to the other. The updated version of *ARC2LZH* comes with a comprehensive and user-

friendly Options screen that takes the fuss out of the whole process. There's also *PC Mouse* which enables you, for whatever reason, to use PC mice with your Falcon. Finally, *SM Blast* is included, giving you enhanced display options if you have a monochrome monitor.

There's something for everyone here, and each program does its job competently enough. If you're desperate for a new file selector and bar-code creator, look no further. If you want a host of other utilities, you might be better off just getting hold of a PD library catalogue disk and scanning through it to find exactly what you want.

STF RATING: 71%

MAGNET 9/GULLBACH

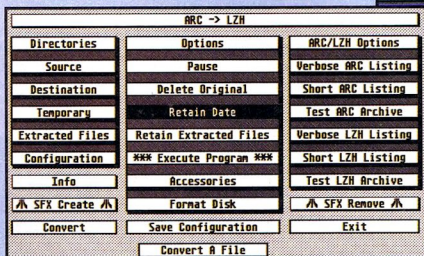
FLOPPYSHOP DISK F4581

THESE THREE DEMOS VARY IN style and quality. *Magnet 9* is the best, featuring ambient swirly graphics, which offer a respite from the psychedelic stuff we've reviewed recently. The music isn't all New Age though – the mood is shattered by the sound of guitars blasting away to *Anarchy in the UK* (thanks to Andy O, our resident punk rock guru, for that piece of information). Excellent stuff, but no Brian May solo...

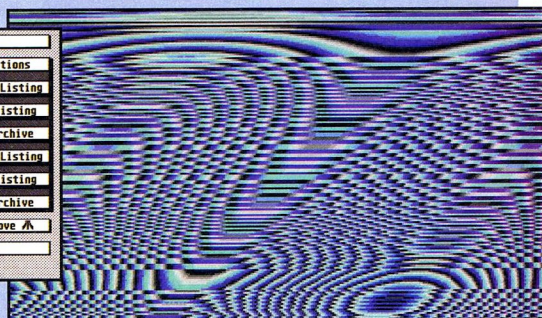
Gullbach returns you to the dance music theme, with nicely constructed, if sparse, graphics (the little gorilla tramping across the screen is a particular team favourite). The final demo, *68xinter*, is simply a picture constructed back in 1993 for a GFX competition in Germany. It might have taken 15 hours to render, but it still takes up far too much disk space (720K). If you're a Sex Pistols fan, buy this disk for the *Magnet 9* sequence. Otherwise it doesn't offer anything radically new.

STF RATING: 65%

■ After a program to convert ARC to LZH files quickly? Here it is.



■ Hmm. What's this then? Well, your guess is as good as mine. Answers on a postcard please...



MISCELLANEOUS

CHINESE HOROSCOPE AND I CHING

**GOODMANS PDL
DISK GD560**

A GOLDEN OLDIE OF A DISK THIS. If you're into astrology you'll love it of course, but even if you're a sceptic it still offers a few hours of mindless fun. *Chinese Horoscope* gives you the option of producing one of two horoscopes, based on either animals or stars. The horoscope based on animals is easy to produce – just enter your time and date of birth and the program produces a personality profile based on whether you were born in the Year of the Rat or Dragon or Donkey or whatever. The stellar horoscope is much more complicated, and requires an intricate knowledge of the night sky, something that the disk doesn't provide. Although other sources are recommended, it would have been helpful if the program could have done the hard work for you.

I Ching is another matter entirely. You type in a question, and the program answers by throwing three coins six times and

coming up with a 'profound' saying. For example, when we asked about the future for *ST FORMAT* over the coming year it replied: "When the corn is ripe, it must be harvested. Look into yourself anew, and take stock. Inaction and complacency harden the arteries." Sounds about right. It's easy to take programs like this apart – there are a finite number of responses depending on how the coins fall – but it's good clean fun.

Rounding off the disk are two programs: *Numbers*, which calculates what numbers play an influence on your life, and *Dominoes*, which is STFM-only, although you can get it to work if you use *STOS Fix* (a version of which graced last month's Cover Disk). You simply pick three dominoes at random, and receive your horoscope in return.

It's all weird but wonderful fun, and if it really does secure Birmingham City FC success this season then it'll have been well worth the paltry asking price!

STF RATING: 79%

DOUBLE FOUR
Social events are well starred, but
in the work sphere, do not commit
yourself unless your work is related
to the arts.

DOUBLE FIVE
A change for the better is in the
air. This may be a move of house, job
or relationship. Do not resist
change.

SIX / THREE
This portends travel, either for
pleasure or business. Any thoughts of
emigration will lead to success.

CLICK



MOUSE

■ My last *Dominoes* reading told me that weddings would be involved in my near future. So who's getting married, and where's my invitation?

UFOLOGY

**STELLAR PD
DISK MISC10**

NOW THIS REALLY IS BIZARRE. This disk consists of 15 text-files covering the author's view of the universe and the existence of UFOs. It opens with his personal beliefs, then develops some 'radical' (or loony, depending on your point of view) theories about UFOs and their role in the world.

For example, he believes that UFOs are "the Keepers or Guardians of the world" and that "they have been instrumental in its creation", and goes on to claim that the real purpose of UFOs has been hidden from us from the world's authorities. It all continues in much the same vein: just think paranoid fundamentalism and run screaming in the other direction. Might be briefly entertaining, particularly to cynics.

STF RATING: 38%

PD ROUND-UP

Missed a back issue? Want to know when we reviewed a particular piece of PD in the last few months? Then look no further than this definitive guide to PD reviews over the past four issues, in ratings order.

Title	PD Library	Type	Issue	Rating
Munch	Art Lib PD	Art	63	93%
Dynabusters+	AWF PD	Game	65	92%
Award Maker Plus	Tumblevane PDL	Utility	66	91%
Speed of Light v3.5	Floppyshop	Art	67	90%
Clip Art Collection	Floppyshop	Art	67	88%
HP Support Disk 2	Floppyshop	Utility	64	87%
Local Utilities	Floppyshop	Falcon	65	86%
Route Finder 2.0	Cover Disk 66	Utility	66	86%
Golden Dawn Menu 15	Stellar PD	Game	67	85%
ST Beermat	Organised Chaos L/Ware	Diskmag	64	84%
Oh no! More Froggies	Floppyshop	Demo	67	83%
Kozmic 4	Goodmans PD	Utility	66	81%
Ultimate STE Megademo	Floppyshop	Demo	66	81%
Family Tree 2.1	Merlin PD	Utility	65	80%
Golden Dawn Menu 10	Stellar PD	Game	64	80%
Power Magazine 16	Power PD	Diskmag	64	80%
Cycedelic Knockout Demo	Floppyshop	Falcon	67	79%
Novadisk 2	James Bird	Diskmag	64	76%
Scorewriters	Tumblevane PDL	Misc	66	76%
The PD Collection	Transparent Dreams	Utility	67	76%
Darts 180	Merlin PD	Game	65	75%
JPEG Pictures	Floppyshop	Falcon	67	75%
Imagelab	Goodmans PD	Utility	65	74%
Frantick	Goodmans PD	Game	66	73%
Pison-ST Transfer Software	Goodmans PD	Utility	67	71%
Lotus Document Displayer	Chris Sharp	Utility	64	70%
The TIFF Demo	Floppyshop	Demo	65	70%
Archivers	Goodmans PD	Utility	67	70%
Violent Death	Transparent Dreams	Game	66	68%
Intro Maker 1.5	Floppyshop	Utility	67	68%
Big Top Type	Floppyshop	Education	67	67%
Atari Museum	Merlin PD	Misc	65	66%
Stellar MOD Collection	Stellar PD	Misc	66	65%
ST Weird	Who's PD	Game	67	65%
MOD Files	Floppyshop	Misc	67	61%
Ozbornz Module 1	Transparent Dreams	Misc	64	60%
Ozbornz Module 2	Transparent Dreams	Misc	64	59%
Zuffers	Power PD	Game	66	60%
Golden Dawn Menu 9	Stellar PD	Game	64	55%
Overcans Invaders	Floppyshop	Game	67	55%
Club Culture Mix Pack 2	Stellar PD	Demo	66	51%
Lindemo and War	Goodmans PD	Game	67	50%
Jet Bike Challenge	Transparent Dreams	Game	65	48%
World Cup 1966 Demo	GL-PD	Demo	64	40%
Fly Over Fantasy	Floppyshop	Demo	66	25%

See page 73 for a list of all PD libraries. Although we've listed the libraries who sent in the disks for review here, most of the programs should be available from a selection of libraries.

RAE TUTOR

**FLOPPYSHOP
DISK UTL4609**

IF YOU'RE A BUDDING AMATEUR radio enthusiast, you have to attain a RAE City & Guilds certificate to enable you to become a licensed radio amateur. This suite of programs should help you do just that, the disk containing a demo of the programs (registration for the full suite costs £15).

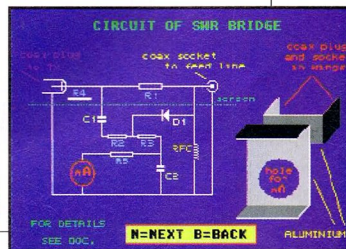
Two syllabuses are supplied. The first deals with licensing conditions, transmitter interference and electromagnetic compatibility, each of which is split into eight component parts, although the demo version restricts you to one choice only. The second syllabus deals with the actual basics of the radio, with seven sections featuring operating radios, electronic theory and transmitters and others. Again, the demo version restricts you to one piece of information from the many available on each topic.

■ If you understand diagrams like this, you're probably halfway towards getting your amateur radio licence.

Rounding the disk off are two slide shows of clear, concise figurative diagrams. There are 60 in the full version, but only eight in the demo. To help you remember the material, the author has made it impossible to print any of the tutorials or diagrams, so you have to copy his own notes from the screen. This might work but watch out for eye strain and take plenty of breaks.

Coded in *STOS*, the program is not *TOS 2.06* compatible as it stands but does work using *STOS Fix* (which we gave away on Cover Disk 67). It's well put together and should be an invaluable aid to all you budding amateur radio enthusiasts. **STF**

STF RATING: 76%



**Full catalogue disk for £1.00 or 50p with order.
Disk prices: £1.75 each. Postage included**

STARDUST

Bloodhouse's latest offering is one of the best-looking games this year. Simon claws through the make-up to find out about the game lurking underneath.

Old games never die – they just come back five years later with better graphics on the next generation of hardware. Unfortunately, game designers never really caught on to the idea that while you can make a game look as wonderful as you like, you still have to include little things like gameplay. You have to be careful to keep the game's attraction intact – it's all too easy to ruin a game like *Asteroids*, for example.

On first impressions, *Stardust* appears to have fallen



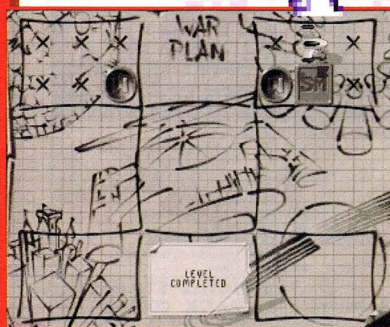
into the familiar trap of reproducing an old game with a flash new presentation but adding absolutely nothing to the gameplay. Indeed, the first level does little to change your opinion. Venture on through any of the other 29 levels however, and you soon realise there's a great deal more to *Stardust* than a quick game of *Asteroids*...

The game takes the standard *Asteroids* format: an overhead view of your ship, which offers rotation and thrust controls, and fires at slowly falling objects in zero-G space on a wrap-around screen. The

only real gameplay difference is that everything is much larger, effectively making the area of play smaller – so every rock in *Stardust* is permanently in your face, demanding to be dealt with.

Hold on a minute
Having merrily played through level one of *Asteroids*, admittedly with

■ It was when Derek showed me the battle plan in his maths book that I realised this wasn't exactly a professional operation I was on.



■ The big chaser. It'll go for you wherever you are, and smack straight into you when you attempt to knock out the balls holding it together. What are you going to do?

graphics to salivate over, your STE suddenly remembers it's running *Stardust*. Suddenly, '90s game techniques click smoothly into place. This really comes into effect when

you reach the end of the first world. Instead of the odd mothership bumbling aimlessly across the top of the screen, as you'd expect, an enormous droid appears from nowhere and sweeps the screen of... well, you, basically.

After you've defeated it, you switch perspective, moving into a warp section in which you fly down the long tunnel to the start of the second world. These warp tunnels

link the five *Stardust* worlds, each littered with deadly mines, boulders and blades. Some can be destroyed, but others sit solidly, ripping away your energy as the

"The graphics are raytraced and the colours must have been chosen by God (or someone close to him)"

texture-mapped walls of the tunnel slip quickly by. All you can do is shoot them or avoid them.

Stardust looks flippin' gorgeous. The graphics are superbly ray-traced, the animation is smoother

than you'll ever have seen before, and the colours must have been chosen by God (or someone very close to him). Although the backdrops are essentially just stills that add nothing to the gameplay, each

Weaponry

Although *Stardust* doesn't strike you as a tactical game, the addition of extra weaponry adds interest. As well as the three-way gun you begin with, which is good for general-purpose boulder destruction, you slowly build up an array of weapons, powering them up as you play. Not surprisingly, the bad guys you meet tax your ability to select the right weapon for the job, but anyway...

3-way: your standard gun. Fires three bullets together, which slowly separate, giving both range and blanket. **Bouncer:** bullets that not only damage their target, but bounce off, hitting anything else in their way.

Plasma: a continual, far-reaching stream of plasma bolts. Does least damage to anything that stays still long enough.

Flamer: a flame-thrower. Excellent for immersing things in fire although it doesn't quite have the same range as the other weapons.

Burst: an excellent way to kill those big, slow bad guys. Charge up the burster and fire it for big hits (but bear in mind that they do take a fair old while to charge).

Rockets: these are additional to your selected weapon, firing homing missiles from the sides of your ship to hit anything on screen.



STATUS DISPLAY
WEAPON 3 WAY
POWER LEVEL 4/3





■ The warp sections are pretty hairy, and it's easy to get cut up over them.



■ The mission briefs, giving vital advice on exactly what you can kill. They also help to break the pace a little.

and dirty tricks. It does wonders for the soul to realise that with a little patience and a lot of thought you can work out how to kill particular baddies

who've rubbed you out every time they've caught sight of you.

Every time you get used to what you're supposed to be doing you bump into something new. This can make the game seem a little inaccessible, but it also gives *Stardust* enormous

longevity. You never get bored, because as soon as you manage to beat everything you've come across so far you suddenly encounter a new contender, who naturally appears equally unfathomable and merciless.

■ The mine choppers. Inaccurately named – they're too busy spitting mines out to chop any up.



■ Those mines will kill you, but you can bomb the rocks to clear a safe path through.

So the big question here is whether *Stardust* manages to rework an old gameplay concept and still come up with something new. To their credit, Bloodhouse have taken a solid original concept and come up with a hundred and one modifications, making for an even better

game. The balance of reflex and technique is perfect, each new encounter drawing on a different skill.

If *Stardust* has a bad point, it's the difficulty curve. Although you can record

your position, using the level code system, you always re-enter the game with the same number of lives as you had when you received



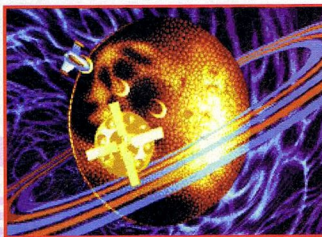
■ It became apparent to the estate agent that those penthouse flats were about to go rapidly down in price.

it. If you end up approaching the third level with only one life, you'll only ever have one life unless you find another code.

But pish to such minor gripes. *Stardust* really is a fine tribute to an old classic, as well as an excellent game in its own right. It feels good, it looks great, and it's easily big enough to keep you playing for a long time – after all, there are 30 levels plus additional warp tunnels and optional special missions.

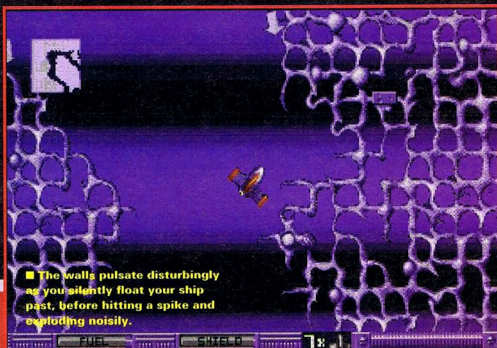
Stardust is the latest in a recent line of excellent, not-so-corporate releases, and it's one you must get. Not only will it show off your machine, but it'll blow your mind as well. **stf**

SIMON FORRESTER



Extra-special-bonus-secret-mission sublevels

As well as the standard *Asteroid*-style levels and the warp tunnel sections linking each world, there are a few extra bonus levels added to give the game even more spice. The first encounter of this kind appears once you've completed every level of the second world. Set underwater, you jump into your ship and explore an enormous cavern network, the fragmented walls pulsating organically as you fly past. The objective of the level is purely personal gain – it's littered with extra lives and power-ups, and becomes a race against time as your fuel level slowly drops, and is only sparingly revived by the occasional fuel pod.



■ The walls pulsate disturbingly as you sailantly float your ship past, before hitting a spike and exploding noisily.

Stardust

£25.99 Daze
0171 372 7435
STE, Falcon and compatibles
1MByte minimum required

Highs

- It's *Asteroids*!
- With bosses
- And warp tunnels
- And extra weapons
- And special missions

■ And everything!
Lows

■ Erm...

94%

PINBALL

The world's first decent pinball computer game has finally appeared on the Falcon. Fly through space, become a rock star, travel the Wild West railroad, experience your worst nightmares and fulfil your *Pinball Dreams*. Dodge, eh?

It's been a long time coming. The original Amiga version of *Pinball Dreams* appeared back in 1992 and now, nearly three years later, it's finally arrived on the Falcon. Yep, just the Falcon. Not the ST, not the ZX81 and not even (cue gasps of horror) the Spectrum!

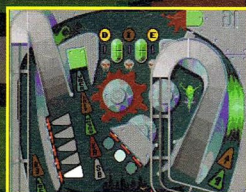
While *Starball* and the original *Obsession* title were tailored for the ST and STE, *Pinball Dreams* is the first Falcon-specific pinball game. This means that it's going to blast the other two to infinity in terms of graphics, sound, speed and, oh, everything. Surely? Erm, well except that it isn't, largely because it doesn't utilise the Falcon's in-built technology. But I'm getting ahead of myself. Let me give you the full story...

Lights, camera, action!

Like *Obsession*, *Pinball Dreams* features four themed tables for you to bang your balls around. In ascending order of difficulty they are Ignition, Steel Wheels, Beat-Box and Nightmare.

Actually, as *Pinball Dreams* came first, it's fairer to say that *Obsession* followed the trend.

The game comes on a single high-density disk (there's no swapping to be done here) and you can install it on your hard drive, which obviously speeds up the loading process. This means you spend more time playing the game rather than tapping your feet impatiently waiting for it to load.



■ The Nightmare table offers by far the toughest challenge of *Pinball Dreams*. Exactly what you want, eh?

As with *Obsession*, up to eight players can get involved in any one game, which means you can take your eight-way battles to extra heights. There are differences, though. Unlike the five balls you get in *Obsession*, *Pinball Dreams*

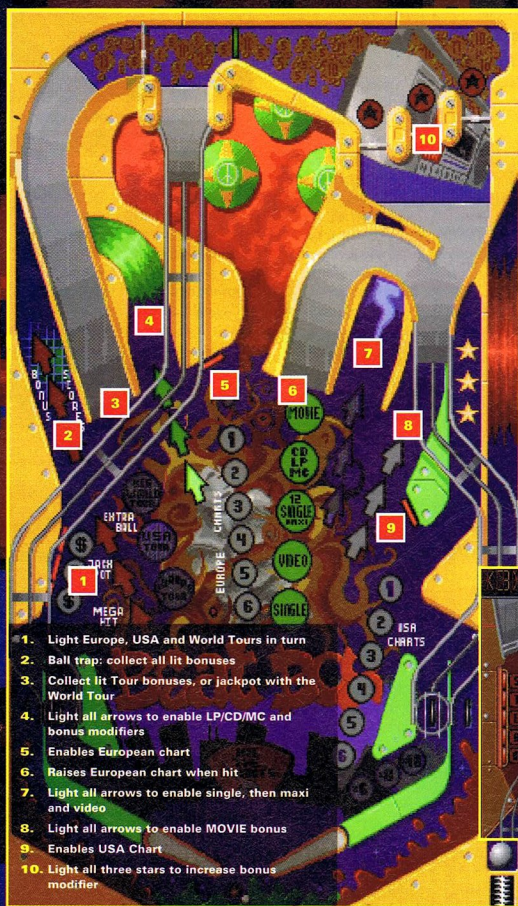
gives you just three chances to rack up the highest score possible (and thus lord it over all your mates). Such crowing is all part of the game, of course, and it's no doubt largely respon-

sible for that universal impulse to have "just one more go" that makes pinball so addictive as a competitive sport.

All of the tables are similar in appearance and concept. There are all the bog-standard bonuses that you tend to find on most tables, including a 'jackpot' feature common to all four. However, as with the STE version of *Obsession* there's no multiball option, so don't hold your breath waiting for three balls to start bouncing around the table at any one time because they won't. Pity that, especially as the Falcon version of *Obsession*, which is due any minute now, promises that very feature.

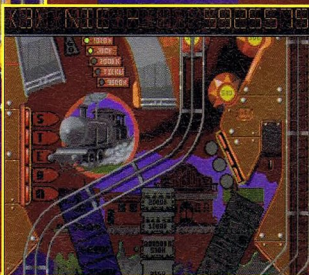
Lift Off!

The first table, 'Ignition', is based loosely on rocketships and the like. After a few minutes' play it becomes clear where *Obsession* got its inspiration - comments like 'Lost in Space' (which appear when you lose your ball) are sharply reminiscent of the 'You're Out!' message on the Bats 'n' Balls table featured in UDS' release.



1. Light Europe, USA and World Tours in turn
2. Ball trap: collect all lit bonuses
3. Collect lit Tour bonuses, or jackpot with the World Tour
4. Light all arrows to enable LP/CD/MC and bonus modifiers
5. Enables European chart
6. Raises European chart when hit
7. Light all arrows to enable single, then maxi and video
8. Light all arrows to enable MOVIE bonus
9. Enables USA Chart
10. Light all three stars to increase bonus modifier

■ If the Steel Wheels table itself hasn't already given away its Western origins, there's a Country soundtrack to remind you of its theme. Yee-ha!



DREAMS

Lighting up all the letters that make up the word 'fuel' enables you to blast off around the planets – of course, you have to flip the ball all the way up the left ramp first. Otherwise, it's business as usual as far as the bonuses are concerned – lighting up 'warp' adds to your bonus multiplier while getting all of the letters of 'ignition' gives you the jackpot, which can be increased by hitting other bonuses.

The Ignition table is designed to be the easiest of the four, but it still presents a challenge and works well. If nothing else it serves as a gentle introduction to playing *Pinball Dreams* which is, of course, its ultimate aim.

Trainspotting

The second table takes you back to the days of the Old West and, in particular, the railroads. Points are easy to rack up here. You see, while the instructions state that you need to hit the left and centre ramp alternately within five seconds of each other to score a million points, you can actually get those points simply by knocking the ball twice around the same ramp – provided you do it within the time limit. Considering that each ramp can only be accessed by one flipper, the challenge of juggling flippers to hit the ball up both ramps within five seconds is lost, removing the whole point of the bonus.

Grumbles aside, Steel Wheels is still fun to play, although the fact that points can be scored so easily does detract from it slightly. That said, if you like scoring millions of points with no effort whatsoever, you'll probably love it.



■ The rather groovy options screen from *Pinball Dreams*. From here you can pick any one of the four tables to play. (And I thought it served no useful purpose whatsoever – Karen)

Rock Chicks

The third table is based around the world of rock, and your attempt to conquer it by scoring a number one hit in both Europe and the USA. This is my personal favourite, if only because I harbour a secret desire to become a massive rock star and change the world as a result. Either that or become a dinosaur making tens of millions of dollars in 20 years' time by doing reunion concerts in America.

Various bonuses exist, enabling you to release singles, videos, albums and even movies. At the same time you're trying to rise up the European and American charts while cashing in on European, American and finally World tours. Hitting number one in either chart scores you a massive five million points and, if you're not careful, you can find yourself consumed with a desire to make it as a star, along with a sad belief that playing pinball will bring you closer to your dream.

Freddy Krueger

The final table is called 'Nightmare', which has much to do with its difficulty. Unless you practise accurate shots (you know, those where the ball goes somewhere other than between your flippers), you die all too quickly.

The two major bonuses involve lighting up each of the 'graveyard' letters in turn by hitting all the RIP targets. This activates the mystery spin feature, which randomly determines whether you score extra points, get the jackpot or even receive an extra ball. The second big bonus, which is worth five million points, is awarded every time you hit the left and right ramps in the 30 second period after reaching midnight, which is reached by advancing the timer, which you can do by hitting the ball on to a flashing ramp.

Nightmare is the toughest table of the lot, but, like the others, you can quickly become addicted to it.

21st Century?

Pinball Dreams is an extremely competent conversion of the Amiga original, so if you're a pinball fan



■ "Space, the final frontier..." Is that a required part of every Starship Captain's vocabulary, or just those who get a network TV show?



■ We have lift-off! Cruise the solar system with *Pinball Dreams*' first table. But don't get lost in space!

with an obsessive desire to collect all the pinball games available you won't be disappointed. It hooks you like all games should and the hours literally fly by as you promise yourself "just one more go".

Nevertheless, it's a shame that the game doesn't aspire to be anything other than a faithful conversion. It doesn't stretch the Falcon's impressive capabilities, and, truth be known, it could easily have been converted for the STE. It's a more accurate rendition of pinball than *Obsession*, in that the tables are less 'gimmicky' and mission-orientated, but considering that the table designs are a major factor in *Obsession*'s success, *Pinball Dreams* misses out somewhat.

The graphics are completely faithful to the original Amiga 1200 version, which sadly means they lack the vibrancy and colour of *Obsession* – in fact, their hues cast quite a dour shade over the proceedings at times. The music and sound effects are good, but again they don't exactly make great use of the Falcon's hardware.

Pinball Dreams has been superseded on all formats since it

first appeared all those years ago (*Pinball Illusions* and *Pinball Fantasies* have taken the crown on the non-Atari computers, while *Obsession* reigns supreme on the STE), but it's still good fun and worth investing in, especially if you love pinball and can't wait for UDS to release a data disk full of new *Obsession* tables. **stf**

NICK PEERS

Pinball Dreams

£24 21st Century Entertainment
Distributed by 16/32 Systems ☎ 01634 710788
Falcon only (RGB)
Hard drive installable

Highs

- Addictive
- Faithful conversion of the original...

Lows

- ...but perhaps too faithful
- Doesn't push the Falcon in any way

80%

SPACE QUEST

When we heard Kixx had re-released the first of their *Space Quest* graphic adventure games on budget, we sent our very own hero out there to save the world from gaming ignorance.

Roger Wilco is the chief sanitation engineer (aka the janitor) on the starship Arcadia. His mission: to scrub the dirty decks... to replace burnt-out light-bulbs... TO BOLDLY GO WHERE NO MAN HAS SWEEPED THE FLOOR!

That's how the packaging reads, the gag painstakingly pointed out in capitals then rammed down your throat with an exclamation mark. It's then converted into a few other languages, just to be on the safe side (und sich tapfer dorthin wagen, wo niemand je guputz hat!). Yup, *Space Quest* is a graphic adventure in the *Monkey Island* vein – a bloke wandering around accompanied by a host of cheap gags.

You play Roger Wilco, the aforementioned bloke, who's working on the Arcadia when, luckily, it happens to be hijacked by Sarien stormtroopers. Not so lucky for Roger perhaps, but it makes for a slightly more interesting game than a few hours of floor sweeping would.



■ Though it was fully functioning, Jeff couldn't shake the feeling that he looked a little silly in the cat suit. Then he noticed that the airlock was open. Goodbye, Jeff.

Graphic vs text

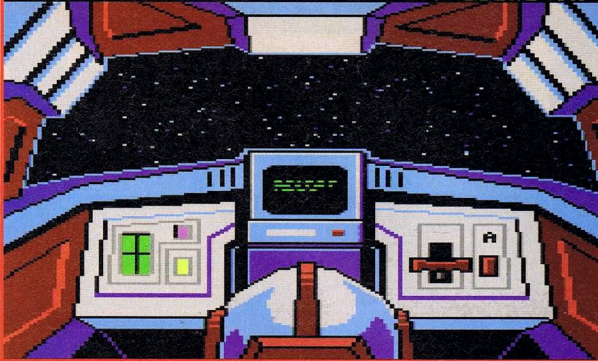
Space Quest is a 3D adventure, in which you use a mouse to direct Roger around the large blue steel ship, littered with the dead and the dying. However, given that this is the first in a series of five games, you'd expect to see problems or inconsistencies in the control system, and as it transpires they're even more pronounced than you would expect.

For example, the novel, convenient, mouse-based point 'n' click system for moving around is only used for walking – any other actions must be initiated using the classic text adventure method of typing in commands. This could easily have been avoided with a few icons, or active text areas, and is annoying in itself. This problem is compounded by the fact that when you are using text, the responses don't hang around on screen, instead appearing and disappearing in boxes. Then there are the problems that arise when you come up against obstacles. Steering Roger around a concrete corpse or convincing him to skip around that door jam can really be a problem, especially when you're in a hurry.

All of this makes problem solving

Score:15 of 202

Sound: on



■ Though all your indicators are working perfectly, I'm afraid I'm going to have to impound your ship because it clearly only has two buttons.

more difficult than it needs to be, because as well as all the time you spend finding objects and solving puzzles, there's the extra time spent painfully steering toward the object you're trying to manipulate then being told you're not close enough. *Space Quest* would almost be easier to play if it had been programmed as a purely textual program rather than a graphic adventure, despite all its jokes, intrigue and puzzles.



■ While the professor lay dead on the floor, Jeff decided to take a look through the music collection.

Hmm. Back to the bad points

An adventure of this kind needs size. It's probably because of its extraneous graphic interface that *Space Quest* has too few locations. And within those locations there are so few features. If you examine a corpse in a text adventure, you come across the standard wallet, pass card, and maybe even a gun. In *Space Quest* people die alone and naked – the emphasis doesn't lie in objects, but then, the emphasis doesn't seem to lie anywhere else, either.

Space Quest rides on the fact that it's a graphic adventure, while forgoing essentials like puzzles and intrigue. Unfortunately, for a graphic adventure the graphics aren't any good, nor is the sound. It's a game in which you're reduced to wandering around ships and alien planets, wondering where everything is, then dying a sudden and unpredictable death. Fun. **stf**

SIMON FORRESTER

This is a problem that *Monkey Island* solves by presenting itself as more of a movie than a game – you just tell the ST vaguely where you want to go, and it delivers you to exactly the right spot. *Space Quest*, on the other hand, insists that you carry out all the petty lining up and steering yourself. Which means that you're reduced to getting stuck to walls and wondering why Roger won't move when there's quite patently nothing in his way, and why, when the ship's been overrun with marauding space aliens, he can't muster anything above a slow plod.

A good point

Of course, *Space Quest* does have its good points, the first being the humour which, though tiring at times, certainly helps lighten the tone of the game.



■ The bad guy walks on to the screen, and kills you before you have time to dodge. The game ends. That's fair.

Space Quest

£9.99 Kixx XL
0121 625 311

Highs

- It's fun for a while
- A few things to explore...

Lows

- Puzzles aren't even vaguely taxing
- Little to see and do

30%



SPELLBOUND

The quality tester played the game for a couple of minutes, then nodded with satisfaction.

"Absolutely nothing new there. Unleash it upon the market immediately."

The 16-bit computer revolution was responsible for a wealth of 3D games, massive text adventures, graphic adventures and strategy games. It also introduced a new breed of game: the ST platformer, which was instantly recognisable as making absolutely no use of the 16-bit computer's abilities. The ST platformer isn't a rare breed. A certain level of programmer senility has been reached, at which the idea of yet another cutesy bloke running

sional object brightens up the place, as do the wobbly bad guys, who weave their predictable, brainless patterns across platforms. From this point on, you should prepare to be annoyed.

Broccoli

The control system is a masterpiece of odd joystick designation: up and down moves lifts, not your little wizard. Other actions, such as jumping and manipulating objects, are controlled by the <Fire> button.

To take a run up and jump, you have to hold a diagonal and hit <Fire>, an unnecessarily complex way to time any manoeuvre.

And before you even think about progressing any further you need to get the hang of the way the game moves. Lifts move erratic distances; then stop, leaving you ploughing off the edge into blackness when

you thought you were still travelling upwards. Weapons describe arcs of motion seemingly designed with safety in mind, falling short before they do any damage. Aiming is a matter of standing the correct distance from your moving target and repeatedly hitting <Fire>

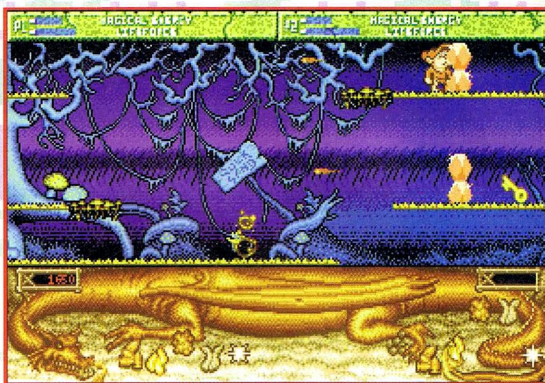
■ He can magically throw rocks! Gasp! He can magically throw bits of metal! Gasp! He can, oh, what's the point? I've seen more magic on a Paul Daniels show.

around another set of platforms seems like a great one.

Spellbound is one of those platformers. It features Sortice the Wizard, and his attempt to rescue Poinat, his friend, by journeying through eight worlds with cheerful names such as the 'dingy dungeons of death and destruction', 'subterranean slime pits of doom' and 'domain of ghostly goings on'.

The scene opens with Sortice standing on the left of a left-to-right scrolling level, built up of thin platforms, lifts and gaps. The occa-

■ Meet Arthur. He spends his time snoozing at the bottom of the screen, whereas the player snoozes in front of it.



■ There are a number of standard plots computer game authors insist on using in their work. *Magical rescue attempts* – a plot only really properly explored by Cecco in the *Stormlord* series – never work quite as well as they should.

until the baddie walks into the rock's path.

There are other weapons. As your manna (magic power) increases, you can use a variety of weapons, from icy blast spells to fire walls to gems. But while these extra weapons can only be used properly when your manna is high enough, there's no indication of exactly what 'high enough' actually means. Attempt them with insufficient manna and the weapon misfires, an event represented by a whirlwind engulfing Sortice.

This is a platformer with absolutely nothing new about it. One of those games that makes you suspect there's a computer somewhere churning these out by the hard-drive load, changing the level design fractionally and adding a different set of cutesy graphics. All the programmer needs to do is think of the twist to 'spice up' the gameplay. *Spellbound's* concession to gameplay is a two-player option, enabling Sortice's brother

Cerorapp to join in the simultaneous two-player fun. Psygnosis have also recognised the need for a game like this to degenerate into a fist-fight, so the ability to shoot the other player has been included. Essentially, though, the two-player option simply enables two people to get bored together, as opposed to taking it in turns.

The only area in which this game excels is monotony. You're either standing on a lift, working around a simple obstacle or falling. The fact that you can only carry one object at a time makes the levels yet more repetitive; you have to traipse through them all over again to find the key that you couldn't collect because you were weighed down with the massive encumbrance of the first key.

Despite its obvious lack of originality as far as gameplay is concerned, *Spellbound's* well presented. It looks polished, if a little dull, and the sounds aren't offensive, but if you're looking for a demo of what your ST can achieve look elsewhere. **stf**

SIMON FORRESTER

Spellbound

£19.99 Psygnosis
0151 709 5755

Highs

■ Two-player action

Lows

■ Dull

■ Dull

40%



ST ANSWERS

Games on the Falcon

SOFTWARE
I use a 1MByte STE and I'm thinking of upgrading to a Falcon030. Will any of my old ST games, like *Rainbow Islands*,

Bubble Bobble and *Scrabble*, work on the Falcon? And will my BASIC programs with PRG file extensions work?

Samuel J Carroll, Blackpool, Lancs

Programs created with STOS or GFA Basic are not very compatible with the Falcon and usually crash.

Mystery Mega STE switches

HARDWARE
I have several Atari STs including a Mega STE 4/80. Inside the Mega STE, in front of the SIMM slots, are a row of DIP switches and a pair of empty sockets just to their right. I believe one switch enables the Desktop to be held in memory and the others control different boot-up options. I'm a bit wary of experimenting with the switches, so could you tell me what they and the empty sockets are for?

Peter Lee, Cheltenham

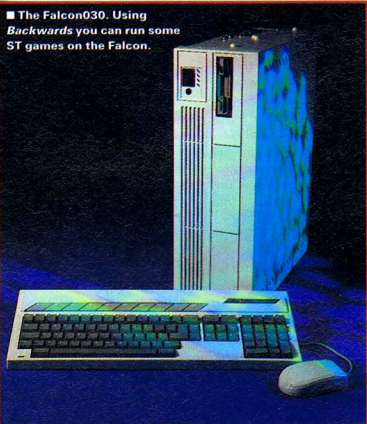
A I've taken a quick look inside our Mega STE to refresh my memory. Yes, there is a bank of eight DIP switches in front of the SIMM sockets. Unfortunately I don't have a clue what they're for, although it's unlikely that any of them would 'enable the



■ Mystery switches in the Mega STE, at the bottom right of the motherboard. Do you know what they are for? Anyone? Please! We're completely stuck.

Desktop' as you suggest. More importantly, no one I contacted in the ST trade has a clue what the switches are for either – including Atari. I've contacted Atari US and I'm waiting for the specs for the Mega STE to arrive by post – hopefully this will determine what the switches are for.

In our Mega STE, there are no empty sockets to the right of the DIP switches. There's a couple of empty places on the motherboard where surface-mounted chips can be soldered just to the right of the SIMM sockets.



■ The Falcon030. Using Backwards you can run some ST games on the Falcon.

A There's good news and bad news for you. Some old ST games work on the Falcon and some don't. To make things a little more compatible there's a special Falcon program called *Backwards*, which enables more ST games to run on the Falcon. It's really an ST emulator for the Falcon software, and you can get it from any PD library that stocks Falcon software. Remember, even though you might be using *Backwards*, ST games are not guaranteed to work.

All programs generated with HiSoft Basic 2 should work without problems on the Falcon.

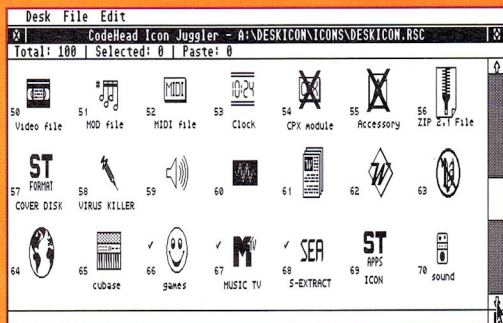
BIG ICONS?

SOFTWARE
When I boot up in medium resolution using TOS 2.06 and the DESKICON.RSC file from Cover Disk 48, I can get four icons vertically down the Desktop. However, if I modify the DESKICON.RSC file in any way, using *Makeicon* and *Icon Juggler* (also on Cover Disk 48), I can only get three icons vertically. I get this problem whether I boot from floppy or

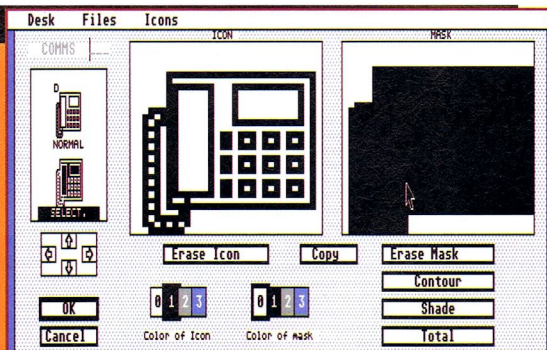
hard drive. Is this a problem with the software or with TOS 2.06?

Kevin Wade, Isle of Wight

A Editing the icons in the DESKICON.RSC file shouldn't make any difference to the way the icons are displayed on screen. The display information for the Desktop icons is contained in the



■ Once you've designed your icons for TOS 2.06, you need to sort them out. Which is exactly what Icon Juggler does for you. Clever stuff.



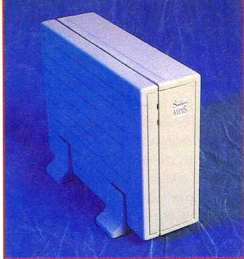
■ Go design crazy with Makeicon from Cover Disk 48. You can also use it to create icons for KAOSDesk, which was on last month's Cover Disk.

NEWDESK.INF file, which isn't affected by either *Makeicon* or *Icon Juggler*.

There are a couple of things you can check. First make sure you use the 'Save Desktop' command from the Options menu when you've rearranged your Desktop layout. If you don't save the info then you simply get the original icon layout when you re-boot your ST. Alternatively, your *NEWDESK.INF* file

may be corrupt. Drag it to the bin and create a new *NEWDESK.INF* using the 'Save Desktop' command. If it's too large, the *NEWDESK.INF* file sometimes becomes corrupt.

Finally, make sure that your *DESKICON.RSC* file is less than 64K – TOS 2.06 can't cope with it if it's any larger. It's a good idea to restrict the number of icons in the *DESKICON.RSC* file to about 150.



■ It's certainly unusual for people to have any problems with System Solution's Minis hard drives. They're the most reliable hard drives around.

Hopefully with those full specifications from Atari US I should be able to let you know next month.

Hard drive horror

I am having trouble with my 270MByte MiniS hard drive, which I've only had for a couple of months. I think I have a corrupted boot sector, which has led to my Drive C partition disappearing. When I open the drive window I get the message '0 bytes in 0 items' in the information bar. When I use DiskSpace 1.07 to check the drive it tells me that the correct amount of space is available. And other software tells me that the FATs are different. I now have to boot my hard drive from floppy disk every time.

On my other partitions I have problems like illegal cluster links, too many subdirectories and invalid sub-directories. Is there any software that can fix these problems? I've contacted System Solutions, but they simply advised me to reformat the complete drive. Surely this is a bit harsh?

Susan Carey, London SE25

Unfortunately, Susan, it looks as though the data on partition C is gone for good. There's little or nothing you can do to fix the problem and recover your data. And judging from your other comments, it looks as though you may lose the data on your other partitions if you aren't careful.

I know it's a pain, but you'll have back up your partitions to a large heap

of floppy disks and reformat your hard drive using your ICD software. It's the only solution, I'm afraid. If you still have problems with the drive after reformatting it may be because of a physical problem with the drive itself. Contact System Solutions ☎ 01753 832212 and they should replace the drive if it is less than a year old.

Get Diamond Edge from HiSoft AVR (£49.95 ☎ 01525 718181). It's the best hard drive diagnostic and repair software you can get for your ST. Use Diamond Edge for a weekly diagnostic report and if you find any problems then you can fix them immediately. I always use Diamond Edge at least once a week to check my hard drive – after all, the data on it is vital.

You can also use Diamond Edge to format your hard drive, make back-up copies of your data and undelete accidentally erased files. It's a great tool.

Oh, by the way. According to the printout you sent me you have one partition of 26,336 bytes and five of 100,494 bytes. This means that you have a 516MByte drive, not a 270MByte drive – unless the data is really screwed up.

Cheap and nasty

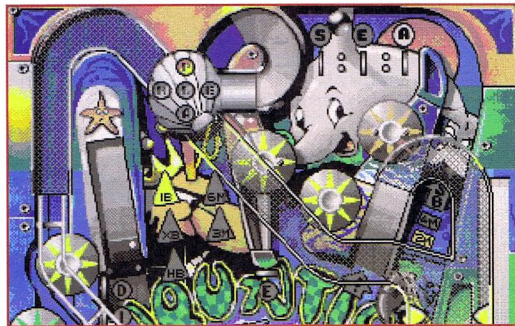
I've been having a lot of trouble recently with my internal disk drive. It refuses to read certain disks, and flags them as being faulty. The bizarre thing is that my external drive can read the disks with no problems.

I was about to replace the internal drive when I realised that all the disks I was having trouble with were cheap, unbranded disks. Since I've transferred the data to new, branded disks I haven't had any trouble.

What puzzles me is that the dodgy disks were read easily by Drive B, but reported as being faulty by Drive A. What's the reason for this?

Brian Douglas, Morecambe, Lancs

Well, the main problem you had was with cheap,



■ Obsession. When a game designer says a game is STE-only, he means it, I'm afraid!

unbranded disks. You've solved that problem yourself. If your ST is an older model then it's possible that the read/write head in the disk drive is slightly out of alignment. This means that it's harder for the drive to read data from disks that were formatted before the head went out of whack, or in another drive, but your external drive can read them perfectly.

Similarly, if the data on a disk is slightly damaged or corrupt it's harder for an out-of-alignment drive to read the data than a perfectly aligned drive. You may find that you start to have trouble reading disks again in the future. If that happens, you should consider getting a replacement internal drive for your ST. We've reviewed a high density internal drive kit on page 39.

Having a blitter bother

If I had a blitter chip in my 4MByte STFM would it enable me to run STE-only games like Grandad and Obsession? Does fitting the blitter chip change an STFM into an STE?

D J Barnett, Stoke-on-Trent

No, having a blitter chip installed in your STFM doesn't magically turn it into an STE. After all, if you put a Mondeo engine into a Mini, the Mini doesn't become a Mondeo. When games and other software are labelled 'STE-only' it means it only runs on the STE or better. The software won't run on older systems like the STFM.

Upgrade crazy

I have a 520STFM which I want to turn into a Falcon030. Then I want to turn it into a Lighthouse Tower and add a CD-ROM drive and 14MBytes of RAM. Is this possible, and if so, where do I get everything from and what will it all cost?

Darren Brown, Brighton

Eh? (Checks date on letter to see if it's an April fool joke.) Sorry, Darren, you can't change your STFM into a Falcon030, but you can change your STFM for a Falcon030.

To get everything you want for your upgrade, call System Solutions ☎ 01753 832212 and tell them exactly

File Medic Optimize Undelete Archive Utility Help					
Disk Information for All Drives					
Drive	Usage Information	Total Bytes	Used Bytes	Free Bytes	%Free
C:		26,241,024	21,839,872	4,401,152	16.7
D:		26,241,024	5,797,888	20,443,136	77.9
E:		26,241,024	25,788,416	452,608	1.7
F:		26,238,976	14,118,912	12,120,064	46.1
Grand Total:		104,962,048	67,545,088	37,416,960	35.6
Press Key or Button to Select Active Drive					
Disk Info ^A All Info ^A					
Frag Map ^M Print ^P					

■ Get yourself a copy of Diamond Edge from HiSoft/AVR and use it regularly! It's the best hard drive fault finding and repair program you can get for your ST.



■ Loads of luurvy Falcon stuff. And no matter how much you pay me, I won't tell you to buy a Mac and use MagiC Mac instead. So there. (Pointed comment Clive? - Karen)

what you want. They'll doubtless be happy to quote you a price for the system you describe.

Here's a rough guide to the prices. A Falcon030 with 14MBytes of RAM, 14-inch mono monitor and 1GByte hard drive costs around £1,800. The Lighthouse Tower case costs about £200 and an Apple 300e CD-ROM drive costs about £290 for the Falcon030. That's a grand total of £2,290. And the best part of the deal is that you don't have to get rid of your STFM.

Dead ST

HARDWARE I have a 1040STE which stopped working when I was loading a picture. I have checked the power cable and the fuse in the plug and they are okay. There is still no power getting through to the ST, and the power light doesn't come on.

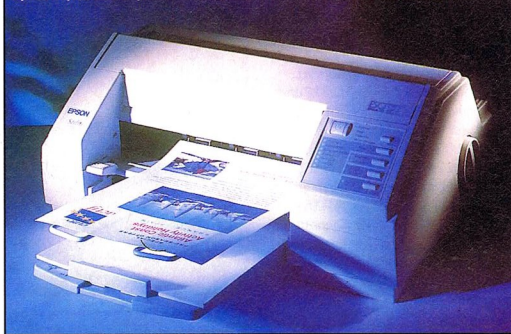
Lawrence Stromski, Barnstaple, Devon

A It sounds as though you have a problem with the power supply unit (PSU) inside your ST. It could be as simple as an internal fuse blowing or the whole PSU may have failed. You need to get a replacement PSU or have your STE examined by a repair centre. Analogic Computers have an excellent repair service for £59.95 and a next day courier collection service for an extra £6. Give them a ring on 0181 546 9575 and explain the problem. They'll be happy to give you advice.

In living colour

PRINTERS I've just got a 1040STE and a Philips 8833Mk2 colour monitor. I want to buy a

■ Looking for a colour printer? Why not plump for the FORMAT Gold winning Epson Stylus Colour printer reviewed last month? A snip at a tad under £450.



colour printer, but I've been told that no printer drivers are available for colour printers and the STE. Is this true? What colour printer would you recommend I buy?

James Quinn, Omagh, Co Tyrone

A While it may be true that many early paint programs for the ST don't support colour printing, most of the new paint packages – such as True Paint – do. Even if you have an older program like Degas Elite or NeoChrome, you can always use Imagecopy Colour 3.5 CD (which scored 93% last month) to print in colour. It's available from FaST Club 0115 945 5250 for £34.95.

It must be stressed that Imagecopy only enables you to print graphics files – you can't use it to print word processor or FTP files in colour. If you use software that's compatible with SpeedoGDOS 5.0 (from Compo Software 01487 773582), like Papyrus Gold and AtariWorks, you can

use the SpeedoGDOS printer drivers to generate colour output. The drawback with SpeedoGDOS is that you need at least 2MBytes of RAM installed to use it.

It's difficult to recommend one colour printer over another. All of the Star range of colour printers are very good, as is the Canon Bf600 colour and

the Hewlett Packard 500C. It's up to you whether you need dot matrix or inkjet output. The 24-pin dot matrix printers produce very good output, but not quite up to inkjet standard. Inkjet output, however, can be messy if you pick up the hard copy before the ink is dry.

Give First Computer Centre a call on 0113 231 9444. They have a range of colour printers available, which start at £145 for the Star LC240C 24-pin colour printer.

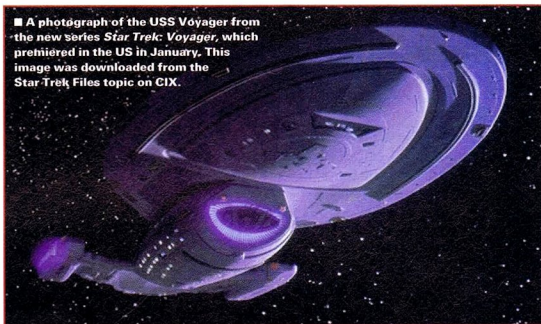
Expensive BBS

COMMS I know what a bulletin board system is, but when I logged on to CIX it asked me for my credit card number. I thought BBS services were free.

Vernor Vinge, Erdington, Birmingham

A CIX stands for the Compulink Information eXchange – it's not a standard BBS. CIX is a commercial on-line service offering millions of items of data on thousands of subjects. There

■ A photograph of the USS Voyager from the new series Star Trek: Voyager, which premiered in the US in January. This image was downloaded from the Star Trek Files topic on CIX.



GHOST IN THE MACHINE

SOFTWARE I'm having a small problem with my mouse. When I'm at the Desktop or in a GEM-based program, the mouse sometimes reverses its up and down response. When I move it down the pointer goes up, and when I move it up the pointer moves down. I have tried three different mice but the problem still occurs, not within specific programs but during or after disk operations. I think I have a problem with my ST – can you help?

Karl Gosling, Sudbury, Suffolk

A You've just perfectly described the actions of the Ghost virus. It copies itself to ten disks before reversing the vertical mouse pointer operations, which is why it seems to occur after disk access. This means that most of the unprotected disks in your collection are probably infected.

The problem isn't too serious as long as the Ghost virus hasn't infected any of your commercial game disks. If it has, the game won't be able to boot up, because the virus has destroyed the boot information on the disk.

There is however a solution to your problem. Turn to the ST FORMAT Reader Offers on page 69 and order Ultimate Virus Killer (UVK6) for the bargain price of £9.95, then use UVK to go through your software collection disk by disk and erase the Ghost virus. Be sure to check every disk, because if you miss one disk you could re-infect the lot.

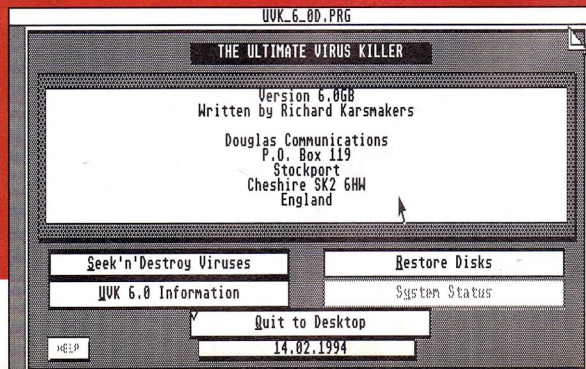
One word of warning though. Whatever you do, don't use UVK to check commercial game disks that currently work. If you immunise a game disk you can destroy it as effectively as a virus does. Luckily, UVK can repair any game disks the virus has damaged, and it's updated every three months.

When you've immunised your complete software collection – and it's a long, boring job – follow these ten tips to prevent re-infection...

■ It's dead easy to use UVK6. Just point, click and destroy all known germs.

1. Keep all disks write-protected until you need to save data on to them.
2. Buy Ultimate Virus Killer 6 from Reader Offers (page 69). Now.
3. If you can't afford UVK 6 (it's only a tenner!) then get a PD virus killer.
4. Check all new disks you get from your friends or PD libraries. You never know what may be lurking on them.
5. Remember that some viruses can infect your hard drive.

6. Thinking "it'll never happen to me" is just asking for it.
7. Never use a virus killer on a commercial game disk, 'cos you'll erase it.
8. Always back up important floppies.
9. If you don't have a commercial backup program use Back Up, which is included on the Cover Disk every month.
10. Never use a virus killer that just blanks the boot sector. Many programs store code in the boot sector.



Error number	Message
1	General error
2	Drive not ready
3	Unknown command
4	CRC error-disk checksum wrong
5	Bad request
6	Seek error-track not found
7	Unknown media-boot sector wrong
8	Sector not found
9	Out of paper
10	Write fault
11	Read fault
12	General error 12
13	Disk write-protected
14	Media change detected
15	Unknown device
16	Bad sector (verify)
17	Insert other disk (request)
32	Invalid function number
33	File not found
34	Path not found
35	Too many open files
36	Access denied
37	Invalid handle
39	Out of memory
40	Invalid memory block address
46	Invalid drive specification
49	No more files
64	GEMDOS range error-seek wrong?
65	GEMDOS internal error
66	Invalid executable file format
67	Memory block growth failure

is a standard quarterly charge and charges for the time you spend on-line. This means that you're charged by the minute for the time you spend connected to CIX, and you also have to pay the phone bill for the time you spend connected. Using CIX during off-peak periods will keep the cost of your phone bills down.

Many people think CIX is a part of the Internet but it's not; it's a completely independent service. However, you can use CIX in a limited way if you want to access certain features of the Internet using a gateway – a link between CIX and the Internet. Using the gateway, you can send e-mail to and receive e-mail from the Net, use ftp mail and access Usenet newsgroups.

CIX is a very useful service, offering plenty of official on-line help and support from software houses. There are also hundreds of special interest areas ranging from music to science fiction and TV. Whatever your interest, there's probably an area on CIX devoted to it.

If you want to connect to a free BBS, why not try AdLib? It's run by Andy Curtis and Frank Charlton and has several ST FORMAT support and chat areas. The BBS runs on an ST at speeds of up to 14,400baud, 24 hours a day. You can connect to the AdLib BBS by dialling 0191 370 2659 with your modem.

Who gives a TOS?

I've been getting weird messages from my ST when using some programs. What are TOS Error #34 and

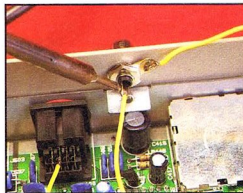
TOS Error #39? What do they mean? Where can I find a list of the TOS errors? I'm quite new to using computers and I'm completely baffled by these strange messages.

M Davies, Newton-le-Willows, Merseyside

A The TOS Error messages are there to let you know that your ST has a problem with the software it's running. Unfortunately, the ST user manual doesn't actually tell you what the error messages mean.

TOS Error #34 means 'Path not found', which means your ST has become confused and can't find the directory path it was expecting to use. This usually occurs after swapping disks when you're at the Desktop. The directory information is supposed to be updated whenever you swap disks, but sometimes it doesn't notice that the disks have been swapped. Pressing the <Esc> key at the Desktop after changing disks forces your ST to read the drive.

TOS Error #39 means 'Out of memory', which is often another directory-related problem. This time your ST is trying to store more copies of the directory information than it has room for. When it tries to store more directory information in the area of memory assigned to store this information, it can't, and gives you the 'Out of memory' alert. The fix for this problem is to order the Folder100 program from any PD library and install it in your Auto folder. This program increases the amount of memory available to store directory information.



■ Install your own Audio Out port on your STFM using our DIY feature from issue 62. Oh yes, we certainly revel in our techie-ness here at ST FORMAT.

Sound output

HARDWARE Is there any way I can connect external speakers to my STFM? I need the speakers so I can listen to MOD files properly in stereo. I'm not worried about having to take my ST apart or do any soldering.

Karl Gosling, Sudbury, Suffolk

A You can add external phone sockets to your STFM using the DIY project featured in ST FORMAT 62 (turn to page 79 if you missed it). Performing the upgrade should take about 45 minutes.

The only problem is that the sound output is restricted to mono because the STFM just doesn't have stereo capability. You could always link two phone sockets in parallel or use a phone line splitter to give you two (mono) connections.

Memory, not disk drives!

HARDWARE I have a 520STE and I'm getting an external 1MByte drive. When I get the drive, does this mean that I can then run 1MByte software like Calamus 1.09N?

Bruce Gibson, Bellshill, Lanarkshire

A Sorry, Bruce, but adding a 1MByte external drive doesn't increase the memory of your STE. The software you refer to requires 1MByte of memory chips installed, not an external double-sided disk drive. Remember that your STE already has a 1MByte internal

double-sided disk drive. You can increase the memory in your STE to 1MByte by adding two 256K SIMMs – small memory boards that plug into two empty sockets inside your machine. Call Compo Software ☎ 01487 773582 and ask them about their STE SIMM memory upgrades and explain that you want to increase the RAM in your STE to 1MByte. The upgrade kit only costs £9.99 and comes complete with full fitting instructions. The whole upgrade takes about 25 minutes to install.

Second drive

HARDWARE I'm thinking of buying an external disk drive but I'm not sure how to install the new disk drive icon on to my ST's Desktop. Do I need to install it using a special GEM Desktop menu? Will I still get the message 'Insert Disk B into Drive A' in the same way as I do now when I use Drive B for file copying?

Paul Levy, Newport, Gwent

A The GEM Desktop always displays two disk drive icons even if the internal drive is the only disk drive connected. If there isn't an external drive connected you get the 'Insert Disk B into Drive A' message you mentioned when you click on the Drive B icon. This is because the operating system acts as if there are always two disk drives connected. When you click on the Drive B icon on a single-drive system the operating system asks for the Drive B disk to be inserted. This 'virtual' Drive B is present in the operating system to make it easier to copy files from one floppy disk to another on a single-drive system.

All you have to do to install an external disk drive is connect it to the external drive port. When you power up your external disk drive and your ST – in that order – you can access a floppy disk in the external drive by simply clicking on the Drive B icon on the Desktop.

There's no need to install the drive using any software. The operating system of your ST automatically detects when a second drive has been connected to it, and will automatically route all Drive B disk access directly to it. That's all there is to it! **stf**

AND FINALLY...

No, not a strangely shaped vegetable or a dog that says "Sausages". Just a plea for help from Ken Smart in Derby and another from Robert Lambert from West Newbury in the US.

Ken says: "I'm looking for information about a hard drive controller: the Atari ST 506 I/F made by PCML Ltd, 1987. If any ST FORMAT reader has any information I would be happy to reimburse them for any help they can give me." Well, there you have it. If you can help Ken then drop him a line at: 130 Boulton Lane, Alveston, Derby DE24 0FG.

Robert Lambert is a new ST owner living in the US. He has several STs and wants to know if there are any ST user groups he can contact in the USA. If you know of any, let us know at ST FORMAT, or write to Robert at: 470R Main Street, West Newbury, MA 01950, USA.

Send your ST Answers questions, hints and tips to Clive either by e-mailing him at: cparker@futurenet.co.uk or clive@netmag.cityscape.co.uk or post them directly to: ST Answers, ST FORMAT, 30 Monmouth Street, Bath, Avon, BA1 2BW.



Our resident assembly expert, Tony Wagstaff, straps on his Gucci chaps and prepares to ride off into the distant data planes, his horse kicking up clouds of logic as it thunders across the horizon.

Assembly Pointers

File facts

Can you tell me how I check whether or not a file exists? If it does, how do I then find out its size and date, and whether it is read only or not?

R Shore, Darlington

There are various ways of checking for the existence of a file. Using the Gemdos Ffirst call is one of them, and since this also returns the file's attributes, including date and file size, you might as well use it.

The information is returned in a structure called the DTA or Disk Transfer Address. The first thing that must be done is to set up our own DTA, using the Fsetdta call. If we don't, then Ffirst function will overwrite some important system information, and that could land us in deep trouble. And you don't want that.

```
rsreset
resvd rs.b 21
fattr rs.b 1
ftime rs.w 1
fdte rs.w 1
fsze rs.l 1
fname rs.b 14
sizeof_dta rs.w 0
sizeof_dta rs.w 0
move.l #Dta, -(sp)
```

```
text
move.w #11111, -(sp)    the %11111 means you are looking for
move.l #path, -(sp)    all types of file
move.w #42E, -(sp)
trap #1 Ffirst
addq.l #8, sp

data
path dc.b "A:\MYFILE.FILE", 0    (this is what you're looking for)
```

```
loop cmp.w #0, d0        This will be 0 only
    bne finished        if a file has been found
    move.l #Dta, a2
    bst.b #4, 21(a2)     This tells you if
    bne next            you've found a folder

next
```

```
next move.w #42F, -(sp)    Fnext:
    trap #1
    addq.l #2, sp
    bra loop

finished
```



```
move.w #51A, -(sp)
trap #1 Fsetdta
addq.l #6, sp

    bss
Dta ds.b sizeof_dta
```

The above listing shows the format of the DTA. The first 21 bytes are reserved, the next byte holds the file attributes, bit 0 indicates a read-only file if set, bit 1 a hidden file, bit 2 a system file, bit 3 a volume label, bit 4 a subdirectory and bit 5 indicates the archive bit is set. The next long holds

the time and date, followed by the file size. Finally comes the filename itself.

Once you've relocated the DTA you can call Ffirst. This takes two parameters, the address of the path of the file (if you only specify the filename, without the path and drive, then the current directory will be assumed), and a word value, with the same format as the file attributes. Ffirst will only return information about those files that have one or more of the attributes specified in this second parameter. A listing using Ffirst looks like box one. If the search is successful, d0 will contain zero, otherwise a negative GEMDOS error, which is how you check for the file's existence. This will be -33 if the file couldn't be found, or -34 if the path couldn't be found.

It's worth knowing that you can use the * and ? wildcards in the file specification. Used in conjunction with the Fnext call, you can search for a number of files in a directory. Say the filepath is D:\FOLDER*, calling Ffirst returns the first file in the \FOLDER\ directory, check d0 for zero to see if one exists. If successful, you can then call Fnext over and over, until it returns non-zero in d0, for a complete listing, as in box two.

Now you use Fnext to look for the next file, as in box three.

Register corruption

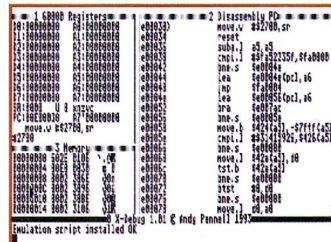
I want to accept key input for a filename, print each key press on the screen, then store the key in (a0) to use later to load the file. However, I can't figure out how to move the key into (a0) after I've printed it to the screen.

Malcolm, bolton.ac.uk

Malcolm is using the Gemdos call Cconout to print each keypress to the screen, after he's collected the keypress in d0. An important point to remember about Gemdos calls is that they use registers a0-a2 and d0-d2, so the values they hold are likely to be different after the trap command.

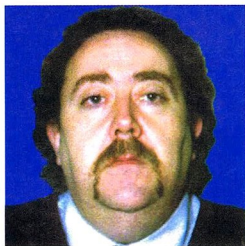
Since they are corrupted in this way, they are not much use for storing values. This means that the value of the keypress needs to be moved out of d0, and an address register other than a0-a2 needs to be used as the filename pointer instead.

Perhaps an easier way of inputting a string in this way would be to use the Gemdos Cconrs call, because this automatically echoes the keypresses to the screen, and handles backspaces, deletes, and so on, as well as being able to specify the maximum number of keypresses. Better still for inputting a filename, use the AES file selector with the fsel_input call.



If you have any questions about assembly programming, send your queries to Tony Wagstaff at: twagstaff@cix.compulink.co.uk

■ We love technical grabs, we do – this one's of X-Debug, an essential coding tool, reviewed in issue 66.



Mac Marsden has been answering your GFA queries for years now, so this month we gave him the chance to impart a few hints and tips that you should follow when programming in any language, particularly *GFA Basic*.

GFA Answers

So you know a little about GFA Basic. You've struggled for months – perhaps years – on little bitty routines, and now you're wondering how to put it all together? The answer may surprise you – turn off your computer! Yes I know it seems like a backward step, but in the long run it makes everything easier.

What you need to do is sit down and create an outline of what your program is to do. In the diagram called 'The Initial Idea' you can see a small flow chart showing the way the program works, and it's from this small beginning that the final program will spring into life. For the example, what the program actually does isn't important.

I've called the procedure in the example LOGO, and you can see that it's an introduction screen to the program (see the 'Expanding LOGO' diagram). In the expanded window you can see that I've noted down everything that I want to occur in the procedure, and again, it's still written in plain English. The next step is to write out the code for the procedure on paper, working out screen co-ordinates and the placement of all text and prompts. This could be written as we've shown in box one.

Now you can type in the procedure, knowing that the text output will be placed in exactly the correct position the first time the

program runs, and that you're not going to have to spend hours altering the co-ordinates of the PRINT AT commands to get things right. As you can see in 'The completed LOGO screen', the final output is where we require it to be.

It's a good idea to use a grid showing the pixel and text column layout of the screen under a sheet of plastic. This enables you to mark positions for your current program, then wipe it clean ready to design the layout of your next program. This really does make programming easier and less time-consuming.

Keeping track

What happens a year after you've written your program and a friend wants a customised version of it for himself? Well, if you haven't annotated your program it can be surprisingly difficult to remember what the code actually does.

It's for this reason that you should note what each section and each variable does by using REM statements within the program. Yes, it's another of those annoying jobs that you usually can't be bothered with, but you probably won't remember what your code does otherwise, particularly if it's a large and complicated program. Getting into the habit of making REM statements will also help you in the future, especially if you're thinking of becoming a professional pro-

```

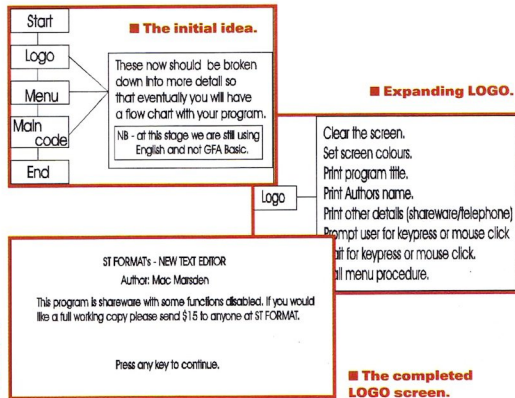
LOGO
MAIN_MENU
END
PROCEDURE LOGO
CLS
' NO COLOUR CHANGE REQUIRED, USING DEFAULT HI-RES
PRINT AT(28,10);"ST FORMAT's - NEW TEXT EDITOR"
PRINT AT(33,12);"Author: Mac Marsden"
PRINT AT(10,15);"This program is shareware with some functions disabled,
if you would"
PRINT AT(10,16);"like a full working copy please send $15 to anyone at ST
FORMAT."
PRINT AT(30,20);"Press any key to continue."
AS=""
REPEAT
  AS=INKEY$
UNTIL AS=""
CLS
RETURN
PROCEDURE MAIN_MENU
' PLACE YOUR CODE HERE
RETURN
  
```

grammer – no matter which language you choose to work in.

Take a look at the example in box two and you can see that even a small piece of code is easy to follow if it's annotated and labelled. But while it's much easier to see what the code does if notes have been added, it's pointless annotating commands like CLS or: PRINT AT(10,20);"Press any key to start program." because these commands are obvious and don't require further explanation.

More hints

While designing and coding your program keep all the bits of paper you've used either stapled together or in a folder, no matter how small and insignificant they may seem. The smallest note you made at the time you wrote the program could become the most important piece of paper in the world if you can't find it. Also, keep back-up disks of your source code with your documentation as well as in your back-up disk box. Now the fun begins...

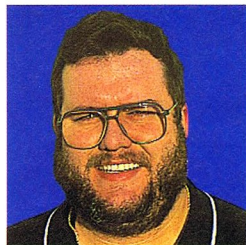


```

REM procedure to display the registered user and serial number of the program.
REM AS,B$,X,Y,Z are NAME, LOCATION(TOWN), Phone number, PT1 & PT2 of
REM the serial number.
PROCEDURE SERIAL_INF(AS,B$,X,Y,Z)
REM localise x,y,z,K$ so that they have no effect on the rest of the program.
LOCAL X,Y,Z,K$
CLS
PRINT AT(10,10);"Registered user      :";AS      ' name
PRINT AT(10,12);"Location      :";B$      ' area
PRINT AT(10,14);"Phone Number :";X      ' phone
Y=Y+Z
PRINT AT(10,16);"Serial Number :";Y      ' serial number
PRINT AT(10,20);"Press any key to start program."
REM repeat/until loop waits for a key to be pressed, then return to main menu
REPEAT
  K$=INKEY$
UNTIL K$=""
RETURN
  
```

Free computer!

Okay, that's got your full and undivided attention. If you would like me to look into a GFA Basic problem in more detail than we've covered in the past, drop me a line at ST FORMAT or send me an e-mail at: mac@mentor.demon.co.uk



Andy Curtis, our music guru extraordinaire and Ad.Lib SysOp, this month dips his toes into the frenzied world of music and MIDI on the Internet.

Music & MIDI

The Internet is a vast resource for all kinds of data and a great way to exchange information in general, but what does it have on offer for us musicians? Ready yourself for a once-only, whistle-stop tour of music resources for you and your ST on the Internet.

NewsGroups

As you may be aware, newsgroups on the Internet can contain files as well as messages. This is achieved by UUEncoding file archives so that they can be transmitted as plain text. The UUE files can then be easily converted by using *Esscode* on your ST. Let's have a look at the newsgroups available.

alt.binaries.sounds.music

Excerpts from a wide variety of music, including chart music and albums, all in the form of sound samples. These are often in WAV format but *Soundlab* on your ST will cope with them effortlessly.

alt.binaries.sounds.mods

We downloaded a few MODs from here and they made great listening. Play them back on your ST using *Juke Box* or *U_Track*.

alt.binaries.sounds.midi

Just what it promises: loads of MIDI files to grab and load into your sequencer. Be sure to contribute

your creations as well – that's what the Internet is all about.

alt.music.7 & rec.music.7

These are two big series of newsgroups. Between them they cover almost every aspect of music and MIDI discussion. Some groups are dedicated to a particular artist, some to a style of music and others to specific software.

alt.steinberg.cubase

All about, er... *Cubase*. Remember that *Cubase* is available for a number of different computers and not all the comments will directly relate to the version of *Cubase* you have.

Mailing lists

A mailing list is much like a newsgroup, only it uses the Internet e-mail system. Once you have subscribed to the mailing list you will receive all the messages people write, but as personal e-mail. One example of a good mailing list to be on if you have an interest in *Cubase* is the Cubase-users mailing list. You can subscribe by sending e-mail to: majordomo@yama.mcc.ac.uk. Leave the subject blank and in the message body write the following on the first line: subscribe cubase-users [your e-mail address]

You should get a reply back very quickly because this is an automated server. Along with the reply telling you that you've been added to the list you will also receive a FAQ (Frequently Asked Questions) list for your information.

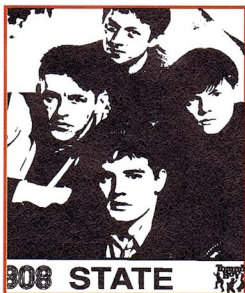
FTP sites

There is a wealth of MIDI files, lyrics files, pictures and other music-related stuff to be found on the Internet. Here's a quick taster.

ftp.mcc.ac.uk

This is the site for the latest *Notator*

■ A pic we found on <ftp.uwp.edu>. 808 State live on, if only in cyberspace.



808 STATE

■ A Sugar Cubes logo, which we downloaded from the Internet. There's loads of stuff like this out there if you take the trouble to find it.



General MIDI Patch List					
1 Acoust Piano	24 Bandoneon	47 Harp	70 English Horn	93 Pad Bowed	116 WoodBlick
2 Bright Piano	25 NylonGuitar	48 Timpani	71 Bassoon	94 Pad Metal	117 TaikoDrum
3 Elec Grand	26 AcoustGuitar	49 Strings	72 Clarinet	95 Pad Halo	118 Melod Tom
4 Honk Tonk	27 Jazz Guitar	50 Slow String	73 Piccolo	96 Pad Sweep	119 Syn Drum
5 Rhodes Elec	28 El GuitrStrat	51 Synth Str1	74 Flute	97 Ice Rain	120 FxvCymb1
6 Elec Piano2	29 El GuitrMute	52 Synth Str2	75 Recorder	98 SoundTrack	121 FxvFrets
7 Harpsichord	30 OverDriveGt	53 Choir Aahs	76 Pan Flute	99 Crystal	122 FxBreath
8 Clav	31 Distort Guitar	54 Voice Oohs	77 Blow Bottle	100 Atmosphere	123 SeaShore
9 Celeste	32 Harmonics	55 Synth Voice	78 Shakuhachi	101 Brightness	124 Tweet
10 Glockenspiel	33 AcoustBass	56 Orch Hit	79 Whistle	102 Goblin	125 Telephone
11 Music Box	34 FingerBass	57 Trumpet	80 Ocarina	103 EchoSweep	126 Helicopter
12 Vibraphone	35 PickedBass	58 Trombone	81 SquareWave	104 Sci Fi	127 Applause
13 Marimba	36 FretlessBass	59 Tuba	82 Saw Wave	105 Sitar	128 Gun Shot
14 Xylophone	37 Slap Bass1	60 Mute Trumpet	83 Calliope	106 Banjo	DRUM #5
15 TubularBell	38 Slap Bass2	61 French Horn	84 Chiff Lead	107 Shamisen	1 Standard
16 Santur	39 Syn Bass1	62 Brass Sect	85 Charang	108 Koto	9 Room
17 Home Organ	40 Syn Bass2	63 Syn Brass1	86 Voice Lead	109 Kalimba	17 Power
18 Jazz Organ	41 Violin	64 Syn Brass2	87 Fifth Lead	110 Bagpipe	25 Electronic
19 Rock Organ	42 Viola	65 Soprano Sax	88 Bass / Lead	111 Fiddle	26 Rap Tr808
20 ChurchOrgan	43 Cello	66 Alto Sax	89 Pad Bell	112 Shanai	33 Jazz
21 Reed Organ	44 ContraBass	67 Tenor Sax	90 Pad Slow	113 Tinkle	41 Brush
22 Accordion	45 Tremolo Str	68 Baritone	91 Poly Syn	114 Arpeggio	
23 Harmonica	46 Pizzicato	69 Oboe	92 Pad Voice	115 SteelDrum	<div>Ok</div>

and *Cubase* upgrades. Look in the directories [/pub/emagic](#) and [/pub/cubase](#) respectively. There's also a whole load of midfiles here in the directory [/pub/midmisc/smf](#).

src.doc.ic.ac.uk

Here you can find all the files from the vast University of Michigan archive, except they're on a UK server that's easy to access. Here are the paths you need to use:

[/computing/systems/atari/umich/Music](#)
MIDI and music utilities for your ST.

[/computing/systems/atari/umich/sound/sounds](#)
Sound sample files.

ftp.uwp.edu directory /pub/music

This is a great site for all things musical. Check out the pictures we downloaded from here, but also take time to explore the FAQs, reviews, song lyrics and press releases. They're worth it.

ftp.funet.fi directory /pub/sounds/midi

If you want stacks of MIDI files then here's the place to be. You would be

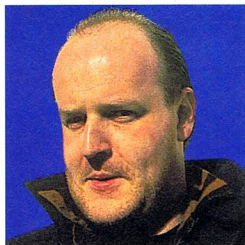
well advised to download the index file first, because the contents of many of the files aren't obvious from the file names.

■ A complete program number list of GM sounds. Now you know exactly which sound is indicated by each GM program number.

A word about MIDI files

Often, you'll be presented with a list of tracks and given no indication which instrument or voice should play for each one. If you have a General MIDI synthesizer or module then the sounds are assigned for you. We've included a list of GM (General MIDI) program change numbers and voices to help you set up your sequencer for GM file playback if you don't happen to have a GM instrument. They're in the picture just above this column – so get your magnifying glass out!

If you have any MIDI and music queries or information, you can e-mail Andy Curtis at: acurtis@theshack.demon.co.uk, or send your queries by snail mail to ST FORMAT.



In the absence of a mailbag bulging with STOS questions, Frank Charlton branches off to answer some of the comms questions you've asked since we ran our big Internet feature in issue 65. Next month STOS will be back too.

alt.queries.net@...

Caught in the net

I've just got an Internet account with Demon after reading the article in STF 65, but I've been having problems with the KA9Q software supplied. When it runs, it starts to dial my modem, and I hear the modem make a connection, but I don't see anything on screen other than a NET> prompt. What do I actually do?

Duncan Anderson, Whickham

KA9Q is a multi-session program – it launches the modem dialler then moves to another session. This means you don't actually see what's going on. It's easily solved though. As soon as you hear your modem's dialler kick in press [F10] then [Return]. This switches KA9Q to the session that's dialling, and you should see the normal connect strings from the modem displayed. As soon as you've seen the string HELLO returned by Demon's host computer, press [F10] again (or wait a bit) for another NET> prompt, and away you go.

PC modems

A friend has just given me a PC modem to use with my old PC, but I would rather use it with my beloved STE, since that has a hard drive. Can I hook it up to my ST or am I doomed to use my old and slow PC?

Linda Li, Wetherby

Since you don't say if it's an internal or external modem you have, it depends. If it's an external modem – a separate boxed unit with its own power supply and cables – then the answer is yes. All you need is a standard RS232 cable to connect it to the serial port on your ST. If it's a PC internal modem, looking like a small circuit board without a box,

We haven't covered any STOS questions this month, but don't stop sending in your STOS queries. Send 'em to us and Frank'll do his utmost to answer them in the pithy style for which he's noted.



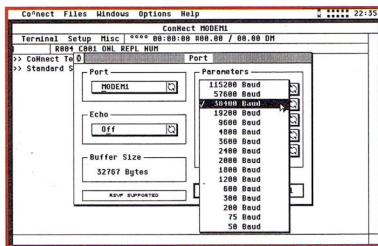
■ External modems are getting cheaper, 28,800 is the latest standard. Keep an eye out for this US Robotics Sportster.

then you can't. Internal modems interface with the PC's expansion sockets inside the machine, and get their power and RS232 connections from there – there's no way to connect them to your ST. Use it with the PC or sell it and buy a cheap external modem.

Serial killer

I notice that modems supporting the new V.Fast and V.34 speeds of 28,800 are getting cheaper now. I'd like to use one with my ST, but I've noticed that the serial port only goes as high as 19,200. I was told there's a way round this, but that it involves a DIY circuit. Do you know anything about this?

Alan Collins, Connecticut USA



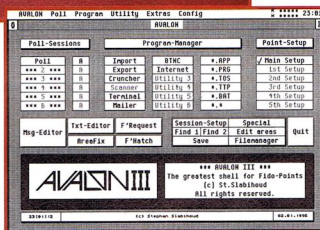
■ It can be done. A serial port running at 38,400 can be yours. Oh yes.

ftp.demon.co.uk/pub/atari/utility/3800portmod.lzh. You'll need a compatible serial-port driver like HSModem (from the same ftp site) and a comms package that supports it, such as CoNect or STarcall.

What's the point?

I want to set up a point system so I can collect messages from Networks like NeST and AtariNet from my local BBS, and read and reply to them off-line to save money. My SysOp is willing to help me, but I don't know what I need.

Paris Fattabais, Athens



■ The lovely Avalon shell for BBS network points, available from your favourite ST BBS.

There is a hardware modification you can make which gives your ST a serial port capable of 38,400. It does involve soldering, as well as cutting a leg on one of the ST's chips, so it isn't for the faint-hearted. The parts you need cost about a fiver, and can be picked up from any electronics store like Maplin. A circuit diagram in IMG format shows

you what to do, and most BBS systems will have it, or if you have Internet access you can ftp the file from

A point system is sort of a mini-BBS with only one user, and is more complex to run than using an offline reader. You'll need: a mailer program, such as BinkleyTerm or Semper, to collect and deliver the mail from the BBS; a 'mail tosser' to process the mail into a format you can use, such as IOS or JetMail; and a message reader like LED. Your SysOp can find these programs for you, and I don't have anywhere near enough space here to cover the complexities of setting them up, sadly.

What you might also want to consider is a 'shell' program to make it all easier, such as the wonderful AVALON. Users in message echoes such as the NeST Comms echo will certainly help you – I lurk in there myself – and once you're going, you'll find it a rewarding way of keeping in touch with the 'nets. stf

Contacts

If you're on-line, you can contact Frank at the following addresses: Internet:

frank@tachyon.demon.co.uk
NeST 90:100/308.2
AtariNet 51:6/208.2
FidoNet 2:256/502.28

TWIST 2:

HOW TO COMBINE DATABASES

Nick Peers demonstrates that combining databases in the powerful yet easy-to-use *Twist 2* isn't as difficult as it might seem. The smug git!

Let's be honest. *Twist 2* (STF 65, 83%) lost Brownie points because when it comes to actually combining two databases, the program and the

manual just don't tally. You might have followed the manual to a tee, but you still find yourself left cursing when one of the two files refuses to play by the book.

Combining or linking two databases enables you to keep different sorts of information in different databases, but pull information from files in one database into linked files in another.

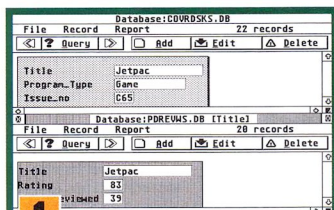
In the example below, we use two separate databases entitled COVRDSKS.DB and PDREVWS.DB. The first contains information about what software has been featured on our Cover Disks, while the second contains info on all the PD software we've ever reviewed. When linked together they enable the user (in other words, Cover

Disk Editors everywhere) to find out whether any Cover Disk software has ever been reviewed in Public Sector and, if it has, in which issue, and what mark it received.

So without further ado, load up your copy of *Twist 2* and get the two files you want to link ready for action. Before you know it, your database will be even more useful than you ever dreamed possible!

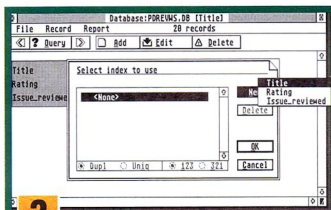
If, by some strange tangle of fate, you haven't got a copy of *Twist 2*, give HiSoft a call on ☎ 01525 718181. It's only £59.95, so don't delay, buy it today! **stf**

LINKING TWO FILES TOGETHER



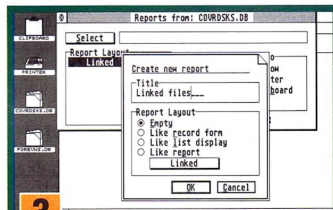
1

For two files to be linked successfully, each file must contain one field that is identical. Here, both files contain a field that is 15 characters long and is called 'Title' (it also needs an entry to be valid). *Twist 2* can then link any files containing the same entry under 'Title' (such as 'Jetpac' or 'BBS Directory').



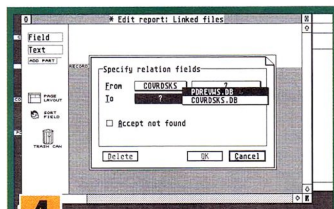
2

Next index the 'Title' field from the second database, here called PDREVWS.DB. This creates the relation that enables the two databases to be linked. To do this, open PDREVWS.DB, select 'Index' from the File menu, and click on 'New'. Finally, click on 'Title' to index this field. Now click 'OK' to return to the main screen.



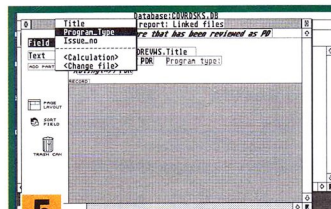
3

Close PDREVWS.DB, and open COVRDSKS.DB in its place. Select 'Edit' from the Report menu before clicking on the 'New' box from the dialog box created. You'll be presented with the 'Create new report' box as shown above. Click on the 'Empty' option, and give the report a title such as 'Linked files'.



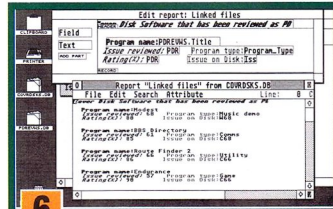
4

When you see the Report Layout screen, click on the Field box and select 'Change File'. You'll now be asked whether you wish to stay with COVRDSKS, or select a new file. Click on the latter option to reach the 'Specify relation fields' box. Clicking on the question mark will enable you to select your second database.



5

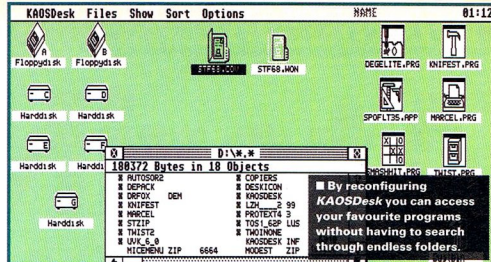
Twist 2 selects the field to be linked, namely 'Title'. Leave the 'Specify relation fields' box by clicking 'OK'. Now you can lay out your report as shown in the manual. Use the 'Fields' box to select fields for your report – you can switch between databases by clicking on '<Change file>' and selecting the one you want.



6

Twist 2 has loads of options you can use to make your presentation more attractive. The shot above shows an example of a Report Layout in progress, and a finished report as it appears on screen. The manual explains how to get the most from your reports in the comprehensive way you've come to expect from HiSoft.

Having given away the powerful **KAOSDesk** on last month's Cover Disk, Nick Peers shows you how to set it up exactly as you want it.



CUSTOMISE YOUR KAOSDESK DESKTOP!

The beauty of any desktop is the way you can configure it to work better for you. We're pretty choosy about what we'll put on our Cover Disks, but we gave away **KAOSDesk 2.1** last month because it takes the bog-standard ST desktop and adds enough features to make you wonder how you ever survived without it. There are too many to list them all, but you can, for example, format disks to your chosen number of sectors and tracks, and it enables you to use new keyboard short cuts for things like getting around your desktop and opening files. For example, you can switch between different drives by holding down <Control>, <Shift> and the drive letter.

Here, we're going to concentrate on how you can configure the desktop itself. Like the standard Atari Desktop, **KAOSDesk** enables you to create, move and remove desktop icons for all your drives, floppy, hard or RAMdisk. But you can also store programs on your **KAOSDesk** desktop, enabling you access without searching through drives and folders. Here's how.

Q How do I assign a program to an icon?

A If your desktop looks bland, inject variety into it by assigning icons to filenames, enabling you to distinguish between different types of programs (databases, utilities and word processors, for example). It's such a straightforward process that it belies its usefulness.

Load in your favourite word processor or text editor, then import **NAMES.TXT** from inside the **KAOSDESK** folder. This simple text-file contains the data that assigns your

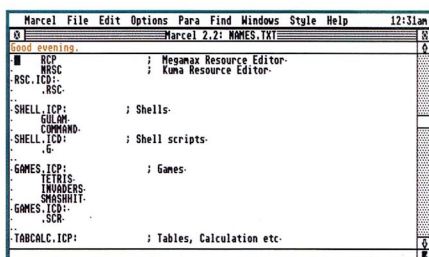
programs and file extensions to your chosen icons. To assign a file to an icon, just type in the relevant filename under the icon you wish to assign it to. For example, you could assign *Smash Hit* from last month's Cover Disk to a game icon by entering its filename, **SMASHHIT** (minus the .PRG extension) under the relevant icon (**GAMES.ICP** in this case).

Once you've made all your alterations, save **NAMES.TXT** as an ASCII file and quit your text editor. To bring the changes into effect, double-click on **MKICONS.TOS** in the **KAOSDESK** folder to update the resource file, then exit **KAOSDesk**. When you next run **KAOSDesk**, your alterations will be incorporated and all your favourite programs will be accessible directly from the desktop – much more user-friendly, eh?

Q How do I go about designing my own icon?

A If you're unhappy with the program and file icons that are supplied with **KAOSDesk**, you choosy blighter, then design your own using **Icon Edit**. Double-click on **ICNEDIT.PRG** to load the program and you'll be presented with a screen containing two grids: one for program icons, the other for file and data icons. You can either create new icons from scratch or import one of the 60 icons provided and amend them to suit your personal tastes. You might want to create a football-style icon for your *Dr Fox's Football Annual Demo* program from Cover Disk 65, for example, or you could even design it around your favourite side's team badge... (Don't even think about mentioning *Birmingham City* – Karen)

To insert a pixel on to the grid, click on the grid with the left mouse button, and remove any mistakes by



clicking both mouse buttons at once. You can then save your creations as **ICP** or **ICD** files, which can then be incorporated into your custom desktop by inserting them into the **NAMES.TXT** file. We've explained that bit already...

Q What else can I use **KAOSDesk** for?

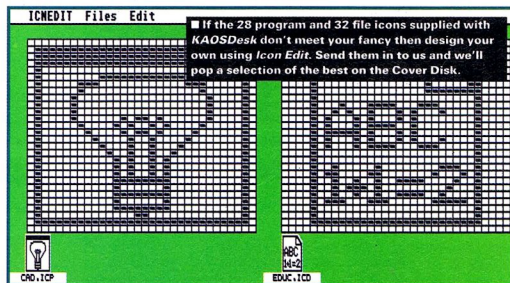
A The customisation doesn't end there! You can choose whether you want your files displayed as icons, or as one of three sizes of text. And if you choose to display them as text then you can also decide whether you want to remove the information showing file size, date and time of creation, which would enable you to cram more files on screen.

You can even create a mask to restrict the file types that are displayed

on screen. Select 'Mask' from the **Sort** menu then, when prompted, select the filename you want to restrict your display to. Entering *.PRG, for example, will only display files with a **PRG** extension, while **KAOSDESK.*** will display all files that are named **KAOSDESK**, regardless of their file extension.

Your desktop, now fully configured, might look like our example. It's attractive, your favourite programs are within easy reach, and each comes with its own distinctive icon. Before finishing, remember to select 'Save Desktop' from the **Options** menu to etch your changes in magnetic media, and when you next boot **KAOSDesk** your personalised desktop will be waiting and ready for action.

So, there you have it. If, by some ridiculous quirk of fate you missed last month's issue and the Cover Disk with **KAOSDesk 2.1** on it, turn to page 79 to order it now. **stf**



AtariNOS know-how

You've called Demon Internet, shelled out your dosh, got yourself an Internet account and downloaded the AtariNOS software. It's all very powerful, but how do you use it to hook up to the Net? Simon Forrester explains in words of one syllable, in the first instalment of a two-part series on using AtariNOS.

CATCH UP!

Maybe you haven't heard of the Internet. Maybe the world of free information at the speed of light passed you by. Maybe the idea of cheap, fast electronic mail didn't enter your head. If you want to join in with thousands of other ST users from the far reaches of this septic orb, you want to be on the Net. If you want to get on to the Internet using your ST, you'll need a few things:

- A copy of *STF65* for the wonderful Internet feature.
- An ST, with a hard drive.
- A modem.
- A phone line.
- A subscription to Demon Internet, costing £15 plus £11 monthly charge. Call Demon on 0181 349 0063 for more information and the chance to part with some cash.
- The Internet software Demon

supply. It's a file called **ATARI-NOS.TOS**, which you download to your hard drive and unpack, then run **INSTALL.TOS**.

Bear in mind that this is an activity that doesn't come cheap. As well as the Demon costs (which are a very fair price), you still have to survive those phone bills spent on-line. You've been warned, and we've been *ST FORMAT*. Good night.

Back in issue 65 we explained in some detail how to get yourself on to the Internet, via Demon Internet (if you missed it, see the 'Catch up!' panel just below). However, the AtariNOS software isn't the most well-documented, explanatory software in the world. So, having covered the what, where, when, which and who of the Internet, now it's time for the how...

Your software

AtariNOS is the official Atari package for Demon Internet, supporting almost every function you can access through Demon from the comfort of your ST. In fact, the only thing it doesn't fully support is the World Wide Web (although you can use the e-mail function to get hold of Web pages as ASCII text - more about that next month).

When you receive AtariNOS you'll almost definitely feel totally lost. The package comes in the form of several small programs, none of which is particularly easy to use. It also contains an enormous folder with over a megabyte of documentation, not all of which relates directly to you. However, if you do have a few days to spare and you don't value your eyesight then you could flick through **DEMON.TXT**, **KA9QNOS.TXT**, **SUPPORT.FAQ** and **WELCOME.TXT**. **ZEN.TXT** should help you out with any general Internet problems.

Using Demon software means that instead of dealing with an unfriendly scrolling on-line ASCII display, you can work within the cosy environment of your own software off-line. You can ring up the system to send mail you've already written off-line, and receive

Demon Internet Access Software for the Atari ST

Main Menu

- A. Logon to Demon
- B. Usenet News
- C. Electronic Mail
- D. News Utilities
- E. Edit Configuration
- F. Command Shell

X. Exit To Desktop

Enter choice: █

■ The main menu, which you're destined to see so much of while you go about your Internet business.

■ AtariNOS is actually based on a program originally designed for accessing the Internet by radio.

NET > domain ?
valid subcommands: addserver dropserver list maxwait query qtype retry suffix st
artons stopdns trace cache
NET > █

■ You can see a list of the parameters that should follow a command by entering a [?] in their place. This is handy for quick reference.

```
NET > ?
Based on KA9Q NOS by Phil Karn - Demon Internet Services V2.12
Copyright 1991 Phil Karn. Parts copyright 1992, 1993 Demon Internet & Members
Support: mail internet@demo.net or phone 081 343 3881
Main commands:
at          attach
close       disconnect
dialer      dir
eol         delete
fkey        domain
hostname    exit
ip          ifconfig
memory      log
param       more
pwd         pop
reset       remote
rmdir       rsh
smtp        session
start       source
test        tcp
udp         time
NET >      upload
          abort
          cd
          clear
          detach
          echo
          finger
          hop
          inline
          mbox
          nntp
          ps
          rename
          rlogin
          shell
          sourceb
          telnet
          trace
```

Atari NOS V0.41, May 22 1994 by David Nash - dnash@chaos.demon.co.uk

Based on KA9Q NOS by Phil Karn - Demon Internet Services V2.12
Copyright 1991 Phil Karn. Parts copyright 1992, 1993 Demon Internet & Members

Load address AE618
NET >

■ And similarly, you can access a full list of commands with a question mark. As you can see, we haven't covered all the commands listed here, but we have covered all those that you'll need.



incoming mail which you can then read off-line later. By enabling you to do so much off-line AtariNOS saves you money, and you're less likely to make mistakes on-line, because everything you do is finalised before the Demon number is dialled.

Getting started

You don't need to know how to use every program supplied in the package, because they all run from one core program, which is called DEMON.PRГ. Just run DEMON.PRГ (double-click) and after a screen of text you're presented with a main menu. This features six options:

- Log on to Demon (go live, on-line, directly communicating with the Demon computer).
- Use Usenet (log on to newsgroups, which we'll explain in more detail next issue).
- Fiddle with electronic mail (it's an off-line reader, again explained more next issue).
- Use newsgroups (also explained next issue).
- Alter your own preferences (coming up shortly).
- Jump into the incredibly unfriendly command shell (which we'll cover just after the bit about altering your preferences).

Alter your preferences

The first thing you need to do is alter your preferences, by hitting [E]. It's at this stage that you tell the package how to log on to Demon, including which Demon server to log on to. Make sure at this point that you have your official Demon documentation in front of you (you know, that bit of paper they sent you when you signed up), so that you can enter the following details. A lot

"When you receive AtariNOS you'll almost definitely feel totally lost..."

of what you're about to read refers to my address as an example to help you, my address being **hairy@stformat.demon.co.uk**. You'll be setting up...

IP address: This is that four-segment number, the final two digits of which you learnt when you performed your cold logon (see the panel just below).

Node name: This is a reference to the second part of your e-mail address. For my address, this would be **stformat**.

User ID: The very first chunk of your address. In terms of my address, this is the **hairy** part.

User name: Your real name, mine being Simon Forrester.

Organisation: Pretty irrelevant, but mine's Future Publishing.

Editor: This refers to the kind of

FAIRLY TEPID PORRIDGE

File Transfer Protocol, or ftp, is probably the only scary thing you'll come across when using the Internet. When you use the ftp command, you follow it with the name of a server to connect to, for example:

atari.archive.umich.edu/atari/

You can now chat directly with a computer, and give it commands to carry out on its own time. These commands are:

dir used on its own requests a full list of the server's current contents to be sent to you. If followed by a path, it gives a directory of that specific path and, if the path name is then followed by a file name, the directory received is saved as that file on your hard drive.

get requests the file with the name you state, so **get wibble.prГ** pulls **wibble.prГ** over the Net to your ST and saves it to your hard drive. State a second filename to rename the file before it's saved.

mget is an abbreviation for **multiple get** and enables you to

state several filenames to be transferred. You can use wildcards here to take several files at once (for example, use ***.prГ** to take every file with a .PRГ suffix in that subdirectory). **put & mput** work in the same way as the get commands but in reverse. They're for weird sickos who actually want to send files to these sites in return for the thousands of megabytes they've stolen. But really, it's a good idea to upload whatever you can in the way of information. People have taken the time to upload the software you've just scabbled, so it's only fair to do the same in return - that's what keeps the Internet going.

verbose should be followed by a number from 0 to 3, responding to how much feedback you'd like. 0 only gives error messages, 1 asks for a quick summary every time a transfer takes place, 2 (default) gives error, summary and progress messages, and 3 makes the thing chat about what it's doing till it's blue in the face.

software you're using to access Demon. Best leave it alone, really.

Demon number: This is the nearest Demon phone number to you (they supply you with a list). We're using the Bristol number, as we're only about 20 miles away. Sit down with a map of Britain if necessary - it'll certainly cut down on those phone bills, which could be vital.

Dial command: The command you need to send to your modem to order it to dial a number. If your modem is flagged as being Hayes-compatible then you'll need the letters 'ATDT', which is the Hayes code for dialling. If your modem uses a different command set, refer

to your manual. Most will use ATDT, though.

Password: Like I'm about to tell you mine. This is not your chance to set your password - you should already have done that on your cold logon. At this stage you need to enter the correct password for your software to log on to Demon correctly under your identity.

Log on!

Once you've set up your preferences you can log on to Demon by pressing [A]. At this point, your modem will dial the number you set up earlier, and you'll be connected to a Demon machine, ready

COLD LOGON

When you receive your Demon bits 'n' pieces for the first time you'll be instructed to call the Demon number without any special software running, using a simple ASCII comms package such as **TeddyTerm**, **Fizzydizz**, or any of the other comms pack-

ages you're used to. When you call, you'll be asked for your Demon address details, and given the chance to set your password, as well as pick up the final two figures of your IP address. **MAKE A NOTE** of those important details...

parameter has no effect in unconnected mode. The default value of **paclen** is 256 bytes.

9.2.2. Maxframe

This parameter controls the number of I-frames that net.exe may send on an AX.25 connection before it must stop and wait for an acknowledgement. Since the AX.25 LRB sequence number field is 3 bits wide, this number cannot be larger than 7. Since unconnected mode (dialgram) AX.25 uses UI frames that do not have sequence numbers, this parameter does not apply to unconnected mode. The default value of **maxframe** in net.exe is 1.

9.3. IP and TCP Parameters

9.3.1. MTU

The MTU (Maximum Transmission Unit) is an interface parameter that limits the size of the largest IP datagram that it may handle. IP datagrams routed to an interface that are larger than its MTU are each split into two or more fragments. Each fragment has its own header and is handled by the network as if it were a distinct IP datagram, but when it arrives at the destination it is held by the IP layer until all of the other fragments belonging to the original datagram have arrived. Then they are reassembled.

■ The original AtariNOS documentation isn't exactly easy reading. This is about a thousandth of it.

■ It may be a petty point, but we'll stress it - the NOS folder absolutely must sit in the root directory.

Desk	File	View	Options
D:\NOS\DOCS\W.*			
1586428 bytes used in 32 items.			
POP	FAQ	5819	13/05/94 05:44 pm
POPS	TXT	4185	16/05/94 06:50 pm
PRESS	TXT	7887	01/06/94 09:57 am
PROBLEM	TXT	1359	07/07/92 01:15 pm
SERVICES	TXT	13725	01/06/94 10:06 am
SITES		303278	10/12/93 02:58 am
SNEWS	DOC	26144	05/02/94 04:48 am
SNEWS	TXT	26144	20/05/94 07:53 pm
SNEWSMT	TXT	26314	05/02/94 04:48 am
SUPPORT	FAQ	18536	25/05/94 04:46 pm
TSH_REF	TXT	25947	18/08/91 05:12 pm
WELCOME	TXT	18328	25/05/94 04:37 pm
WWW	TXT	5553	16/05/94 03:18 pm
ZEN	TXT	187879	30/05/94 09:00 pm

■ With over 1MByte of documentation, you might like a quick guide. If any, make sure you read DEMON.TXT, KA9QDOS.TXT, WELCOME.TXT and ZEN.TXT. Then feel very glad we took the time to explain them to you in English.

Desk	File	View	Options
D:*.*			
1031318 bytes used in 45 items.			
LLAMAZAP		24/10/94	10:08 am
NOS		08/12/94	07:41 am
OLDBITS		27/10/83	02:57 pm
OXYD		27/10/83	03:45 pm
PIXEL		02/11/83	09:56 am

From this point on, you'll be plunked into a particularly unfriendly command line mode. You can get to a full list of commands by hitting [?] followed by [Return], but there are a few commands that are really useful...

The following commands can all be used in the **Demon** command mode. Those that are followed by parameters (details) will be explained fully, but make sure you remember that parameters are separated by spaces, not commas.

- abort** kills a session whether it's tidy or not. It's similar to **close**, except that it'll kill anything currently in progress.
- cd** displays the current folder directory, unless you follow it with a new path, in which case it changes the current folder.
- clear** clears the screen.
- close** finishes a particular session — an ftp session for instance.

ftp opens a direct conversation channel with an ftp server on a new session. Once again, see the panel on the previous page.

Say you were talking to an ftp site, requesting a file. Instead of waiting for a reply before you could do anything else, you could switch to a different session and do something else while waiting for a file to be sent. With **AtariNOS** this extends to just about everything you'd want to do on the Net. The session system uses several simple commands, among which are **session** (the main switching command), **abort** and **close**.

```

f user      send mail to a user
f user      send mail from a file to a user
f [msg]     forward message to a user
f           reply to a message
ENR         show next unread message
MSG         show message
s [file]    save message in a file
s           save message without headers
w mark     mark message as deleted
w [msg]     mark message as undeleted
u           goto next message
u           goto previous message
h [msg]     list headers starting at msg
l mbox     change mailbox
l           list unsent messages
l w        list without deleting mailbox
x           exit with updating
x           This help text
[msg]      - message number, default to current message
[file]     - file name, default to mbox.txt
mbox       - mailbox name
mes a key

```

- The configuration menu, into which you enter your details, remembering to press **[S]** when you're done to save them.

• We haven't covered every aspect of Demon and the Internet here – we simply don't have the space. However, this month as part of the new improved ST Answers, we've introduced a comms column, in which Frank Charlton (who works for Demon) answers your comms questions. Address any of your comms questions to ST Answers at: *ST FORMAT*, 301 Monmouth Street, Bath, Avon, BA1 2BW, or send an e-mail to Frank at: frank@tachyon.demon.co.uk and he'll happily answer your questions in print. Okay?

alias	dir	cat	cd	cls	condense
cp	gdr	echo	exit	help	history
ln	input	ls	mkdir	no	man
verbatim	word	set	system	unalias	unset
.TOM files only					
setenv	goto			ifu	resume
Return	label	ifa	ifs		
Special variables					
%	arg		date	disk ^	dcd ^
switch	margin	fil.f28	font	force	pag
keyword	width	ok	rotation	shortdir	status
%	read only	verbosity	width		
Special characters					
<	>	\$	\	^	!
&	%	%	%	%	%

```
S. Save Configuration
X. Return to Main Menu
Enter choice: █
```


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Amstrad DMP 4000	3.66	3.51	3.31	3.11	Panasonic KXP1080/18090/192	2.89	2.74	2.54	2.34
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COVER DISK tutorial

ST DISK CAT

Sex, drugs and rock 'n' roll don't feature in this tutorial. Nick Peers wants to know why. (Because he wrote it? - Ed)



Do you have a disk collection stretching into the hundreds? Me too. Do you find yourself spending hours sifting through them, trying to find an obscure Desk Accessory that you could have sworn was on that disk with, er... Exactly. What you need is *ST Disk Cat 5.2*, which we gave away on Cover Disk 66. You just open it up, search for the file that you want, and it tells you exactly where to find it.

Now you might think that setting up a database of this magnitude involves hours of work of work, typing in every file, folder and disk name manually, but *ST Disk Cat* reads each disk, one by one, and stores the data in its own easy-to-access way. Then, once you've created your database, you can manipulate the data in all sorts of handy ways.

However, if you've tried printing the *ST Disk Cat* READ.ME file you've probably already run out of paper and patience. So we've condensed the essential facts into this tutorial. By the time you've read it you'll have catalogued all your disks and probably rediscovered a huge number of files. Before you know it your \$15 registration fee will be winging its way off to Canada in gratitude.

Creating your sections

When you load up *ST Disk Cat* for the first time it automatically creates a new database for you, which is loaded every time you run it in future.

ST Disk Cat works by displaying the data at four levels: sections, disks, paths (or folders) and files, each of which is viewed in its own window.

You begin by creating sections. This is so that you can assign your disks to separate categories – you could catalogue all your Cover Disks in one section and have your word processors in another, for example.

To create a new section, select 'Add' from the Selection menu and give your subsection a name. You can also add a comment, which is displayed when you select 'Info' from the Selection menu. Click on the 'Multi' box and you can create more than one section at a time.

Adding disks to sections

Once you've created your first section, you can start to add disks to it. Select 'Add' from the Disk menu, and *ST Disk Cat* asks you to insert a disk in the default drive. You can select a hard drive partition if you have

■ *ST Disk Cat* splits the data into four levels – sections, disks, folders and files – making the cataloguing of your huge disk collection that much easier.

one. Again, select 'Multi' to catalogue several disks in succession. If you also select 'Alternate A then B' you can use two disk drives at once in the cataloguing process – just press [Return] to move between disks.

As each disk is read into the database, you can see the Paths and Files screens filling up with the information contained on that disk. Paths contains details of all the folders on the disk, and Files contains information on the files within the currently selected folder. Click on different folders in the Paths window to see their contents in the Files window. Selecting 'Info' from the Path or File menu gives you full details of the currently highlighted folder or file.

You can attach comments to each folder or file by clicking on 'Comment' in the relevant menu. This enables you to label folders and files

Desk	Catalog	Section	Disk	Path	File	View	Output	Misc	STDCAT V5.2b
SECTION: SECTIONS									
SECTION		SIZE		USED		PATHS		PATH	
DISKS									
DISK		SIZE		USED		FILES		NAME SIZE DATE TIME	

PUT YOUR RECORDS IN ORDER

There are four different ways of sorting your records. All are accessed from the View menu – just click on the option you want to select it. The options are:

Field Order: Gives you up to six different ways of ordering your four windows.

Field Sort: Enables you to select which field is the primary field for sorting. From here you can also decide whether you want to sort in ascending or descending order, and whether the program automatically sorts each section for you.

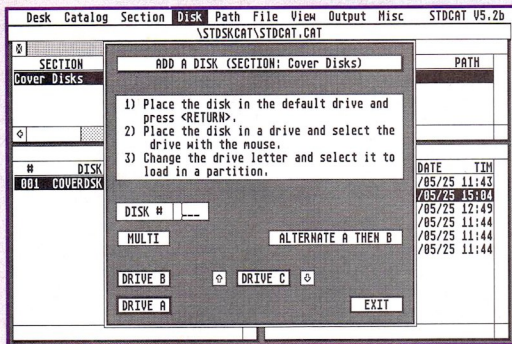
Field Enable: Another display option, with which you can choose which fields are displayed in each window.

Field Qualify: Most complex but most powerful. This enables you to select what records are displayed in each window. Working along the same principles as the 'Find' option, as described over the page, you can mask records according to name, date, size or even group. For example, you could restrict the 'Files' window to displaying program files only by entering '*.PRG' under File Name in the 'Field Qualifications'

window. Or you can screen for programs of a certain size – handy if you have 100K to spare on a disk and want to find programs to fill it.

Desk	Catalog	Section	Disk	Path	File	View	Output	Misc	STDCAT V5.2b
SELECT FIELD ORDER									
SECTION		DISK		PATH		FILE			
NAME DATE		NAME DATE		NAME DATE		NAME DATE			
NAME SIZES		NAME SIZES		NAME SIZES		NAME SIZE			
NAME COUNTS		NAME COUNTS		NAME COUNTS		NAME PATH			
NAME SERIAL#		NAME SERIAL#		NAME SERIAL#		NAME GROUP			
NAME COMMENT		NAME COMMENT		NAME COMMENT		NAME COMMENT			
NAME SECTION		NAME SECTION		NAME SECTION		NAME SECTION			

■ *ST Disk Cat* enables you to sort your fields in a variety of ways. This screenshot shows you its default settings.



■ Adding disks to your database is straightforward. Follow the instructions, and insert the relevant disk when prompted. Everything else is done for you.

more clearly, to help you distinguish between them, or you can add silly comments if you like.

Viewing your files

Once you have your disks catalogued into a single database, you can configure exactly how *Disk Cat* displays your files, using the View menu. You can display your records in three ways. The default setting is 'Dependent', in which the Files window displays the files contained in whichever folder is highlighted in the Folders window. The Folders window contains those folders in the highlighted disk in the Disk window and so on. Click on a different section, disk or folder, and the other windows update automatically.

The second display option is 'Hierarchical', in which you resize the windows to leave one on screen, displaying either sections, disks, folders or files. If you double-click on the Sections window it's replaced it with a new Disks window displaying all the disks in that section. Click on a disk and it replaces the Disks window with a Paths window, displaying all the folders within that disk, and so on. To return to the previous level, click on the Close box icon in each

window. By having only one window on screen at a time, this method gives you more room to display your records.

The 'Flattened' view option enables you to view every file in the database (displayed in the Files window) or every folder in the database (displayed in the Folders window), and so on. This enables you to view every record of that level contained in the database, regardless of which disk or folder it resides in. You can then sort through these in various ways – see the 'Put your records in order' panel for how to do this.

If the screen just isn't large enough to display all the records you want, you can resize the windows to your taste or display them in a smaller font by selecting 'Small Font' from the Misc menu.

Wibbly bits

Once you've created, sorted, qualified and displayed your records to appear exactly as you desire, you'll need to store this database setup ready for next time you load it. To do this, select 'Save Setup' from the Misc menu and make sure you save your file with a .HI or .MED extension, depending on the current resolution. When you next

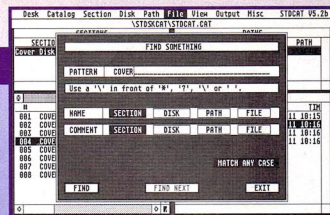
LOST A FILE?

ST Disk Cat features some impressive search options. One of the most important functions of a database is to search through all your records for a particular entry, or even word. You can search any of the four windows by selecting 'Find' from the File menu.

Next, enter the search text. You can use wildcarding, either to restrict the search to a particular filename or extension, or to list all files that don't contain the string you specified. You can elect to search any or all of the windows, and search either through names or comments, simply by clicking on the relevant icon in the 'Find Something' box.

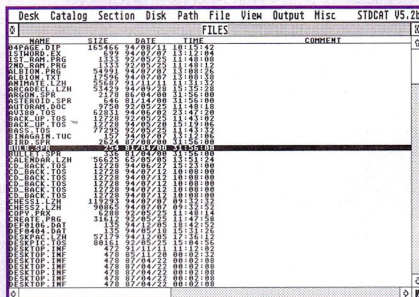
Confused about wildcarding?

Here are a few examples, all of which assume that you're only searching the Files section.



■ You can find any string using *ST Disk Cat*'s powerful search options. Here we're searching the Section window for all instances of the word 'cover', regardless of case.

*.PRG searches for all files with a PRG extension
 ^*.PRG searches for all files without a PRG extension
 ^*.PI? searches for all files that aren't Degas pictures
 A* searches for all files beginning with the letter A
 ^*G searches for all files that don't end in the letter G



■ You can, if you so desire, list every single file in your database, regardless of disk, in alphabetical order. Like this, see?

boot the program, select 'Read Setup' to alter the way your database is filed and presented. Selecting 'Catalog Statistics' from the same menu informs you of the total amount of space free on all the disks in the database.

Should you have that many disks, you can have 100 sections per catalogue, 256 disks per section, 16 folder levels per disk and 999 files per folder.

Finally, you can combine two databases by selecting 'Read' from

the Catalog menu. This takes you to the file selector, where you select a second database to merge with the current one.

And finally...

Full instructions and registration details are contained in the STD-CAT.DOC file. Before you know it, all your disks will be neatly labelled and catalogued, and you won't even have to slot your disks into a disk drive to find out what's on them. Cor, eh? **stf**



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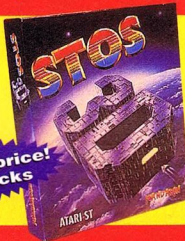
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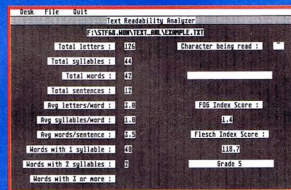
CFN LIST 2: stores details of all your Calamus fonts.

SCOPE: oscilloscope for your STOS Maestro sampler.

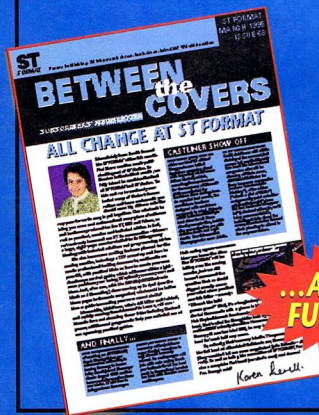
ABFORMAT: format disks in two drives simultaneously.

EXTNSEL2: select which STOS extensions you want loaded on booting up STOS Basic.

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Sales

Panasonic KX-P1081 printer, impact dot matrix, with quick cover, little used, in excellent condition £45 for dust sale. Call 0172 712350

Atari STE 4Mbytes complete with 4Mbyte HDD, second HDD, SM124 monitor, joystick, mouse, software and books £440. Call 01385 232542.

1MByte STE £100, Philips CM8833 colour monitor £75, Protech 40Mbyte external HDD £55, handscanner and software £40, 4 x 1MByte SIMMs upgrade. Call 01440, Word Perfect and Fleet Street Editor £35. Call 01442, 827245 Alan, any time.

STFM, 2Mbytes RAM, external 3.5 DSDO, mouse, mat and joystick, programs, clip-art and games plus excellent Panasonic KXP1124 printer, £300. Buyer collects. Call Phil after 6pm on 01985 750982

180Mbyte hard drive with one CD controller card including clock case and PSU by Gasteliner with software lead etc. £199. Phone after 6pm on 01582 830411.

SM144 Monitor - mono, high res for STs, tilt and swivel stand, £80 ono. Call 01798 343833 and ask for Ben.

Atari ST software sale (all boxed originals). Send SAE to EDT (151 Balsuney Road, Kircaldy, KY2 5LH for full list)

Citizen Swift 900 9-pin dot matrix printer (only). Only three months old £145. Lots of ST/STE games for sale. Call Kevin on 0191 539270 after 4pm.

Master system for sale (compatible with all games) with seven games. Will sell games separately for £10 each. Master system with seven games is £25, boxed and game. Phone James on 01692 403917.

Atari 8-bit various, computers, discs, commercial and PD software, cassettes, discs, lightning, boots, magazines, £120 2400aud modem. Sell or swap for ST hardware. Phone John 01532 361536

Atari STE 1Mbyte, with HyperPaint, Music Maker 2, 1st Basic, 1st Word, ANI ST GCSE revision module, junior school module, learn and learn module. Can be seen worth £160. Phone Ray 01727 711646

Atari 520STFM with mouse and software. Needs new internal disk drive - £70. Phone Darren on 01992 583638.

Power Greysheet hand scanner and software £50. VIDI-ST 12 (Digitaliser 30, 1040ST5 upgraded to 2Meg with over 100 discs inc utils, art, games, DTP, WP, music, £300 ono. Phone Mark on 0114 276 6831.

Falcon030 4Meg RAM/65 Mega internal drive SVGA colour monitor, printer, magazines, loads of software £700 - will split. Call 01257 425131.

4Meg ST/STE, 85Meg HD, External floppy drive, Phillips 8833 monitor, Atari 124 monitor, software and manuals - £600 the lot. Phone 0121 4271757 after 6pm.

2MByte STE, portable colour TV, joystick, mouse, assorted business, music, graphic, games software, mags C/W cover discs. £225. Call Terry 0151 6069583.

Atari 520STFM upgraded to 1040 specifications, Mouse, joystick, STOS basic and compiler, several games, all still boxed with full documentation. £120 ono. Call 01305 778544

Legal box games for sale. Powermaster and WWI; Soccer Mania; Deuteros; Champ Manager; Bridge (Omni Sharif); Caesar; Megalomani and First Samurai. £5 each plus P&P. Call 01703 457566.

Atari STE520 upgraded to 1Meg, Mint condition plus software, all original discs and manual. Genuine offers in writing please. Mr Young, 36 Station Road, Netley, Southampton, SO31 5AF.

For Sale Atari STE 1Meg and 520 - Powermaster; Megalomani; Championship Manager; Omni Sharif Bridge; Caesar; Deuteros; Soccer Mania. All for £30 or £5 each plus P&P. Call 01703 457566.

Atari SLIM 804 laser printer. Good working condition £300 ono or swap for multisync monitor. Mike 01480 475036.

Host adaptor card for using hard drive (SCSI) with an

AtariSTFM/E and lead to connect to computer £20. Call 0191 4205118.

Atari STFM, upgraded to 1MByte to include 30 plus games, two joysticks, two mouse, power scanner, £275 ono. Phone Steve 01242 581878.

Steinberg Pro 24 II with manual and dongle for ST £20. SIMMs (4 x 256 K) 1MByte for STE £10. Call 01273 584802.

TT030 computer, 2MByte RAM, 44MByte hard disk, 3.5-inch floppy drive, PTIC 1426 multisync colour monitor, mouse, manuals. £700. 01787 378741.

Epson internal 720K floppy disk drive £17.50. Atari SF314 external 720K floppy disk drive and PSU £22.50. Prices include P&P. Call 0116 266 5874.

Atari 520 STE upgraded to 1MByte. A mouse, two joysticks, Timeworks 2 and 2 WFS. Games inc - Sensible Soccer and Civilization. ST FORMATS issues 30-66 £150 ono. Call 01284 762466.

520STFM upgraded to 2.5Meg, Acorn colour monitor, second disk drive, loads of software, over 50 mags and cover disks, mouse, joystick etc. £3000. Call 0191 596 9564 plus 30Meg H/Drive.

Atari1040 with high-res monitor. Excellent condition. Bargain at £230. Tel 01884 256955. Ask for Tony.

Atari TT, 32-bit computer, 4Mbytes, hard disk, colour monitor and software £800. Ring 01239 851783.

Sega game gear, 5 games, carry case, AC adaptor. Cost over £200 now. Bargain £90. Tel 0114 250 7173.

Atari STFM, lots of software, joystick, mouse, magazines, good condition £120 ono. Tel 01142 507173.

Notator Logic Audio for the Falcon, £325, Cubase 3 £240. Both boxed as new. Ian 01702 616961.

GST C-Compiler, developer, manual, £85. PC-Ditto £10. Blitz turbo £10. STAC £7. SEUUK £8. STOS £15. Many games including Lotus 3, Striker, Hussain, 165 Ash Road, Birmingham, B8 1DR. Tel 0121 328 8259.

Atari ST/E games for sale at bargain prices including SimCity £7, Populous £4, R-Type £5, Falcon and 2 mission discs £10, Lotus 3 £8. Send SAE to Jazz, 165 Ash Road, Birmingham, B8 1DR.

Morse, RTTY transceiver for £205 £25 disc. Also CAD Novel for 4MByte Atari £25 disc. Call 01297 23421.

Mega ST, plus Phillips colour monitor. Extra drive. Games, programming, Protect 5, business software, ancillaries. Call 0151 643 9616.

Falcon 4MByte, 65Meg hard disk, NVDI, SpeedoGDOS, MULTIOS, Ease, Devpac, Stalker, coprocessor, 2 meg, £550. 14 Meg board £300. Blow-up HDD £220. Atari 01435 882121 or 0171 9567075.

STAC and DEGAS Elite. All originals or swap for Stereomaster sound sampler or if you have Stereomaster for sale. Ring Keith on 01268 472325.

Original games. Superheroes (4 games; Strider 2, The Spy Who Loved Me, Last Ninja 2, Indiana Jones and the Last Crusade) £7. Beyond the Ice Palace £2, North and South £4. (no manual for NandB). Phone Nick 0151 334 9728.

Atari compendium book - brand new - £25 plus P&P. Spectre 128 CDR and system disks, no instructions - £50 plus P&P. Tel 0116 291 3102 after 7pm.

Original games: Supercars £4, Plighters £5, Shadow Gates £6. Phone Nick 0151 3349728.

AUR format 16-bit samples 32KHz or 44KHz, £15 per disc drum machine beats, synths, etc. Ring 01283 500944 for details.

Videomaster colour digitiser for Atari Falcon, complete with RGB splitter, cost £100+ only £60. Phone 01268 561096.

Falcon030, 4Meg memory and 65Meg hard drive, and some software, as new-condition. £595 ono. Phone 01269 561066.

210Meg SCSI hard drive Gasteliner model with lead for Atari Falcon or will need link for STs, as German product £250. Phone 01268 561066.

DA, Vector £75, ACAssist SL £15, new PD CD-ROM £15. Phone 01268 561066.

Second-hand software, all boxed originals, for more details send SAE to Edward Smart, 30 Bury Road, Barrow Bury, St Edmunds, Suffolk, IP29 5AB.

Clear Out Lots to go, old and new eg Calamus 5 £50, scanner £50, Geneva £25, At Once Plus £35, Redacteur £20, Pro 29 £15 and many games. Brian 01539 723190.

Atari SC1H35 Colour monitor almost new £155, second floppy drive with built-in PS £35 and cheap original software. Upgrade to 1Meg STE memory boards £5 ea. Phone 0161 3207415 or 0161 4426078.

STFM (2Mbytes) external drive, CM8833 colour monitor 25+ games 1st Word Plus, Hyperpaint, mouse, joystick - £250. Phone 01639 876761. Delivery possible within reasonable distance.

Wanted

Wanted, Atari 520ST war games, any type in board-game format, buy or swap. Also anyone who has or is able to put Spectrum games into Atari format. Please contact. Call 01252 510555.

Prospero C compiler complete with manuals. Call 01929 551772, Dave.

Has anyone still got a copy of ST Command by SS1. If so phone me now 0181 2030475.

Wanted: Space Quest 1/3. Must be cheap! Phone Plymouth 7794146 when ringing say "Hi, I'm Roger Wilson, I'd like to buy games". PS: I'm bringing save disks.

John the Composer music/MDI program. Write to me with an offer or info on where the program is available. Thanks. Keith Parker, 96 Sandhurst Road, Tunbridge Wells, Kent, TN2 3DX.

Wanted: Civilization (good condition) and Barbarian (by Palsson). Will pay reasonable sum of money. Phone Matt on 01452 301217 after 4pm.

A copy of these games (if possible) because the disk got old and the computer refuses to load them. They are: Afterburner 2, R-Type, Super Hang-on and Quik and Silva, Contact Chaula, 21 Enfield Avenue, Preston, Victoria 3072, Australia. Phone 03 470 2465.

Wanted: Dynablasters, with manual and joystick extension for multiplayer. Send list if you have more or just tell me for a chat. I'll reply to any - 11 Dedmere Rise, Marlow, Bucks, SL7 1PF.

Games wanted, will pay up to £8 each - for Space Quest 1, Risky Woods, Fire and Ice, Parasol Stars, Sleepwalker, Soccero, Space Ace, Ishtar Legend of the Fortress for Atari STFM. Call 01705 665043.

Wanted strategy games - no pirates please - for Atari STE 1Meg. Written list with game description please. Mr Young, 36 Station Road, Netley, Southampton, SO31, 5AF.

Wanted: DTP and word processing software and any extra fonts and clip-art for Atari STE setup. Also font editors eg FontKit v4.1, etc (preferably with some documents please). Call 01438 714033.

ST Games. Supersprint, Barbarian, Dungeon Master, Chaos Engine, Flight Sim, Pimpmania, F1, Silentservice Hermdall, Xenon 2, Rugby, Stuntcar Racer, URB Starball, Hoyle's, Cadaver Chests, moderns, printers. Top prices. Call 01526 835968.

Hard drive suitable for STFM wanted. Any size considered. Send details to: Mr G. Middlebere Drive, Northmoor Park, Wareham, Dorset BH20 4SD. Cash waiting!

Heroes compilation wanted. Barbarian 2, Running Man, Star Wars and Licence to Kill. Please phone David - 0181 7240659.

Number-crunching PRG to work out permutations (PD OK). Also book with examples of spreadsheet formulae. Telephone Chris 01639 633715 (today will do!)

Desperately! I need an Atari ST1040 immediately!! Anyone know where I can get one or who has one, then contact me please!! Call 01569 872848.

Wanted: Amiga 500, no games, but mouse, joystick and manuals. Will pay up to £100. Call 0114 250 7173.

Cheap hard drive. Requirements: suitable for Atari Falcon, minimum capacity of 40Mbytes and must be in perfect working order. All replies and offers awarded. Michael Curnston, 28 Pen-an-Gw, St Ives, Cornwall, TR26 1DL.

Wanted: Oracle, Formfinder, Proprietary and any other horse tipping software. Will buy or swap. Write to: 1114, Troway 81062, Istanbul, Turkey.

Urgently wanted, top prices paid. ST Games: Curse of the Azure Bonds, Elvira - Mistress of the Dark, Elvira 2, the Heavens of Gereous, Civilisation: Legends of Valour. Call 0181 8826515.

Digital's cashbook combo accounts package for the STE. Must be in excellent condition with manual. Cash waiting. Please ring after 5pm 01234 283179.

Wanted: Dungeon Master, Elite. Also various boxed games for sale. Phone Raymond 01387 268621 after 6pm.

Copy of APB (by Domark) for STE. Will buy at reasonable price under £10. Call 01326 40647.

Issues 1 and 2 of ST Review with cover disks to complete my collection. Call 01924 452100.

Programs wanted for POL - we pay for your programs. Send SSAFE for a leaflet about what we want. Write to: PAJ Software, PAJ House, Shaftesbury Avenue, Cheshire Humble, Stockport, SK8 7DB.

WANTED: Sage Accountant plus program for the ST. Preferably boxed and with manual. Tel Russell on 01692 631225.

WANTED: The Curse of Azure Bonds, Hillstar, Romward 2000, Bat 2 for STE. Buy or swap for other software or tips for Ultima 6, Frontier, Towers and other games. Call 046 58 511271 (Poland).

Desperately looking for Top Tennis Tour 2. Swap or buy. Call 0181 8592522.

Swap

Want to swap PD? I've got roughly 60 quality disks some with more than 3 PD programs on. To find out more call 01296 89059 6-9pm.

Interested in saving software? Lots of games available. Especially interested in Dungeon Master/Chaos Strikes Back. T Higgins, 40 Sutherland Avenue, London, W9 2HQ.

Introducing JPDF, a great swap service, where you can get PD for the price of a disk. Send a SSAFE and disk today to: J. Davidson, Wood Farm House, Whitford, Shipton-on-Stour, Warks, CV36 5PF.

I want to swap my original boxed Microprose Golf for an original boxed copy of Populous. Phone Simon on 01994 448471 after 6pm.

ST contacts wanted to exchange PD software. Send a blank disk for catalogue to: A Owen, 11 Castle View Est, Derrington, Nr Stafford, ST18 9NF.

Microdeal Quarter, Master Sound and Replay plus Sweet Sixteen accomplishment - composer for notator scorewriter or similar software. Call 01327 341319.

Wanted: SimCity or Populous 2. Willing to buy or swap for New Zealand Story, Golden Age, Pacmania, Time Bandit or Bridge Player Galactic. Call 01734 262967 and ask for Alex (after 6pm weekdays).

Wanted Sensible Soccer or International Sensible Soccer for Civilization or Street Fighter 2. If interested contact Philip Ramsay on 01270 255523.

Messages

Stellar discipline if packed with reviews, news and free PD. Send £1 for issue 14 to: Mark Nobes, Newhome, Aston Road, Chipping Camden, Glos, GL55 6HR.

HELPI Technician/engineer to find why my Datastarc scanner doesn't work. Call Chris 01639 633715. Signed, Desperately.

Do you use the Cyber sense for animations? I am looking for people to swap animations, ideas and information on how to get the best from these programs. Call 01702 2660235.

For a free copy of the new-look Power Map disk - please just send a disk and SSAFE and ask for Power Map to: James, 3 Salisbury Road, Maidstone, Kent, ME14 2TY.

NOVADISKS - Any submissions for Nova 5 must be received by Feb 1st when it will be released price £2 + S&A. James Smith, 81 Elm Tree Avenue, Derby, DE35 0NN.

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Get your PD for free by sending your list and a stamp to me for a list of over 600 disks of demos, modules, utilities, etc. Paul Womart, 27 Stonehill, Harman, Bristol, BS15 3HP.

Third dimension - 3D Construction Kit user group disk may cost £1.50 monthly. Crammed with tutorials, utilities, etc. Tony R 81062, Istanbul, Turkey.

Urgently wanted, top prices paid. ST Games: Curse of the Azure Bonds, Elvira - Mistress of the Dark, Elvira 2, the Heavens of Gereous, Civilisation: Legends of Valour. Call 0181 8826515.

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GAMEB

Captain Blunder, aka Simon Forrester, wades his way through piles of reader tips, and carefully selects this month's winning cheats. They're the ones that got stuck to his boot.

Game playing expert though he is, occasionally Simon could do with your help. So send your tips to: Gamebusters, ST FORMAT, 30 Monmouth St, Bath, Avon, BA1 2BW.



FIRST SAMURAI

£9.99 UBI SOFT
0181 343 9055
REVIEWED STF 61, 85%

Jody Smith, who assures us that he is in fact a feller, has provided a bundle of invaluable tips for First Samurai, recently re-released on budget by UBI Soft. His guide takes you through each level, with instructions not only how to get through, but also the best way to defeat each guardian.

1 Ancient Japan

Take the logs to the far right of the level (above the ground) and use them to form a bridge across the waterfall. Continue to the right.

This level's guardian is a dragon, and to defeat him you'll need axes or knives to throw. Stand on the convenient platform provided and throw them at any part of the dragon. When you run out of things to throw, try chopping and punching at the dragon's base.

2 Civilisation

The teleport at the top left of the playing area transports you

to an underground passage. The flames that you find here can be put out with the pails of water.

When you get through the flames, you come up against a Tribot. Your best tactic here is to corner it against the right-hand statue and continually hack at it, while ducking whenever it fires back at you. Knives would be handy here, although not essential.

3 Crystal caverns

Use the underground teleport to reach the island in the sky. Just to the right of this is a row of spikes, which can be crossed by using the rocks as stepping stones. Now head off to the right (lots of rightwards motion in this game, isn't there?).

Unfortunately, you're now approaching the spooks. You can't do much here – just stand on the right of the screen and throw whatever you have at them. When they charge, jump and slash as they close in. After a while, they get

■ Here comes the bad guy hatching his evil plot. Boo! Hiss! And all that.

bored and wander off home.

4 Teleport labyrinth

To get to the first cavern you need to use the teleport directly above your

starting position. Once in the cavern, walk to the right (avoiding the mine) until you come to a skeleton swordsman. Use the lightning on him to wake him up and make him attack you. Now, why on earth did you ever want to do that?

To defeat the skeleton you're going to need the knives. Once he's woken, run to the left, turn and shoot him. Throw your knives sparingly – once he starts blocking he carries on for a fair while. When

you run out of things to throw, charge into the skeleton, chopping rapidly, and occasionally jumping over him to attack from behind. Just don't retreat.



■ See that log? You'll need that, only it's protected by a fierce, fire-breathing, and expendable dragon. And you're carrying that sword...



UPSTAIRS



■ Have you ever wondered how computer characters climb so well? In an exclusive interview on set, Sam Ural claimed "it's all in the wrists". Thank you, Sam.

5 Subway train

Just continue to the right until you finish. If you want to collect a few goodies, try jumping while standing on the train's roof, and you should find nice things start to fall from the sky. Or try chopping at ceilings to get hold of even more goodies.

6 Derelict suburbs

The special items are now hidden, so chopping at ceilings often reveals them. Take this level's items (cherubs) to the far right at street level and use them to lift the sacks which are covering the manhole, then jump down to face the guardian.

And wish you hadn't. You're looking at a multiheaded monster, and he's not easy to kill. Try standing to its left and hacking while standing up. Kill any heads that grow before they break off and attack you. As this is the toughest guardian around,

■ This is the opening screen to the entire game, a majestic affair flanked by tall, foreboding statues.

you might like to try cheating your way out of it. And this is how...

The easy way to avoid this guardian completely is to make sure you only take two cherubs and a bell. When you ring the bell, only two sacks are taken, providing the perfect platform to jump over the barrel to the right and stroll straight off to level seven.

7 Sewers

This level's special items are snowflakes, which can be used to crystallise the spurts of water, which are scattered throughout the level. Once a spurt has been frozen, hit it until it shatters and you then get a clear path.

The guardian here is similar to the one on the first level, so stand on the convenient centre platform and jump while hacking at the lower body. If his head gets near, you should be able to knock it away without any trouble, stopping him from dribbling slime anywhere near you. If your energy level drops too much, use the food hamper that's to your left. Just there. That's it.

8 More derelict suburbs

Use the diamonds to break the forcefields in the same fashion as you used the snowflakes on the previous level. Now you come up against the machine, so keep to the left of the thing and swipe at it. Use the platforms to get at the thing as it gets gradually higher. If you need any extra food or things to throw, you'll find them hidden above the forcefields to your left.

9 Elevator heights

After collecting all nine floppy disks, go to the top right of the area and boot up the main terminal. Once this has been done, all the monitor screens light up.

It's easy to get lost on this level, so the best thing to do is break any floors or ceilings that are already cracked, so that you can easily tell where you have already been. Secondly, make sure you smash any surveillance cameras, otherwise they'll give away your location to the bad guys.

If you manage to find your way through, you come up against the computer holograms. Hitting the large green button releases a hologram for you to kill. Only release another once the previous hologram has been nobbled, as you can't handle too many at once. The easiest way to kill them is to throw things at them, but as soon as they get anywhere near you just keep jumping and slashing.

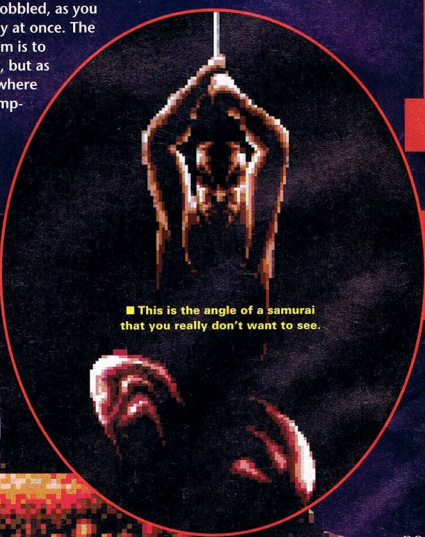
10 Futuristic Japan

The special items on this level are eight scrolls, which can be used at the very top of the playing area, where the backdrop is chequered like a chessboard for a nice surprise. Just to the right are stacks of goodies hidden in the ceilings, including food, bells, treasure, scrolls and power-ups. The lantern there helps you uncover them.

You now come up against the demon king. Ooh, goody. While the scrolls are being released, go to the far side and off the chessboard backdrop. If you stay on the chessboard he'll burst through and crush you to death.

The secret of the demon king is to destroy its eyes, so go for one of them. It takes a few attacks, but you should get it in the end.

You need to destroy both eyes to blind him totally, at which point he calls forth extra baddies to help him out. Try to ignore them and jump and hack at the demon king instead – the chances are that the baddies will get caught in the cross-fire anyway. Just keep going until the demon king explodes, and you've finished the game. Well done! Easy, wasn't it?



■ This is the angle of a samurai that you really don't want to see.

FLOOD

£9.99 EA = 01753 549442

Andrew Reed of Tyne and Wear (Monkseaton, no less) has kindly

supplied the complete set of level codes to this classic little game. The codes are:

FROG YEAR QUIF
LONG WORD FRED
WINE GRIP TRAP
THUD FRAX VINE
JUMP NILL FOUR
GRIT ZING JING LIDO
POOL HATE REED
LIME QUID WING
FLEE GIGA HEAD
LOOP SING JOUX PINK
GOGO LETS QUAD
BRIL EGGS HENS NAIL
SOAP FOAM MEEK

■ Ridley Scott's alien played a number of cameo, this time in the background.



A mélange of tips

This time, it's Richard Brown from Portishead, with some short tiplets:

Ghosts' n' Goblins:

Type: Delboy during the credits for invincibility.

Arkanoid Rev of Doh:

Type: Magenta on the title screen, then use [S] for the next game to skip levels.



Double Dragon: On the two-player game hold down both [Fire] buttons and press [Esc]. When the credits start acting strangely both characters have infinite lives.

Double Dragon 2: On the high-score chart, type: Are you calling my pint a puff? for infinite credits.

Afterburner: Pause the game and type: Thunderblade. Now you can press [C] for extra missiles, [N] for extra lives, [Z] for the previous stage and [S] for the next one. If you don't win now, well...



■ "How does he hover on his bum, then?" the vultures wondered to each other.

Revenge of the Mutant Camels

16/32 PDL = 01634 710788

It's that **Andrew Reed** chap again! And he's sent us all these level codes for the Minter classic:

OLLANTAYTAMBO
RAVEADELICA
NEWCASTLE EMLYN
THIS IS BASINGSTOKE
OCCAM II



EPIC

£19.99 OCEAN
= 0161 832 6633

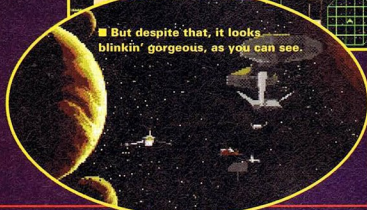
We like this **Andrew Reed** fella. He send mission codes. Codes we print. Yeah. Me bad bananas. Sorry - no - that's *Captain Blood*, isn't it? (Sorry - everyone else)

- 2 - AURIGA
- 3 - CEPHEUS
- 4 - APUS
- 5 - MUSCA
- 6 - PYXIS
- 7 - CETUS
- 8 - FORNAX
- 9 - CAELUM
- 10 - CORVUS

■ *Epic* - a space adventure sadly spoilt by a slight lack of gameplay.



■ But despite that, it looks... blinkin' gorgeous, as you can see.



DYNABLASTERS

UBI SOFT = 0181 343 9055
ZF7 43, 92%

This **Andrew Reed** bloke just keeps on going, doesn't he? Positively Duracell-like, he is. For your playing pleasure, your digital delectation and your gaming gaiety, the playing codes you'll need for the one-player levels of this excellent bombastic, erm, game are as follows:

RKOVGEHK
UUYKWGEU
UKCZJGVG
UWVKOPST
RWHYJWLA

RKBVGMHE
UUVVEVPU
RAFAVONL
UKFHEVHG
UOBHPOPA
RBVCQTVR
RWANPTVZ
UKZHWSAG
UBNZQLUK
UOGZMSGU
RWICYQNL
UKNZPJUV
UBGZOMUH
MBCAPHAH
MUNEPBCP
UKGOWPSS
UKNOWVSG
RWEZMOHK

...and another

Peter Tuffin has graciously sent us a whole wodge of tipettes to help you out in your hours of need:

Bart vs Mutants: Type: cowabunga the first time you see the family (with the music playing) for infinite lives. On the nuclear plant level the floor codes are 14, 32, 11, 41, 21.

Skweek: Hold down the Spacebar and press [F2] on the title screen for a random level.

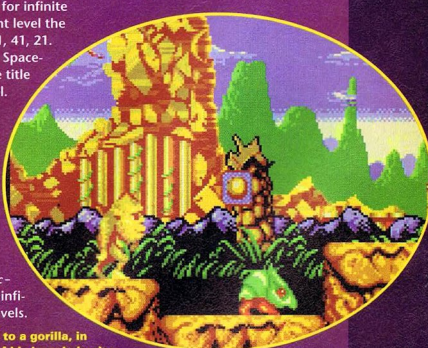
Toki: During the introduction, press [Esc] before the man transforms, then type: poortoki. On the first level type: killer for infinite credits. If you press a function key, you're sent to the corresponding level.

Dragon Ninja: Type: terrific, then press [F3] for infinite lives or [H] to skip levels.

■ Toki, a man turned to a gorilla, in desperate search of his luurvy laydee.

Prince of Persia: Hold [Shift] and [H] to skip levels.

Axel's Magic Hammer: When you get the 'Continue' message, take the disk out of the drive and press the [Fire] button to restart without the blocks you have already destroyed.



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ISSUE 67

FEBRUARY 1995

Disk: *Smash Hit* and *KAOSDesk 2.1*
Inside: Pure Genius – explore your ST's powers; Twist and Superbase Pro head to head; ProTOS show **Reviewed:** *Obsession*, *Quill 2*, *Imagecopy Colour 3.5*



ISSUE 66

JANUARY 1995

Disk: *Stardust*, *Endurance*, *Route Finder* and more **Inside:** All you need to know about animation; ST First Aid course; programming tutorials **Reviewed:** *Zero-5*, *Metamorphosis...*



ISSUE 65

DECEMBER 1994

Disk: *Grafix*, *Jelpac*, *Arcade Classics* and many more **Inside:** Plug your ST into the Internet; word processors head to head; GFA and *Personal Pascal* tutorials **Reviewed:** *Twist 2*, *ScreenEye...*



ISSUE 64

NOVEMBER 1994

Double Disk special: *Personal Pascal*, *Starball*, *Graftek* and much more **Inside:** The future of the ST; full PD library round-up **Reviewed:** *HERO*, *NeoDesk 4*, *Munch*, *Robinson's Requiem*



ISSUE 63

OCTOBER 1994

Disk: *Quill* and *HERO* demos and *Herman* **Inside:** Pure Gold – all the *FORMAT* Gold winners; coding for beginners **Reviewed:** *Starball*, *Protext 6.5*, *Papyrus Gold* and *That's Write 3*



ISSUE 62

SEPTEMBER 1994

Disk: *Medieval Chess*, *Fastcopy 3*, *Albion* and *TUC* **Inside:** Supercharge your ST special **Reviewed:** *Rainbow*, *Xenomorf 2*, *EZ-Art Pro*, *Imagecopy 3*, *Ishar 3*, *Nova card*, *MIDGrid Pro*, *Rorke's Drift...*



ISSUE 61

AUGUST 1994

Disk: *Well 'Ar'd*, *Twilnz*, *Digit 1.1* demo and *Atari View 3.8* **Inside:** Serious software preview; art packages rated **Reviewed:** *3D Calc*, *Kobold*, *Diamond Back 3*, *HP Chrome 2.5*



ISSUE 60

JULY 1994

Disk: *Snacman*, *DeskPic*, *Sam 2 Disk*, *Diskfree* and *Music Mon 2* demo **Inside:** Next generation of ST games; WPs sorted; file handling; *Exposé* **Reviewed:** *Magic*, *DA's Vector Pro...*

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STF03035

FEEDBACK

From an ST murderer to a weighty discussion about ST FORMAT's resident wobblers, it's all here in this funny old collection of pages they're already calling Feedback. Karen Levell takes the paper cuts like only a woman can...

Memory to die for?



I'm writing this letter as one of both praise and warning to a certain category of ST users. My letter is about the infamous Marpet upgrade kit (ST FORMAT 62).

First of all I'd like to compliment Marpet on a great service in relation to on-line help and speedy posting. But now to my complaint/warning. I posted away to get a 2.5MByte upgrade for an STFM from Marpet. I read the manual from start to finish and kept it open during the 'operation'. Everything was fine until I came to soldering a chip over the video-shifter chip. Basically, to cut a long story short, my ST then died a horrible death and has since cost me £180 to get fixed.

From this you can probably gather that I'm not a techie whizz, and it was more than likely my fault. However, after this 'experience' I'd advise anyone who's hoping to buy one of these little nightmares to make absolutely sure that they know their ST inside out and are a dab hand at soldering.

I think my ST is a brilliant piece of equipment, and matched with your mag it is perfect. Keep up the excellent work.

Keith Preston, Co Meath

stf: So, you're a self-confessed ST murderer, eh? Seriously, though, we're sorry to hear about all your troubles – fitting SIMMs can be tricky and we'd agree that you should certainly think carefully before attempting to fit them yourself. You needn't give up on the idea of expanding your memory though, because most companies are happy to provide a fitting service for a small fee. Marpet ☎ 01423 712600 for instance, will fit their RAM upgrades to your ST for £20 (with an extra £20 courier charge for customers who need to 'post' their ST).

Fatty Format!



I feel moved by your impassioned plea to enter the RVF vs RF900R debate. While the former clearly wins hands down in the 'having more 'V's' department, it is transparently clear to me that the latter is both longer and, this is the clincher, includes not one but three numerals. A clear mandate for the RF900R I believe.

And while I'm on the subject, I would also like to express my outrage at the lack of plump people on your staff (since the sad poaching of Clive 'Panda' Parker by the loathsome .NETball Monthly). I honestly cannot believe that the 'larger' computer users' needs are being met when you show support for such a weightist policy. As you are now under the protective wing of Pearson Inc, perhaps you could persuade that great big wobbly Atari fan Gary Bushell on to the team? (And if he doesn't like his Atari, tell him to send it to me – being a dole scrounger I can't afford one at the mo.)

Oh, and in response to your query in STF 66, no, I don't wear huge trainers, enormous baggy trousers, and yes, I am fully aware of exactly which way round a baseball cap goes.

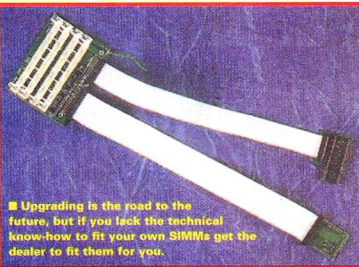
A Brasire, Walthamstow

stf: Dear Brasire (or may I call you Bra?), motorbikes are eminently complicated things, and we all heaved an enormous sigh of relief to be getting some constructive criticism and clear buying advice at last. You seemed to gloss over the F features a bit though – surely not a lack of research?

As far as our weightist policy goes, Simon was extremely upset at your comments. He has been working steadily on his beer gut for the last three years and was understandably shaken (or is that wobbled) by your dismissive attitude.



■ Just wait till we take the cork out. So maybe we touched it up a lot. A bit. A little. Okay, so maybe we didn't.



■ Upgrading is the road to the future, but if you lack the technical know-how to fit your own SIMMs get the dealer to fit them for you.

ALL IN THE MIND



I'm writing to tell you about 'Figments of an Imagination', a new company that aims to improve upon and promote Atari software by providing a way of combining the talents of home-based programmers, artists, musicians and designers. Figments will enable people to contribute skills and ideas to finished projects, and give them access to a large central database of material for future projects.

We'll also act as a conventional software house by promoting and advertising software, as well as linking the best people in a given field with projects for both the commercial and shareware markets – but without any of

the restrictions imposed by the usual 'in house' approach. By providing additional services – post-sales support, a 'freelance agency' service for existing software producers and a helpline for our members – we intend to bridge the gap between clubs and software houses.

Membership is free, and profits from the sales of a title are shared between members who have supplied work for it.

Danny Martin, Kent

stf: It's great to see this kind of positive approach, and we wish you luck. You earn yourself this month's £25 for your imagination and initiative. If you want to join Figments write to: Figments of an Imagination, 10 Bloomfield Road, Bromley, Kent BR2 9RZ.



Figments Of An Imagination

■ Think you can dream up brilliant ST programs? Code routines like no other? Or even supply the wildest soundtrack ever? Figments are waiting for your contribution.

Lies, all lies!

There are nasty rumours that *ST FORMAT* is going to merge back with *Amiga Format*.

Come on, we've had enough mergers already with *ST Action*, *ST User* and now *ST Review* going. What's the point of joining with a mag for a different make of computer?

John Hayward, Portsmouth

stf: Absolutely none whatsoever, which is why we have no plans to do so. I don't know where you do your gossiping, but someone

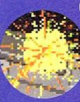
would appear to be pulling your chuffer.



Amiga Format is a darn fine mag and all that, but it doesn't mean we want to get into bed with it.

DON'T CHEAT YOURSELF

Included on your October Cover Disk was *Spacewar 2000*. This nice game, which was written by J Chan, has given us plenty of enjoyment. As it's shareware I sent off £5 to the author, who wrote back saying that mine was the only registration fee he



received. He also added that he won't be writing further programs for the ST... **Brian Matthews, SW London**

stf: This sort of thing really gets me mad! Surely, Brian isn't the only one who uses this game regularly. It's little wonder programmers are leaving the ST scene when the support from users is so pitiful. If you want a future full of new and exciting ST software, support the programmers now! Send off your fivers and let's see if we can convince J Chan to stay with the ST.



Look, if you're playing this game, send the author £5. Not only can you brag to your friends about your honesty, but you'll also help ensure the ST shareware scene continues for many years to come.

Here to stay

During 1994 a number of PDLs and magazines have taken the road to oblivion. Some will be missed, in particular those that did at least try to benefit ST users. But some of the big names who have 'gone' have treated customers disgustingly, particularly their subscribers, who at least ensured them a guaranteed income.

I myself have been caught out four times during the previous 12 months, and have lost money in at least two cases. I'm still waiting for the results of the other two – but I'm told by the magazine's parent company that they have now passed my subscription over to *ST FORMAT* and *Future Publishing*.

Of course no one has asked me (a) if I wanted that or (b) whether I already subscribe to your

mag. I do subscribe already, but a quick word with your Customer Relations Office put me in the picture about how the other mags' subscriptions will be carried over.

But what guarantee do we have that our subscriptions will be safe? If you go there doesn't seem to be anyone ready to carry on and take over.

Derek Hunt, Cardiff

UNLEASH THE BEAST!

I'm beginning to hate you, Trenton. First I saw you as being okay and quite a worthy replacement for Paula, but now I've changed my mind. All previous editors have been keen and perfectly willing to satisfy their reader's needs and adapt *ST FORMAT* for them. You, however, have seemed to reverse this.

How many letters have you had asking for Jaguar coverage? Paula Richards ensured that the Jaguar had a decent section devoted to it, and as soon as you shortened it you received complaints. The solution? Extend the coverage again. But instead you went and cut all Jaguar coverage entirely, replying to further complaints by telling us to bugger off and buy *Edge* or some other magazine. It's not really on, is it?

Jody Smith, Woodbridge

stf: Hold on, let's take these points in turn. All *Future Publishing* editors work to satisfy their readers' needs. When Paula was editor she felt that *ST*

FORMAT's readers wanted a Jaguar section, but by the time Trenton took over there was an awful lot of anti-Jag mail coming into the office. Naturally, he tried to fulfil these reader's needs by axing Jaguar coverage, because by that time other console mags were covering the machine.

So when you ask how many letters we've had asking for Jaguar coverage, I'd reply that over the whole history of the machine we've had about as many as we have asking us to stop covering it.

Clearly this is something that many of you feel strongly about, and in an effort to resolve this ongoing dispute we'll be carrying a full reader questionnaire in the next issue. This, among other things, will pose the question 'Do you want to see Jaguar coverage in *ST FORMAT*?' We'll go with whatever the results of they poll say – that's a fair method. So if you feel passionately about the Jaguar, fill in and return next month's questionnaire.

stf: I sympathise with your problems, Derek, but you can rest assured that *ST FORMAT* will be here for a long, long time to come (we're talking in terms of years, here). The recent merging of *ST Review* and *ST FORMAT* is just one example of how *Future Publishing* is continuing to invest in the ST market. To further reassure you, though, all *Future Publishing* magazines are covered by the same policy: if we are unable to supply the magazine because of closure any outstanding monies will be refunded. Guaranteed.

If anyone has any questions about the 'carrying over' of *ST User* and *ST Review* subscriptions please call our Customer Services department on 01225 822510. **stf**

NEXT MONTH

The Survival Guide: we help you through the trauma of ST tragedy, and explain how to pick up the pieces when it all goes horribly wrong!



Tune in: we show you how to set up your own sound studio, and reveal the best hardware and software for would-be musicians!



Reviews: 14MByte Falcon Upgrade Kit, InShape 2, Beginners' Guide to STOS Basic, Video Supreme 2, Shadow of the Beast 2, Llamazap and... Team! (We hope.)

PLUS!

ST Answers is growing again. Next month sees the first of our new comms-dedicated problem pages – get your questions in now!

April issue of ST FORMAT on sale Tuesday 14 March

TWILIGHT ZONE

PIXEL PAINTING

This month's digital daubing comes from **Matt Bearpark of Harpenden**, who's used his ST to produce this rather cute little tree-frog. Frankly, we're impressed not only with Matt's graphic ability, but also with the excellent way in which he's used the tools available to him. This isn't something we can teach you, though – he's just abnormal. Cheers, Matt.



■ Next, he filled in the frog and leaf with a base colour, to give an impression of what the final image would look like. The attention-grabbing eye was then drawn using the Zoom option.

■ Matt started by drawing the frog's outline using Freehand and Curve tools. He also spent time making sure the colour palettes were right for the picture.

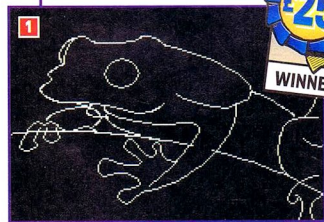
■ Cleverly, Matt's used a dithering technique to give a better shading, blending colours together to smooth the graduation from one colour to the next.



■ Here you can see the front legs and upper body gaining texture, once again thanks to the Zoom option. Texture is incredibly important in pictures like these, adding depth and perspective.



■ And here's the finished picture, looking all the better for Matt's small adjustments. He's tidied up a few mistakes that he made earlier, and corrected the odd stray line.



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INTERACTIVITY AHOY!

WE WANT **ST FORMAT** TO COVER the things you want to read about, and what better way to do that than to ask you to write it?

No, we're not offering full-time jobs, but we are looking for your input. If you have a specialist ST-related hobby – programming, music, hardware DIY projects, whatever – and you've come up with any useful routines, tricks or even tutorials that the rest of our readers would find useful and interesting, this is your chance to shine! But take note, we're talking advanced,

here – if you don't know your stuff inside out, then we're not going to be interested.

Send your project marked 'Reader contributions' to us at: **ST FORMAT**, 30 Monmouth Street, Bath, Avon, BA1 2BW. We'd prefer your copy to be between 500 and 1,500 words, typed. Include anything else you think is relevant – programming routines, ideas, pictures, whatever. If it's useful then we'll print it, and we might even scrape together a relevant prize of some kind. Okay? Get to it then...

MY BLOODY VALENTINE

THIS ISSUE SHOULD ARRIVE ON the shelves of your friendly neighbourhood newsagent on Tuesday 14 February, Valentine's Day, distribution and schedules permitting. So as the sun set on another issue, it seemed relevant to ingenuously poll the team as to who they'll be sending their hopeful Valentine cards to this year. And we never said we wouldn't print the names... (Yes you did! – everyone else)

Nick Peers: Deanna Troi ("and her voluminous hips")
Karen Levell: Jean-Luc Picard ("the way he pulls his tunic down – ooh")
Sarah Sherley-Price: Arnold Rimmer ("waddaguy")
Andy Ounstead: Michelle Pfeiffer ("what a sweetie")
Jillian Ward: the blond security guard at Stonehenge (circa 1989)
Simon Forrester: himself ("because no one else will")

Ladbroke Computing



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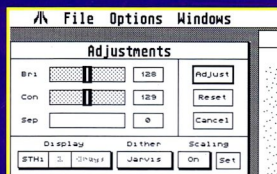
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