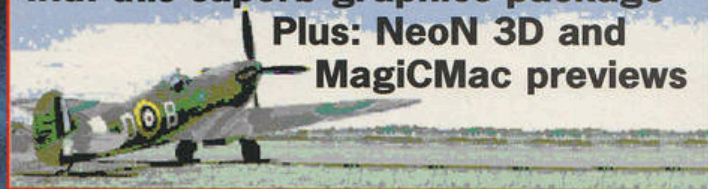


ST FORMAT

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- CUBASE AUDIO 16 ● MUSICOM 2
- TRAKCOM ● RAINBOW 2
- SPEEDCOM+ MODEMS ● HL-630 PRINTER ● ATARI A TO Z ● VECTOR GRAPHICS XCHANGE ● STEEL TALONS
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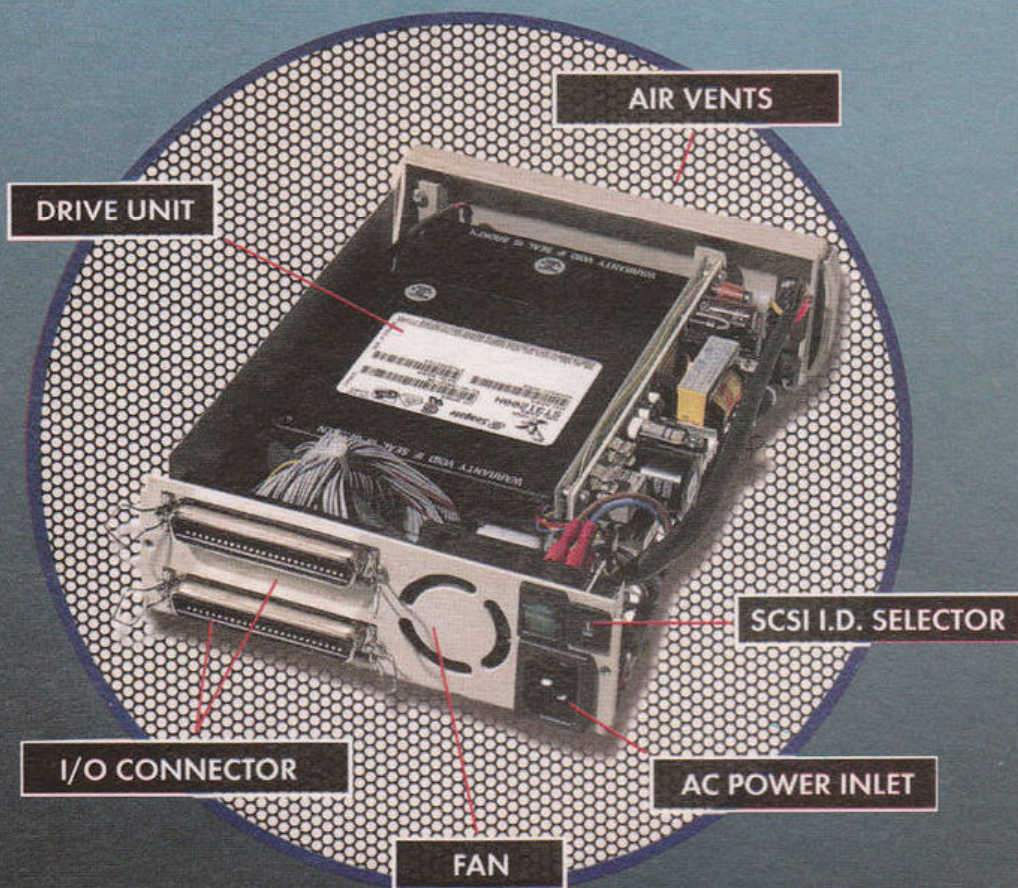
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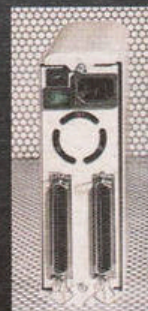
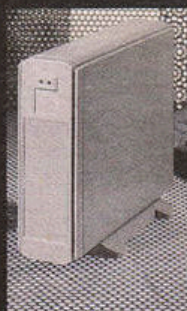
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ST NEWS COMMENTARY

ISSUE 73 ■ AUGUST 1995

ST FORMAT

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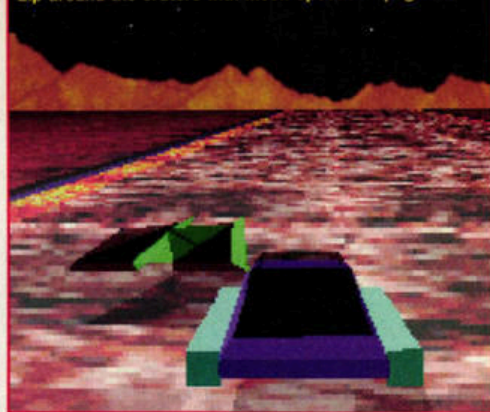
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ST ABC Jul - Dec 1994
FORMAT 23,223
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ST FORMAT is also on line on the Internet as part of FutureNet. To access it, just point your Net browser software at <http://www.futurenet.co.uk/>
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ADVERTISING
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Darran 'Ronald Reagan' Ward ☎ 01225 442244

DISTRIBUTION
UK and Overseas Newsstand Distribution
- Future Publishing Ltd ☎ 01225 442244
SUBSCRIPTIONS/MAIL ORDER
FUTURE PUBLISHING, Somerton, Somerset
TA11 6TB ☎ 01225 442244 Fax 01458 274378
Subscriptions ☎ 01225 822511
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HARD DRIVES:



THE SPACE & TIME SOLUTION

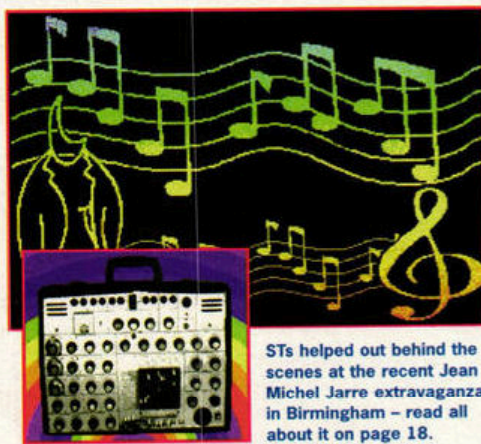
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There were plenty of bargains for Atari users at Gasteiner's Spotlight show – page 14.



STs helped out behind the scenes at the recent Jean Michel Jarre extravaganza in Birmingham – read all about it on page 18.

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Make the most of your ST with this practical new series. This month, we explain how to create boot disks with all the Accessories you need.

COVER DISK 73

THIS MONTH...



HOLLYWOOD HUSTLER: Try your hand at the ST's first interactive video game – It plays a mean game of poker! 1MByte required.
Uncompressed size: 461K

SWEET SIXTEEN: Check out this MIDI sequencer. There are two versions on the disk, one of which enables you to record and save your own songs!
Uncompressed size: 387K

QUADRIX: Play 3D noughts and crosses against your ST or a friend in this challenging game. Falcon and TOS 2.06 compatible with STOSFix.
Uncompressed size: 90K

RENDEZVOUS: An exclusive collection of images from the successful Jean Michel Jarre convention, *Rendez-vous '95*. Includes DSlide picture viewer.
Uncompressed size: 163K

CURTAINS II: Protect your data from unwanted intrusion with this handy accessory. It will even alert you to any attempts to illegally bypass the program! Essential.
Size: 30K

FALCON QUARTET PLAYER: Now Falcon owners can discover just how groovy Quartet tunes sound in 50KHz 16-bit stereo.
Size: 14K

TABBER: Handy utility that enables you to import text files into *Calamus SL* without losing the tabulation.
Size: 14K

OBSESSION HI-SCORE UTILITY: Combine high score tables from the STF Gold-winning pinball king.
Size: 1K

BACKUP: Prevent 'damaged Cover Disk blues' with our back-up utility.
Size: 12K



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Printed by TPL, nr Kidderminster, Worcestershire
Circulation Manager Pete 'Napoleon' Walker
☎ 01225 442244
Publisher Simon 'Josef Stalin' Stansfield
Managing Director Greg 'Benito Mussolini' Ingham
Chairman Nick 'Vladimir Lenin' Alexander
Annual subscription rate: UK £45, Europe £59.88, Rest of World £69.83

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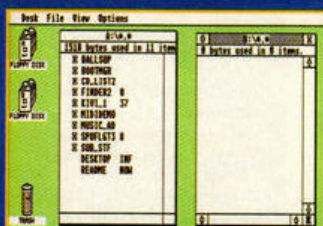
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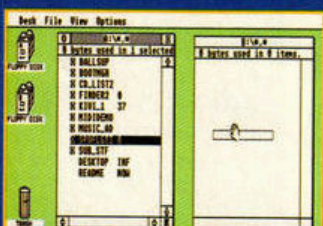
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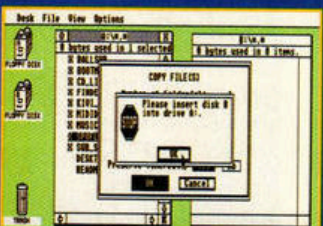
1 Assuming you have a single-drive system, insert your Cover Disk back-up into drive A. Double-click on the drive A icon to access it. Next, double-click on the drive B icon.



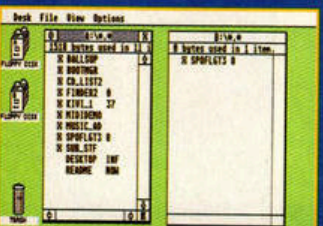
2 When prompted, remove the Cover Disk and insert your blank disk into drive A. Click on OK and a separate window should appear with the contents of the disk within it.



3 Next, click and hold down the left mouse button on the file or folder you wish to copy across to your blank disk. Drag the file over to the drive B window before releasing the button.



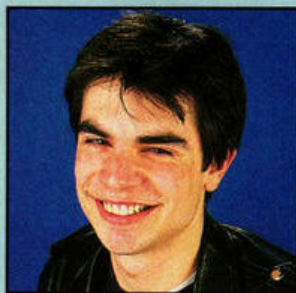
4 An alert box will tell you to insert disk A (your Cover Disk). Do so, click on OK and follow the on-screen instructions. You may have to swap disks several times during this process.



5 Just follow the instructions on the screen until the file or folder you wished to copy has been transferred - it'll be displayed in drive B's window.

6 ST FORMAT AUGUST ISSUE 73

Cover Disk



Securely back in the disk editor's seat, and happy in his work (*Bitter, moi?*), Nick Peers takes you on the magical mystery tour that is this month's Cover Disk.

HOLLYWOOD HUSTLER

By: Desert Star Software
Machines: All Ataris (joystick required)
Falcon compatible: yes (with Backwards)
Memory required: 1MByte
Resolutions: any colour (VGA or RGB)
Uncompressed size: 461K

Getting started

Open up the HOLLYWD folder and copy all the files on to a blank disk. Double-click on HOLLYWD.TOS to dearchive its contents, then delete it. Re-boot the machine with the *Hollywood Hustler* disk in drive A. The game will automatically load and run (Falcon owners must run *Backwards* first - version 1.43 appeared on Cover Disk 55).

About Hustler

Hollywood Hustler lays an excellent claim to

being the 'first fully digitised game for the ST'. Beneath the flashy exterior lies a mean game of poker between you and three computer-controlled opponents, each with his own personality, strengths and weaknesses. No wonder it scored a solid 75% in issue 69.

This demo enables you to play six rounds of poker before your character does a runner. Note that each round is played with preset hands, so after a few games you'll be



Can you defeat these three poker players? Can you stand their bodily odour? And by the way, isn't that what's-his-name from *Twin Peaks*?

able to predict what's going to happen. In the full game the cards come up at random.

Poker face

The game is controlled entirely with the joystick. When the first round begins you'll need to put in a five-dollar stake to begin - push the joystick forward to do this. The cards are dealt, and you start betting. You can raise the current stake, match it or drop out. Dropping out means you lose whatever you've bid, but you don't risk further losses.

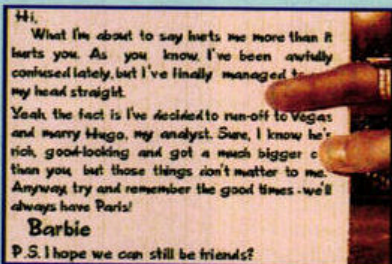
Once everybody has matched one person's bid, each player can elect to swap up to three of his/her cards. This could produce the combination you're looking for, or leave you even worse off.

Your opponents bet on the strength of their hands, but it's possible that one or more of them is bluffing. This involves trying to frighten the other players into dropping their hands, even though yours is weak or non-existent.

You want more?

The full game features three levels of difficulty, and you can play up to 25 rounds. Full details can be found inside the HUSTLER.INF folder.

Hollywood Hustler costs £24.95 and can be ordered directly from Desert Star Software on 01482 871210.



The full game of *Hollywood Hustler* includes an intriguing little plot to explain your presence in the game. And no, I'm not going to comment on the contents of this letter (I've seen it somewhere before, though).

WINNING HANDS

Most hands aren't worth the cardboard they're printed on. Here's what you need to win, in ascending order:

- High card only:** whoever has the highest card wins.
- Pair:** two cards of the same value (for example, two of diamonds and two of spades).
- Two pair:** two pairs (see above).
- Three of a kind:** three cards of the same value.
- Straight/run:** five cards running from one value to another (such as two through to six), regardless of suite.
- Flush:** five cards from the same suite (such as hearts or clubs).
- Full House:** a pair and three of a kind.
- Four of a kind:** four cards of the same value.
- Straight flush:** a five-card run in the same suite (so for example, the nine, ten, jack, queen and king of hearts).

A pair would beat a high card, three of a kind beats a pair and so on. If two players have the same hand, the person whose cards have the greater value wins (a pair of kings beats a pair of threes).

SWEET SIXTEEN LITE/DEMO

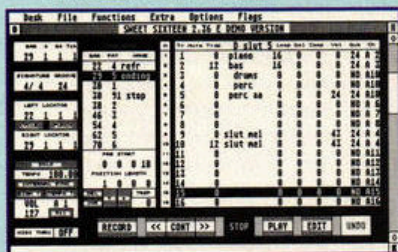
By: RONI Music/Rolf Nilsson
Machines: All Ataris
Memory required: 512K
Resolution: Medium or high
Uncompressed size: 387K

Getting started

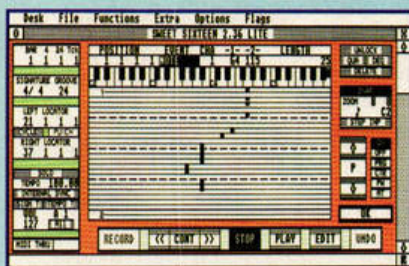
Transfer SW16.TOS to a blank disk and double-click on it to dearchive the contents. Run either S16_LITE.PRG or S16_DEMO.PRG (see below).

About Sweet 16

Sweet Sixteen is a Swedish MIDI sequencer. Enclosed in the archived file are two



Sweet Sixteen is a budget sequencer that runs on all Ataris and on a colour or monochrome screen. Two versions are on this month's Cover Disk.



Although you can access *Sweet Sixteen Lite's* Grid Edit screen, you can't do anything when you get there. Try the demo version instead.

versions of the program – *Sweet Sixteen Lite*, and a demo version of the full program.

Sweet Sixteen Lite enables you to record, playback and save original compositions, but its editing facilities are very limited – you can view the Grid Edit page, for example, but you can't use it. The demo version, on the other hand, enables you to tour the entire program, but you can't save anything.

What's it got?

Sweet Sixteen runs on basic 512K machines with no problems, something few other sequencers do.

It's capable of handling all MIDI events, which means you can create songs on your favourite synthesizer without losing any important data (such as volume or instrument changes). Perhaps most importantly of all, it's capable of importing and exporting MIDI file format data, which makes it compatible with a wide range of other sequencers, be they software or hardware based.

Fade... to edit

Once *Sweet Sixteen Lite* has loaded, just click on the record icon and play away on your MIDI instrument to record the first part of your song.

After recording, you would normally enter either the Grid or Event edit pages to amend any mistakes.

Unfortunately, *Sweet Sixteen Lite* doesn't allow editing, so you need to save your work, quit the program and run S16_DEMO.PRG. Now you can tour around the program's versatile editing functions – but remember, you can't save any of your edits.

The Grid edit page enables you to pick up any note (represented by a black line) and place it somewhere else. The Event edit page is more technical, and enables you to insert, amend or delete control changes as well as notes.

Sweet Sixteen employs similar principles to other sequencers, so dig out issue 69 for a more comprehensive look at MIDI and music. At £49.95 for the full version, *Sweet Sixteen* is an economical choice if you're just getting started in MIDI. It can be obtained from Hands On MIDI Software Ltd – see the information box in either version for more details.

RENDEZ-VOUS '95

By: Rendez-vous '95
Machines: All STs
Falcon compatible: yes (no animation)
Memory required: 512K
Resolution: Low
Uncompressed size: 186K

Getting started

Copy RENDEZVS.TOS to a blank disk and double-click on

it to dearchive its contents. Run DSLIDE.PRG to display the images.

About Rendez-vous

Enclosed in the TOS file are five *Degas* P11 pictures that were used during the *Systeme* Concert at the Rendez-vous '95 convention in Birmingham in April. Also included is *DSlide 2*, a displayer for viewing them with. A detailed report on the concert can be found on page 18.



Just one of the many stunning visuals used at Rendez-vous '95. Five STfMs helped provide both audio and visual accompaniment to the band *Systeme's* excellent concert.

QUADRIX

By: Dr Christopher Walters
Machines: All STs (TOS 2.06 with STOSFix 3.0)
Falcon compatible: yes (with STOSFix 3.0)
Memory required: 512K
Resolution: Medium/high
Uncompressed size: 90K

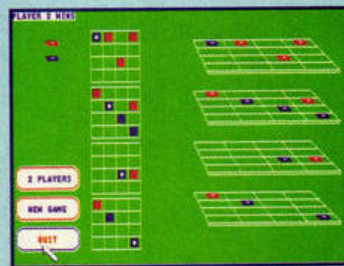
Getting started

Copy QUADRIX.TOS to a blank disk and double-click on it to dearchive its contents, then run QUADRIX.PRG to boot the program. Falcon and TOS 2.06 owners need to run STOSFix 3.0 first.

About Quadrix

Quadrix is a 3D noughts and crosses program for one or two players. You take it in turns to place counters on the grid, and the first person to lay four in a row wins the game. As the game takes place on a 3D grid, the strategic element is all important – a momentary lapse of concentration can easily let your opponent in with a cleverly hidden run.

Place your counters on the right-hand grid using the mouse, then click again for the move to be registered. Play continues until someone wins, or the entire grid is filled (resulting in a draw). *Quadrix* is shareware, and costs just £2 to register – a bargain!



Quadrix adds an extra dimension to noughts and crosses, resulting in a playable twist on an old, but popular, genre.

REMEMBER

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 any software except *Back Up* directly from the Cover Disk.

Many Cover Disk programs are compressed to fit them on the Disk. Follow the step-by-step instructions on page 6 to decompress them.

Read the instructions in these pages and in any document file that is on the disk.

If you have problems with your ST, consult your manual. If you're still stuck write to: ST Answers, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, BA1 2BW, and Clive will do his best to help you out.

FALCON QUARTET PLAYER

By: Alex Johnson
Machines: Falcon only
Memory required: 1MByte
(4MByte recommended)
Resolution: all
Size: 14K

Getting started

Just click on FALCONQP.PRG to run the program. Note that the program is not compatible with multi-tasking software such as *MultiTOS*.

About FQ Player

Quartet, a marvellous sequencing package that uses samples rather than MIDI, appeared on Cover Disk 58. Unfortunately, *Quartet* isn't compatible with

the Falcon, and until now Falcon owners haven't even been able to listen to Quartet compositions.

But wait, change is afoot. *Falcon Quartet Player* enables you to listen to *Quartet* tunes – just select the file and voice-set from the file selector. What's more, playback is in super 50KHz 16-bit stereo, so they sound great. So, dig out that old *Quartet* disk and turn up your speakers.

BACK UP

Just when you thought it was safe to ignore our frequent warnings about backing up your Cover Disks, here comes another one... Stop slacking, back up the disk and congratulate yourself on a job well done. Now if anything goes horrendously wrong, you won't be left crying into your keyboard.

TABBER

By: Ian Hancock
Machines: All Ataris
Memory required: 512K
Resolution: any
Size: 14K

Getting started

Have your ASCII or *First Word Plus* document ready, then run TABBER.PRG from inside the TABBER folder.

About Tabber

If you've ever imported a document into *Calamus SL*, from

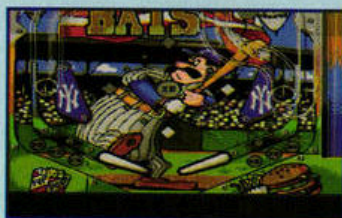
whatever source, you'll be aware of some of its limitations. One of these is its inability to implement tabulation correctly, leaving you with the arduous task of going through your document and reformatting it line by line.

Tabber helps you out by

converting certain characters into tabs that will be recognised in *Calamus SL*. Just press [Space][^] for a left tab, and [^] for a right tab, then use *Tabber* to create a TAB file ready for importing. See STFORMAT.DOC for more information.

OBSESSION HI-SCORE TABLE UTILITY

By: Unique Developments
Sweden
Machines: STE, Falcon
Memory required: 1MByte
Resolution: Low/medium
Size: 1K



Obsession. A stonking game from a brilliant company. What more can be said? Oh yeah, it's a pinball game. And it's great.

About Hi-Score

You've got *Obsession*. Your mate's got *Obsession*. Some days you play round at his house, and some days you play at yours. By now you've got two high score tables reflecting your respective competitions, and you'd like to combine them to find the overall champ. This unfeasibly tiny utility does the job.

Getting started

Ensure the two disks with your separate high score tables are close at hand, and format a third disk to copy the combined table on to. Double-click on HISCADD.PRG (in the HISCADD folder) to run the utility and combine the two high score tables.

CURTAINS II

By: F10 Software
Machines: All Ataris
Memory required: 512K
Resolution: Medium/high
Size: 30K

Getting started

Copy the contents of CURTAINS to the root directory of your boot disk or drive, then re-boot the machine to install *Curtains* as an accessory.

About Curtains

Curtains enables you to secure your machine from prying eyes and inquisitive fingers without switching it off. This is useful if, for example, you are running a demonstration and sometimes need to leave the machine unattended.

Once it is installed, the only way to leave

Curtains II is to enter a password (the unregistered version defaults to f10, but you can customise it when you register). If anyone attempts to touch the machine an alert will flash, and your ST will give off a siren-like sound. The file AUTOCURT.PR prevents really meddlesome people from bypassing *Curtains* by resetting your computer.

Full details of how to register the program, as well as how it works, can be found in the CURTAINS.DOC file.



Curtains draws a discreet veil over proceedings when you need to leave your machine unattended in a public place.

WE WANT YOUR PROGRAMS

We pay for your software – so if you have anything that's good, original and preferably short that you think really deserves to go on ST FORMAT's Cover Disk, send it with this form and full documentation to Nick Peers, ST FORMAT, Cover Disk, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW

Name _____

Address _____

Daytime phone _____ Program title _____

_____ Total size in K _____

On a separate sheet, explain concisely what the program does and why it's so brilliant. Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, contributions are non-returnable ■ Enclose an attractive bribe. Roxette posters would be nice... ■ Not that it makes a difference.

Please sign the following declaration: This program is submitted for publication in ST FORMAT. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

Signed _____ Date _____

PROBLEMS?

If you can't load, copy or back up your Cover Disk, it may be faulty. If you think it is, send the disk and a padded self-addressed envelope to: ST FORMAT August 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, re-read 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, or 8pm and 11pm on Sundays.

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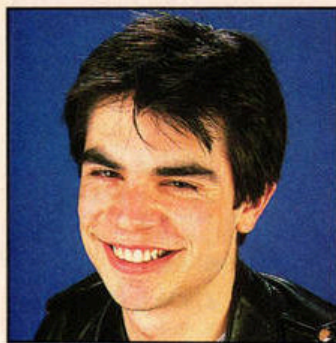
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STF News...



Keep up-to-date with all the latest developments in the world of the Atari. Your host is Nick Peers.

SNIPPETS

Falcon owners with CD-ROM drives will be interested to learn that both *Ishar 3* and *Robinson's Requiem* have been released on CD-ROM in France. Both titles featured more detailed, textured graphics, including smart movie-like opening sequences. They cost Fr379 (£50) each and can be obtained from Turtle Bay, 90 rue Massena, 69006 Lyon, France.

Awesome Animations is a new CD-ROM from It's All Relative. It contains 197 rendered CAD animations in FLI format, plus a clip-art image from each animation in both GIF and BMP formats. The CD-ROM retails at \$19.99 in the US. For more details, contact It's All Relative at: 2233 Kevven Lane, Florissant, MO 63031 USA, or browse CompuServe in the News/Reviews/Shows message section.

Everglade has opened its first shop. Located in **Inverness**, it's open from 9.30am to 7pm Monday to Friday, and 10am to 4pm Saturday and Sunday. For more details, contact Everglade on ☎ 01463 240168.

Sprite Works, the sprite generator for GFA Basic 3 (or later), has just been updated by Terry King of Ninth Wave Software. As well as generating sprites, it can be configured to play samples. *Sprite Works* comes with two complete games, plus a few demos and partially completed games, and costs just £7. It's available from all good PD libraries, or direct from the author himself at: 172 Spencers Croft, Harlow, Essex, CM18 6JR. You can also get an optional A4 manual with an extra disk for another £8. Look out for the full review next month.

Arriving just too late for review this month are two new ST games. **The Ultimate Arena** (Steam, BP 100, F-68220, Hegenheim, France) runs on 1MByte STEs and Falcons, while **STarioland** (Top Byte Software, ☎ 01622 763056) runs on all STs. We'll be reviewing them both next month.

HiSoft highlights

HiSoft is planning three releases for the summer of 1995, all major updates of current products. The first, *Twist 3* is nearly upon us.

The original release of this powerful and easy-to-use database (*Twist 2*) scored 83% back in issue 65. It has now received a major update, and is already available in Germany. HiSoft held back the UK version, though, because it wanted to make further additions to the program.

Twist 3 is a fully relational database - which means you can link two separate data-

only records beginning with 'S', then Press [M] to restrict the display to records beginning 'Sm', and so on.

The update is *SpeedoGDOS*-compatible and supports full *GDOS* graphics printing, so if you've got *SpeedoGDOS 5* (*STF* 63, 73%), you can use TrueType and Postscript fonts in your database.

Twist 3 runs on all Ataris with 1MByte of RAM and will cost £89.95. There will also be an attractive upgrade option for users of the previous version. It is looking good for a July release, so look out for a review and Cover Disk demo soon.

Also due for release in July or August are *Papyrus Gold 4*, a major rewrite of HiSoft's superb document processor (*STF* 63, 91%), and *Diamond Edge 2*, an upgraded version of its hard drive utility.

Papyrus 4 has many new features (see *News, STF 71*), including colour picture support and enhanced display functions. The price is unconfirmed as yet, but will probably be around £130.

Diamond Edge 2 is com-

Product Title	Company	Type	Label	Score
Shadow of the Beast 2	Psygnosis	Game	69	88
Signal and Image Proc...	John Wiley	Book	70	88
Space Quest	Kixx XL	Game	68	38
Spellbound	Psygnosis	Game	68	48
Stardust	Daze	Game	68	94
STE Power CD vol. 1	COMPO	CD-ROM	66	89
STE TDS 2.86	Upgrade Shop	TDS upgrade	70	88
STDS Extra 3	Top Byte	Programming	69	77
SubStation	Unique Develops	Game	72	75
Super League Manager	Audisogenic	Game	72	85

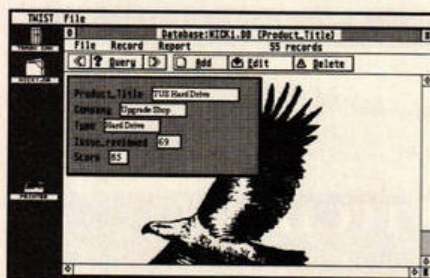
To search for that elusive entry, just type in the first few letters of the word you're looking for.

patible with all Ataris and multi-tasking systems. It enables you to diagnose, repair, recover and edit data from any drive, making it an invaluable aid in avoiding catastrophic data loss. *Diamond Edge 2* will cost just £49.95 - a lot less than you'd pay on other platforms. Sounds like another good reason for sticking with your Atari.

Zip drives

HiSoft will also be distributing the Zip Drive, a new form of data storage which enables you to store 25 or 100MByte of files on a single floppy-sized disk. The drive itself is small enough to be carried around in your rucksack or briefcase. At just £179, it sounds like a real bargain.

Contact HiSoft on ☎ 01525 718181 for more details about all these products.

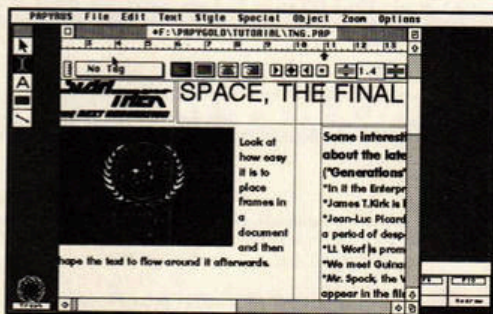


Twist 3 was coded on an Apple Macintosh running *MagiCMac*. Consequently, the time it took to compile the program was cut from two hours to five minutes.

bases together if they have at least one common field. For example, a list of PD reviews and Cover Disk software could be combined by program name, enabling you to find out when a Cover Disk program was reviewed.

Twist and shout

The built-in text editor has been fully updated and now supports *Papyrus*-like paragraph tabs. Changes have also been made to the indexing: in 'List' mode you can locate records quickly by entering the word you're looking for. For example, to search for a Smith, choose the surname field and press [S] to display



Papyrus Gold was quick enough in its original incarnation, but a complete re-write looks set to make it even quicker.

Atari news

Atari UK's marketing manager, Darryl Still, recently commented on the report that Atari Benelux (based in the Netherlands) had been closed down. Closure would leave Atari UK as the company's only administrative presence in Europe.

Explaining that the Benelux office had been a warehousing operation for the past few years, with Atari UK handling administrative details, Mr Still said that the

Benelux operation will continue. The building will be contracted out rather than owned, but many of the core Benelux staff will remain in their current positions. This move follows the final distribution of all STs and Falcons from the Benelux office.

The move is consistent with Atari's recent cutbacks following the decision to concentrate all their resources on the Jaguar (see News, STF 72 for more details).



Atari's decision to concentrate on the Jaguar means that C-Lab is the now only company distributing new Falcons.

Twilight

JCA Europe has obtained the UK distribution rights for the *Twilight* screen-saver. It runs in any resolution on all Ataris (except TOS 1.0 machines), but works best with 1MByte of RAM and a hard drive.

Twilight enables you to display a pattern or animated image (chosen from a selection of modules) while your ST is inactive. A demo appears on this month's Subscribers' Wonder Disk; the full version

is available for £29.95. JCA Europe is on ☎ 01734 452416.



Brush up on your butterflies with Twilight.

Alien Thing

Power PD has gained exclusive distribution rights to 999 Software's *Alien Thing*. The game will run on all 1MByte Ataris, but is enhanced on the STE and Falcon. Extra levels are being added, and it will retail for £19.99. *Alien Thing* should be available as this issue hits the streets.

ST FORMAT readers ordering the game before 31st July can get it for the reduced price of just £14.99 (including

post and packing). Contact Power PD on ☎ 01622 763056.



ST FORMAT readers can get Alien Thing for the bargain price of just £14.99.

PD AND SHAREWARE NEWS

MUNSIE NOW Disk-a-zine

INSIDE this issue:

- Screen shots from our latest games
- Information about our new releases
- Hints and codes
- Seawolf scrapped, released as freeware
- MUNSIE on the WORLD WIDE WEB
- Where VCD can register our software
- Comments from Dave Munsie
- Future development
- And more goodies inside...

COMMENTS
RETRODIA
EDUAROFF
FRANTICK
SEAWOLF
CHOPFLTR
REGASPAC
INTERNET
HINTS
RISC

One of the many pages of information in Dave Munsie's disk magazine, which can be downloaded from his World Wide Web site.

Fans of **Dave Munsie** will be pleased to know that he's got his own Web page, enabling you to find out about all his current projects while you're downloading the latest shareware versions of his games. You can also register any of his games from here, and even download a disk magazine packed with information about his recent and forthcoming releases. Drool over *Choplifter '95* - it looks a stormer - or check out our reviews of *Square Off* and *Seawolf* on page 51 of this issue.

To access Dave's Web page, just point your browser at <http://www.ladfw.net/munsie/index.html>. If you haven't found out what this 'Internet fuss' is all about yet, turn to page 54 for a review of the latest incarnation of *AtariNOS - Oasis*, no less.

Merlin PD has become the official UK registration source for *ProTracker ST 2.1*. The program has been tweaked to make it

Falcon-compatible, and you can register through Merlin for just £8. Merlin is also distributing *SubStation*, *Team*, *Obsession* and other recent ST and Falcon releases. Contact Merlin on ☎ 01452 770133.

Parents with young children will be glad to know that **ASCllium PD** is distributing three disks of educational software compiled by Impact UK. These include *From Picts to Parliament*, *1900s USA*, *Chunnel* (a French-English word game), *Big Top Type*, *Spider Spell*, *Magic Spell* and *Kid Puzzle*, among a host of others. Aimed at the younger child, these compilations look like the ideal introduction to education on the ST. ASCllium can be contacted on ☎ 0181 550 5572, and its disks start from as little as £1.25 each. For a complete list of PD libraries, see the Directory on page 73.



From Picts to Parliament takes you on a detailed tour of British history since prehistoric times. There are maps, text and occasional pictures.

SUMMER FUN



Due in late summer, the Falcon version of *Obsession* features re-worked graphics and multi-ball. Take an exclusive peek at the Aquatic Adventure table, and prepare to be gobsmacked.

TOTAL FOOTIE SHOCKER

August 1 is an important date for *Team* and *Super League Manager* fanatics, because that's when Future Publishing, home of *ST FORMAT* no less, launches *Total Football*, the

magazine that will cover all things to do with the round ball game loved by millions. But will it feature Birmingham City, we ask ourselves? (No, you ask yourself - Karen.)

More addresses

The *Dynamic Address* database from Martin Balmer - now Kestrel Multimedia Applications - has been updated. It has a completely new interface, and now runs in any Atari resolution except low res. It will receive commercial distribution when it is completed later this year.

Dynamic Address 2.0a is fully relational - it enables you to link documents and files together in a similar manner to HiSoft's *Twist*. Other features include the ability to sort each entry as it is entered, and to split an address book into different sections. You can also create different user statuses to make the book accessible to a number of people, but in

varying degrees (so, for example, your children could access family numbers, but not your business contacts).

Also in the program's favour is its non-modal interface, which enables you to have more than one dialog open. *Dynamic Address 2.0a* also has its own Desktop, designed to make file manipulation straightforward.

Dynamic Address 2.0a will run on all Ataris (1MByte and a hard drive are recommended). The price has yet to be fixed - watch this space for developments, or write to Kestrel Multimedia Applications, 9 Manor Close, Thanington, Canterbury, Kent CT1 3XA.

Game bloopers

The Gremlins have been at it again (look out for *Gremlins 3: Invasion of ST FORMAT*). A couple of mistakes crept into last month's issue, but we're only too happy to put the record straight.

First up, *SubStation*. The retail price is £24.95, not £19.95 as incorrectly stated last issue. We also failed to mention that it's fully compatible with the Jaguar PowerPad. Finally, both Merlin PD and JCA Europe are distributing the game in the UK. Call Merlin on ☎ 01452 770133 and JCA Europe on ☎ 01734 452416.

Secondly, we said that you can't switch off

the music in *Team*. Ralph Lovesy of Impact informs us that new versions of *Team* do include an option to turn it off - just press [M]. Meanwhile, Ralph is hard at work on the Falcon version, and you can order *Team* for the STE directly from Impact. Just call ☎ 01280 850450 - you won't regret it!



Nick and his mate Steven have quite a contest going in *Team*. As football games go, it's the best by far.

NET NEWS

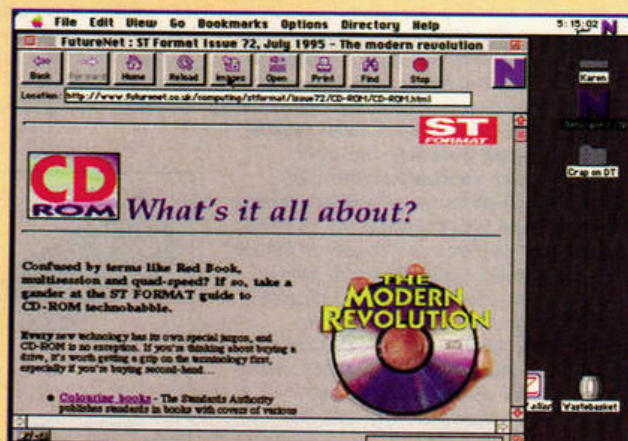
DanSoft BBS is a bulletin board dedicated to all things Atari. It runs from 9pm until midnight every day and supports speeds of up to 19,200bps. Call Dansoft on ☎ 01524 732 957.

Look out for Future Publishing's new bi-monthly, *The .net Directory*. It's a guide to what's where on the Net, and will be divided into eight subsections to help you find what you're looking for.

The .net Directory will also contain reviews and features, and some of the material will be available on CD-ROM and as part of *.net's* Web site. Issue one will be out on 29th July, but it remains to be seen whether the A-ha, Queen, Roxette and Birmingham City Web pages will get a mention.

ST FORMAT's Web pages have expanded dramatically over the last month, with many features from recent issues finding their way on to the Information Supersomething. These include the recent Mix It Up feature, as well as a sneak preview of the latest issue. You might also be interested to discover that the team members will be getting their own pages to wax lyrical on what makes them tick. Just point your browser at <http://www.futurenet.co.uk/>, where you can also find the latest worldwide news and sports updates.

We reported that **Darryl Still** appeared on Ad.Lib BBS last month clarifying Atari's position with regard to the ST, TT and Falcon. In actual fact, the message originated from FolkStone BBS (☎ 01303 249306) and not Ad.Lib (although it also appeared on the latter). Our apologies for the mis-credit.



The *ST FORMAT* Web page as seen on an Apple Mac - you can download the images with your Atari, but as yet there's no way to see them 'live'.

DREDD JUDGED

HAS HOLLYWOOD
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EuroNews...

Euro guru Don Maple brings you the latest installment in the 'MagiC Mac for PowerMacs' saga, and takes a first look at the updated *Arabesque 2* graphics program.

Arabesque 2: new and improved

German company No Software is one of the major software developers still bringing new products to the Atari market. Its latest release, *Arabesque 2*,

has been completely rewritten, and is only loosely based on the original program.

Arabesque 2 is a vector drawing package, which means that the images are

stored as objects rather than collections of pixels. These objects are mathematical representations of image components. Vector graph-

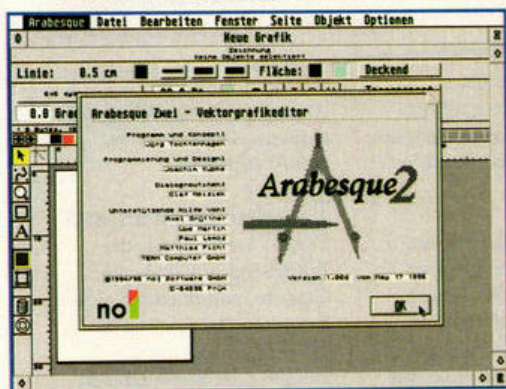
ics make for smaller files, and images can be created in layers, which can be removed or added at will. The main advantage, however, is that vector graphics do not suffer quality loss when enlarged. Instead, the mathematical formulae representing the objects are used to calculate the optimum result for any given resolution, be that on screen or on the printer.

Arabesque 2 runs in colour on all available graphic cards, and colour images can even be processed on a monochrome monitor. It runs under GEM and is compatible with all multitasking GEM extensions, including *MultiTOS*, *MagiC*

and the new *MagiC Mac*.

Arabesque 2 also uses a swap file, so even images bigger than the available memory can be processed. *GDOS* is fully supported, so using *SpeedoGDOS 5*, for example, opens up the full range of scalable fonts. Finally, a wide array of different file formats can be both imported and exported for an easy exchange of files with *Windows* and Macintosh programs.

Arabesque 2 sells in Germany for DM249 (about £115). An upgrade from any older version costs DM99 (about £45). Watch out for more details next month.



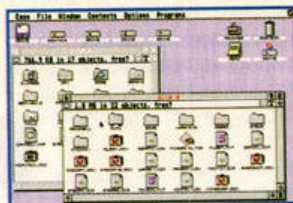
A brand new – and completely rewritten – *Arabesque 2* is now available in Germany.

The power of MagiC Mac

MagiC Mac is the GEM-compatible operating system which runs on Motorola 68030- and 68040-based Macs. When we spoke to Thomas Tempelman (the author of *MagiC Mac*) at the recent CeBit show, he considered the chances of *MagiC Mac* for the PowerMac to be minimal (News, STF 72).

This was mainly because such a port would require

massive support from Apple. That support would include many low level – that is, hard-



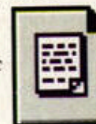
MagiC Mac running under Mac OS (System 7.5.1) on an LC475.

ware – details which Apple itself did not know at the time, and has never liked to reveal.

However, rumour has it that Thomas is currently in the States at Apple headquarters, being instructed in the finer points of PowerMac hacking. This has not been officially confirmed but, if it is true, it would be a giant boost for *MagiC Mac* fans. They were, until now, limited to the

680x0-based Macs which Apple will be discontinuing before the year is out.

One caveat though: the so-called PowerPC 'standard' is in a state of flux (some would say, mess), and Apple alone plans three incompatible PowerMac ranges. Nevertheless, at least the *MagiC Mac* development is continuing.



PD OF THE MONTH

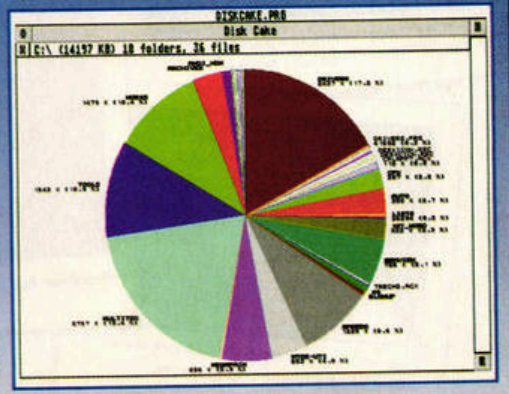
Disk Cake is an ingenious way to view the contents of any directory or disk. Normally, a Desktop window shows file sizes, but not directory sizes. *Disk Cake* shows both, and goes a step further by displaying disk or directory contents as a colourful pie chart. The size of a directory segment corresponds to the combined size of all files within that directory, giving you a much better overview.

Clicking on any directory segment shows the contents of that directory, while clicking on a segment representing a file shows the info for that file. Finally, segments representing directories are coloured with solid colours while

file segments are shaded. The program can also run as an Accessory, which makes it very easy to use, and is completely resolution independent.

Although there is no explicit request for money, a small donation from regular users is certainly in order. The latest version of *Disk Cake* is 1.9, and the author, Christoph Zwerschke, can be reached at the following address: Am Steinfeld 4, 59379 Selm-Cappenberg, Germany.

Disk Cake shows the contents of your disk as a pie chart. Segments correspond to file and directory sizes.



The Spotlight Show

Last month *ST FORMAT* tripped the light fantastic at Gasteiner's Spotlight Show. Happy snapper Peter Crush took notes.

There hasn't really been a major Atari event since Compo's show (Christmas '94), so everyone was looking forward to the Spotlight Show. Organised by Gasteiner and supported by *ST FORMAT*, it was held in the Novatel Hotel in West London, just a stone's throw from the 'scenic' Hammersmith flyover.

An estimated 3,800 Atari and Amiga users attended the show, which was held on Saturday 10 and Sunday 11 June 1995. There were 21 stands with a good range of items on sale or on show. *ST FORMAT* also had a booth, staffed by celebrities from the writing team. Well, Karen Levell, Nick Peers, Andy Curtis and Frank Charlton,

actually, plus a mysterious blond girl who was eating fish and chips.

The show had a family feel about it, not only because Vas Shah of Gasteiner had roped in all his family to help, but also because the Atari fraternity is a bit like a big friendly family nowadays. There was no hard sell anywhere, and the word had obviously gone out that PCs were banned. Everyone had time to talk and answer queries – you don't get that at most of the big computer shows.

It was a shame that not all the major ST dealers and suppliers could make it – System Solutions wasn't present, and there wasn't an



An estimated 3,800 Atari and Amiga users flocked to Gasteiner's Spotlight Show.

outlet for FaST Club products. However, all the other major people were there, so let's look round the show.

Gasteiner

For those who like messing around with circuit boards, the Gasteiner stand was an Aladdin's cave of bits and pieces. A pile of motherboards

and mice was picked over by the soldering iron fraternity, and there were plenty of finished products, too. The

Gasteiner lads entered into jolly banter with everybody, and nobody took things too seriously. Even the non-appearance of the Eagle, the German TT

clone, didn't cause too much distress. Gasteiner is on ☎ 0181 3456000.

Digital Awareness

Digital Awareness is the British end of C-Lab, the German manufacturer of the Falcon Mk2 (reviewed in *STF 72*). One of the new Falcons was demonstrating multitrack direct-to-disk sequencing with *Cubase Audio* software. Associated hardware accessories, such as the MM1 multiple-output MIDI interface, were also on show. A remote controller pad for the ST or Falcon called The K..AT took Andy Curtis' fancy – watch out for a review when

The Atari fraternity is a bit like a big friendly family nowadays



Frank Charlton was modelling a groovy black .net t-shirt (£8.95, call 01225 822511 to order).



Titan was demonstrating its video hardware and software by grabbing and 'editing' images.



Gasteiner had plenty of bits and boards for the soldering iron brigade.



Editor Karen Levell was hawkling magazines to all and sundry, including programmer Martyn Dryden.



Vas Shah had roped in all his family – including Sharmila Shah (right), who manages Gasteiner.

he's finished playing.

At over £3,500, you don't expect to sell many sequencing systems at a non-music show, but Digital Awareness was pleased with reactions and its products are available from many specialised music shops throughout the country. Digital Awareness is on ☎ 0181 5988081.

Titan Designs

Titan's Exposé video hardware and software for The Falcon attracted a lot of attention. Hook up a video camera to the Exposé box of tricks and you can grab colour stills in real time using *APEX Media*. You can then apply all kinds of morphing, animation and painting effects.

There was always a crowd enjoying the distortion of some poor innocent passerby's face into a cartoon character. It's all dead easy to do, and it's fast too, due to DSP machine code processing. For more details, contact Titan on ☎ 0121 4141630.

Compo

Neal O'nions has lots of major products in the pipeline, but wasn't showing anything that he couldn't actually sell, which isn't a bad idea. There was certainly no shortage of stuff, although all the Falcons were gone by Saturday lunchtime. Bargains included *Hyperchart* for under a tenner, and big stocks of ST games were changing hands for a couple of quid. All the regular Compo lines like *That's Write*, *Geneva* and *NeoDesk* were also

available. Contact Compo on ☎ 01487 773582.

16/32 Systems

16/32 isn't just a PD library – it supplies a large range of commercial stuff, too, including games. New releases, including *Steel Talons* for the Falcon (see page 38), were on sale at special show prices.

A new software product called *SARA* enables you to use PC CD-ROMs on your ST or Falcon (for the lowdown on the CD revolution, see *STF* 72). Other products on sale or being previewed included

inkjet refills and *Gemulator 4*, an emulator system for running ST software on PCs. For more information, contact 16/32 Systems on ☎ 01634 710788.

ST FORMAT

The intrepid *ST FORMAT* team spent the two days liaising with their delighted readers. Karen received plaudits, chatted up all the blokes and flogged back issues, while Nick flitted about with the team's lottery tickets. Northerners Andy and Frank were on hand to answer questions, and you could even take out Elite membership of Ad.Lib, *ST FORMAT*'s official and most excellent BBS.

HiSoft

The most professional-looking stand belonged to HiSoft. Although some of its new releases weren't quite ready, a colourful newsletter gave details of the

Squirrel hard drives, CD-ROM drive and Zip drive – a new interchangeable cartridge data storage device. The new versions of *Papyrus* and *Twist* are still not ready, but all existing software was on show.

The stand was packed with customers waving their wallets about, proving that there is still plenty of life in the more serious end of the ST market. Contact HiSoft on ☎ 01525 718181.

Power Computing

Power's usual range of ST products was on sale, but there were no new releases. However, products like their Power Drives and *Blitz* are universally used, and Power

continues to support the ST market. Call ☎ 01234 273000 for more information.

Simon Smith

Simon was offering a range of Falcon music products, including a complete set-up comprising a 14MByte Falcon Mk1, *Cubase Audio 2.03*, FA8 Expander, FDI digital interface, MOR MIDI expander and 1GByte hard drive for a mere £2,700.

Simon is no mean artist, and his self-penned and produced CD *Entitled* was voted 'Album of the Year 1994' by *The Big Issue* magazine – certainly a good advert for using your ST or Falcon to produce professional recordings and packaging. Call ☎ 0171 3856989 for details.

Merlin

Merlin was selling its range of software, which includes both PD software and commercial games. New from Unique Developments of Sweden was *SubStation*, which was in evidence on many monitors around the show (if you'd like to try it, a demo version appeared on the *STF* 72 Cover Disk). *Team* and *Obsession* were also available. Call ☎ 01452 770133 for details.

Golden Image

Another branch of the Gasteiner empire, Golden Image is run by Vas' big brother, Navin Shah. His range includes floppy drives, scanners and clocks, and show bargains included a hand scanner with *Touch-Up 2.5* software for just £119. Golden Image is on ☎ 0181 9009291.

Last bus home

Apart from the major players there were plenty of other exhibitors, many offering floppy disks, storage boxes, printer consumables, leads, connectors and sundry items of the usual computer show variety. All in all, The Spotlight '95 Show was well worth going to, and credit should be given to Gasteiner for investing so much time and money in this event. The organisers were so pleased that the next show has already been announced. Here's a date for your diary, then: Winter Spotlight '95, 25 and 26 November 1995, The Novatel Hotel, Hammersmith, London. See you there. *stf*



The smart-looking HiSoft stand was busy all through the show.



Andy Curtis demonstrated *Cubase Score 2* and answered questions. Nick was impressed.



Digital Awareness was demonstrating the G-Lab Falcon.



Compo had a wide range of products on display, and there were plenty of bargains.



Karen was completely in control of the *ST FORMAT* stand at all times.

Down in the Dungeon



Nick Peers discusses the Atari scene with Al Horton, owner-manager of the Chicago-based Computer Dungeon.

To get hold of the Computer Dungeon's excellent 24-page catalogue, just send Al your name and address.



Long-standing Atari enthusiast Al Horton runs The Computer Dungeon, a Chicago-based store dedicated to all things Atari.

stf: How long have you been associated with Atari products?

Al: I purchased an Atari 2600 system in the '70s and enjoyed it beyond measure. About 1981 a good friend of mine introduced me to the Atari 800 home computer and it was love at first sight.



This is Al Horton, who's in charge of The Computer Dungeon. The Mini Eggs are a red herring, by the way.

stf: What do you use your ST for?

Al: I'm a avid gamer and I play a tremendous amount of games. I also do a lot of word processing, desktop publishing, and BBSing on my ST.

stf: When, and why, did you start up the Computer Dungeon?

Al: It was a spur of the moment thing. In late 1991 my good friend Tom Denison and I were talking about how tired we were of having to make a four-hour round trip drive to the closest Atari dealer. We were upset that we didn't have a local dealer and threw suggestions back and forth about what we thought would make a good dealership. Tom finally said that I should open an Atari support business.

stf: Why did you resurrect the business recently?

Al: The Computer Dungeon was a great success almost as soon as it opened in 1991. Things were going great when, about six months after we opened, my wife became ill and was diagnosed with cancer. We kept the Dungeon

open as we fought the disease, but in 1992 she passed away.

Trying to hold a job and raise a family became a total job so I closed the Dungeon and sold all our computers and inventory. We moved to Illinois and for the next two and a half years didn't do much computing of any kind. Then in the fall of 1994 my three boys and I returned to our former home to visit friends. I went to visit Tom and spent seven hours in his computer room playing with his new Falcon.

Driving back to Illinois from Tom's house I realised how much I missed having an Atari computer and decided to buy one. The memories of The Dungeon came back and I remembered how much fun I had had running it and the friendships I had made. I called Tom and he advised me to re-open the shop.

stf: What do you see as the future for the ST and Falcon?

Al: Even without the support of Atari, I think the ST and

Falcon will be around for many, many, years.

How much commercial and shareware support it gets will depend on how active the Atari users are. If they buy the new products that are released and register their shareware titles I'm positive new software and hardware items will continue to appear.

stf: Have you been asked enough questions yet?

Al: No way, I'm just getting warmed up! Let me tell you about the many nights I stayed up typing Basic programs into my Atari 800XL from *Antic* and *Analog* magazines...

THE COMPUTER DUNGEON

What's on offer in The Dungeon's impressive 24-page catalogue? Al Horton shows us around.

"We offer many services. We buy and sell new and used software and hardware, as well as Jaguar and Lynx cartridges. We have a catalogue of PD/shareware programs - the customer selects just the programs they want and we put them on a disk for them.

"We offer a monthly newsletter, 'The Dungeon Sojourn' that comes with a Disk of

the Month much like *ST FORMAT* does. We offer a full line of accessories like mice, joysticks, extender cables, the ICD Catbox and much more. And we're working on adding a support BBS and Atari 8-bit support to our list of services."

You can contact Al at the Computer Dungeon in a number of ways. Firstly you can write to 1440 Spencer Avenue, Berkley, Illinois 60163, USA. Secondly, you can e-mail Al via the Internet at Isis@Interaccess.com. Thirdly, The Computer Dungeon will soon have its own

BBS with the latest news and PD software for downloading.

Al is keen to hear from anyone in Europe and says, "I would be more than happy to make special arrangements with any *ST FORMAT* reader with regards to purchasing, selling, or trading software titles. I know the cost of shipping overseas can be a problem, but helping each other out is what makes using an Atari so much fun. I've found that the Atari user is one of the most (if not the most) friendly and supportive users on any format."



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Citizen 120D/LS10/LS10/249	2.85	2.70	2.50	2.30	Star LC10/20/100	2.29	2.14	1.94	1.84
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Epson LQ100	4.10	3.95	3.75	3.55	Star LC24-10/200	2.86	2.71	2.51	2.31
Epson LQ400/500/800/850	3.45	3.30	3.10	2.90	Taxan Kaga KP810/815/910/915	3.14	2.99	2.79	2.59
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Lights, video, music...

What connects the ST with hundreds of Jean Michel Jarre fans? *ST FORMAT* reveals all in this exclusive backstage report...



Sunday, 23 April was a big day for the nation's Jean Michel Jarre fans: it was the date of their second annual convention, *Rendez-vous '95*. And while Jarre himself was unable to attend, his absence didn't stop the event's organisers from pulling out all the stops. Dave Knight and the staff of *Revolution* (the Jarre fanzine) produced a show worthy of the French maestro himself.

Aside from the inevitable

exhibitions, merchandising, video shows and fancy dress competitions that characterise any large-scale meeting of fans, *Rendez-vous '95* also featured the spectacular *Systeme Concert*. What's

more, like their hero, the team used STs to run the whole thing. Oh, all right, so there were six live musicians, but the five STFMs

did the donkey work.

Sound...

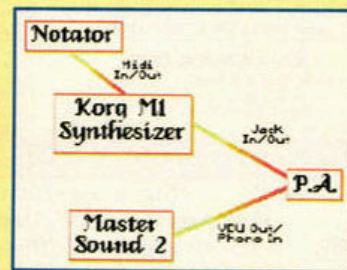
Two of the STFMs helped out in the music department. The

The hard drive was bursting with animations and psychedelic fractals

first ran the MIDI sequencer *Notator* (£199, from Sound Technology, ☎ 01462 480000) to supplement the live rendition of each track – often using sequences laid down in advance using issue 39's Cover Disk offering, *Pro 12*. *Notator* served a double purpose, though, as its score was displayed on the screen, providing yet another visual for the impressive displays.

The second STFM, with 2.5MByte of memory on board, ran *Master Sound 2* to produce the sample sequences for the show. These sequences, built around a recitation by a young French mademoiselle, even included a futuristic shopping list.

The samples were produced on a PC, which meant they needed to be converted before they could be used



This diagram shows how the two STFMs helping out in the sound department were linked together at the *Systeme Concert*.

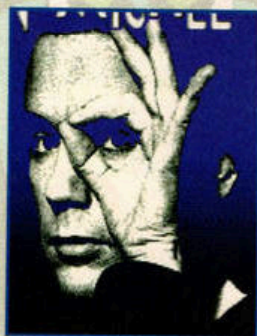
with *Master Sound*. Enter *Sound Lab*, issue 69's Cover Disk star. Crackles were edited out and the samples were speeded up, giving a more childlike ambience.

Once converted, the samples were loaded into *Master Sound* and sequenced together to provide an introduction for each song. As the STFM has no audio out sockets, Dave's

Who is MONSIEUR JARRE?

Jean Michel Jarre is a French composer and performer who has had several hits, most notably with the single *Oxygene 4*. He has also been responsible for some record-breaking live concerts: 1.3 million turned up for his ground-breaking laser show in Houston, and 2.5 million crowded the streets of Paris in 1990 for his *La Defense* concert. His first tour of Europe, in 1993, cost \$20,000,000.

Later this year Jarre will be undertaking a World tour on behalf of UNESCO, for whom he is a goodwill ambassador. The first date of the tour, 14 July 1995 (Bastille day) in Paris, was announced as we went to press.



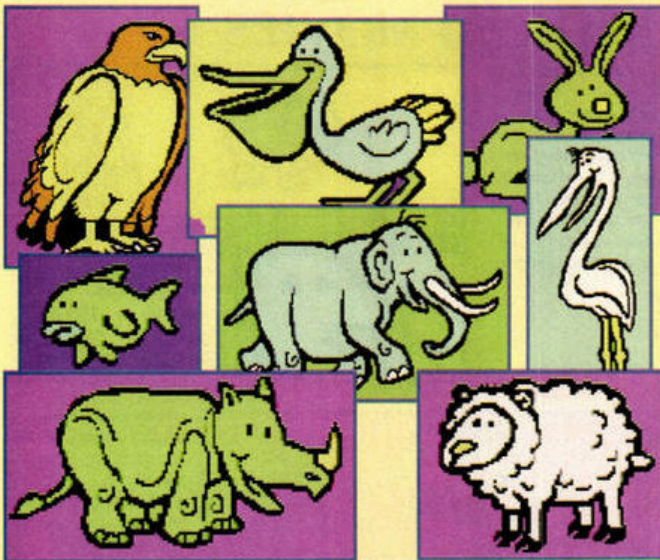
Jean Michel Jarre uses Ataris in the creation of his music.

Jean Michel Jarre boasts a long association with STs. He used an ST and fractal-music generator for *Waiting for Cousteau*, an 'ambient' 47-minute track that was created as background music to accompany a French exhibition of his work in 1989. He has also made heavy use of *Notator* – look out for the Mega-STs in his *La Defense* video from 1990.

Jarre's last CD, *Chronologie*, was recorded with the help of a special instrument called the *Digi-Sequencer*, which is built around a 1040ST. This was constructed with the help of Michel Geiss, who has worked with Jarre since 1978, and Atari France.



Try carrying this beatbox through the streets – but don't bring it anywhere near us.



A selection of the colourful cartoony animals used in one of the show's animations. They were jazzed up in *Deluxe Paint*, then incorporated into a *STOS* program.

team used a special lead to connects the computer directly to the main PA, via the monitor port (see *STF 62*, page 78, for more details).

...and vision

The stunning visual backdrop was provided by the other three *STFM*s, with the help of some familiar programs: *Deluxe Paint*, *STOS* and *Trip-A-Tron*. The *ST*s were first linked together through the JVC KMD-600 video mixer (hire one from Piccadilly

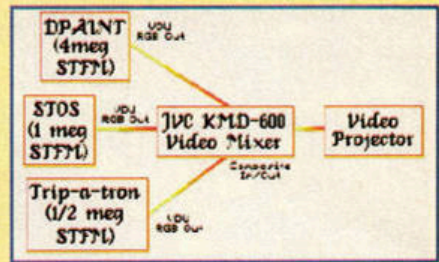
Audio-Visual Systems, ☎ 0121 2362102, for £141 per day), which made it easy to wipe and fade between all the sources. This is a relatively painless process – once you've got the equipment, all you need to get a pin-sharp picture on the video projector is a set of leads (again, see *STF 62*) to connect the *ST*s to the composite inputs on the mixer.

The first *STFM*, with a beefy 4MByte of RAM, a 234MByte hard drive and a copy of *Deluxe Paint*, was

under the control of Dave Knight. The hard drive was bursting with various animations of men running and jumping, and psychedelic fractals, created by Dave over the preceding six months. As he needed to store all these sequences in memory for live mixing, the 4MByte RAM upgrade proved essential.

Of course, as Dave himself remarks, "In hindsight I shouldn't have done this live, I should've laid down all the sequences on video tape. The way I did it, I was constantly having to load in the next song's animations as soon as the previous song ended, which took up to a minute to do. Thankfully, the other two *ST*s were running different visuals and the video mixer was able to fade out my signal while loading took place."

The second *STFM*,

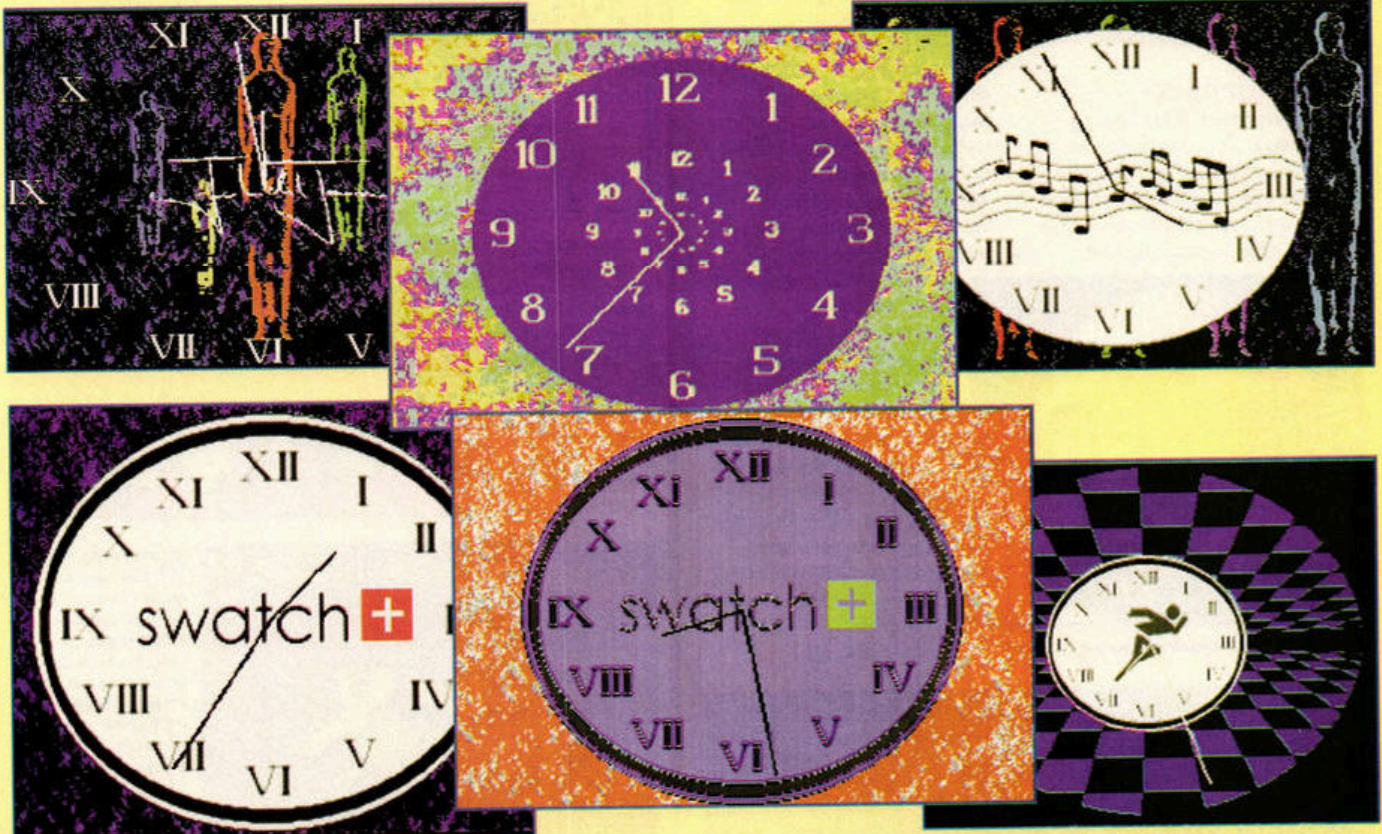


The *STFM*s that produced the visual accompaniment to *Systeme*'s music were linked together through a versatile video mixer before reaching the main projector.

with a more humble 1MByte of RAM, ran a selection of compiled *STOS* programs (subscribers will find one of them on this month's *Wonder Disk*). Each program echoed the beat and structure of the track it accompanied as it cut between various *Degas* low-res pictures. For example, in one



Just one of the many attractively drawn images on show at *Systeme*.



Another *STOS* program concentrated on watches – not that anyone was watching the clock, of course.



Clever use of palette switching helps accentuate this image's rippling contours. Crumbs, that sounded a bit professional, didn't it? (Shut up Nick - Karen)

program trees, mountains and other scenery were shown in rotation with the *Jurassic Park* logo, before cutting to a sequence of dinosaurs. As the music's pace increased, so too did the rate of rotation.

As with the samples, the pictures were brought into the electronic world via a PC. They were scanned as 24-bit images (16.7 million colours), then imported on to the ST with *PicSwitch 0.7*, where they were converted and dithered down to just 16 colours. Surprisingly, Dave was able to do this without losing too much detail. And while it might seem that the STE with its 4,096-colour palette or the Falcon its 256-colour display would be the more obvious choices, Dave disagrees.

Challenges

"I personally think having limits makes you more creative, and besides there's no way I could have had so many images and animations on the PC. There is nothing like



Systeme in "stock raytacing animation" shocker!

STOS on the PC - how could you write something so flexible in DOS or Windows? I would need a gigabyte of disk space at least... and a second mortgage!"

Swirly bits

The final STFM, which had just 512K of memory, ran *Trip-A-Tron*. According to Dave, you can't run a light show without Jeff Minter's groundbreaking light synthesizer. Unfortunately, the memory constraints meant the team could only use it for swirly effects, like rotating a starfield. However, it did add a degree of depth to the *Deluxe Paint* animations and *STOS* stills when they were mixed on the projector screen.

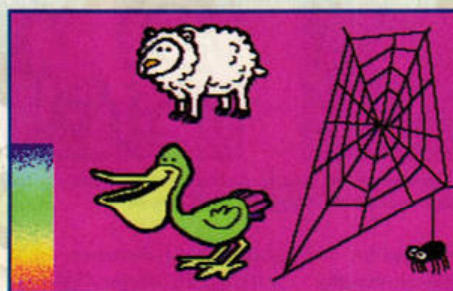
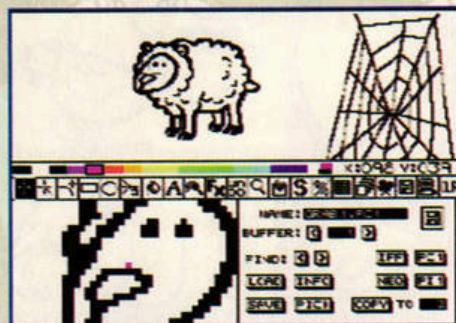
The STs stood up very well to the rigours of the show. Dave admits that his machine crashed once in *Deluxe Paint*, "but the other two compensated admirably, and with the fast SCSI drive I was up and running within 30 seconds with the crowd of fans blissfully unaware of the whole thing."

So there you have it. A whole show supported and produced on the ST - even the musical excerpts from Jarre's albums that were playing through the stands owe thanks to the old faithful. It's obvious from the *Rendez-vous* convention that the ST is still very much in demand for graphics as well as sound work. *stf*

Another Jarre day is planned for 1996. To get involved, contact Tony Dines at 122 Moor Lane, Cranham, Upminster, Essex, RM14 1ET or e-mail him at md94daf@brunel.ac.uk. That's also the address for *Revolution*, the fanzine for Jean Michel Jarre fans.

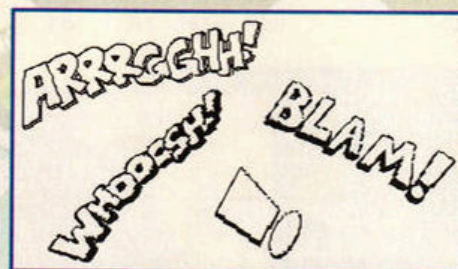
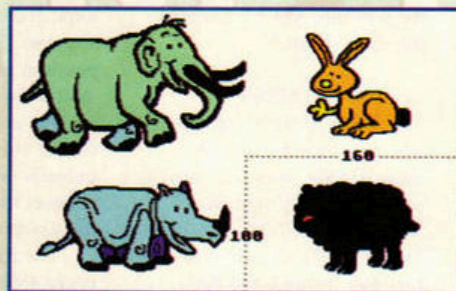
MAKING MOVIES

1 *Deluxe Paint* is used for editing the monochrome images (from an old PD clip-art disk) that are to be included in the animation. Note that the palette has been selected for its psychedelic qualities!



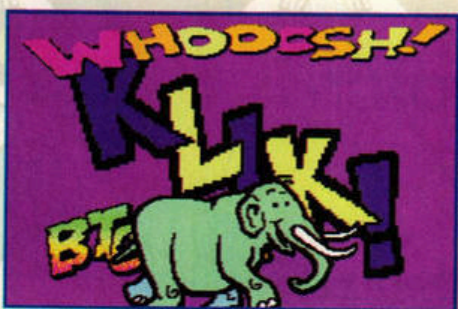
2 Ah! Look what a lick of paint (and a purple background) can do. The spider's newly highlighted eyes stand out well, and the gradient fill in the corner will be used later on.

3 The majority of the cartoon images fit perfectly into the 160x100 blocks required by the *STOS* program, so the images are split into quarter screens ready for inclusion.



4 With animations, the background is all important. The music's psychedelic nature brings *Batman* to mind, so the over-emphasised 'blam' and 'aarrgghh' are sketched out - Adam West has a lot to answer for.

5 When filled in, the backgrounds really come into their element - notice the gradient fill for 'Honk!' An attempt to cycle the palette fails because, although it looks great in the background, it clashes with the animated sprites.



6 And finally, the result. The cartoon animals jump up and down on the screen over a constantly changing backdrop. Subscribers can take a peek at the finished product themselves - it's on this month's Wonder Disk.

Want to make music with your Atari ST?



Get **FUTURE
MUSIC** 

**Exclusive! 3 of the best budget sequencers for the
Atari ST on test in our head-to-head.**

Mag plus audio and CD-ROM all for just £3.95
July issue out 27th June. From the publishers of



MagiCMac update

MagiC, the alternative operating system for the ST, is now available for Apple Macs. Clive Parker sneaks a peek at the pre-release version.

When Atari decided to stop developing TOS-based computers after devoting almost ten years to the ST, TT and Falcon, the Germans came to the rescue. GeSoft's Eagle, C-Lab's Falcon Mk2 and Application Systems Heidelberg's *MagiCMac* for the Apple Macintosh all offer an upgrade path for ST users wishing to move to a more powerful TOS-based machine.

All systems go

MagiC is a multitasking operating system for the ST. TOS is completely bypassed when it is running – your programs run in the *MagiC* environment.

MagiCMac is the *MagiC* multitasking operating system, re-developed for the

Apple Macintosh. It looks and feels the same as *MagiC* on the ST, and operates in the same way. It's important to remember that *MagiCMac* is not an ST emulator, it's an operating system for the Mac that can run TOS software.

Requirements

MagiCMac requires an Apple Macintosh with a 68030 or 68040 processor, System 7.0 or higher and at least 8MByte of RAM. While 8MByte sounds quite a lot of memory from an Atari point of view, it's quite a common configuration for the Mac. *MagiCMac* does not work with virtual memory or RAM doubler software – the Mac must have 8MByte of physical RAM installed.

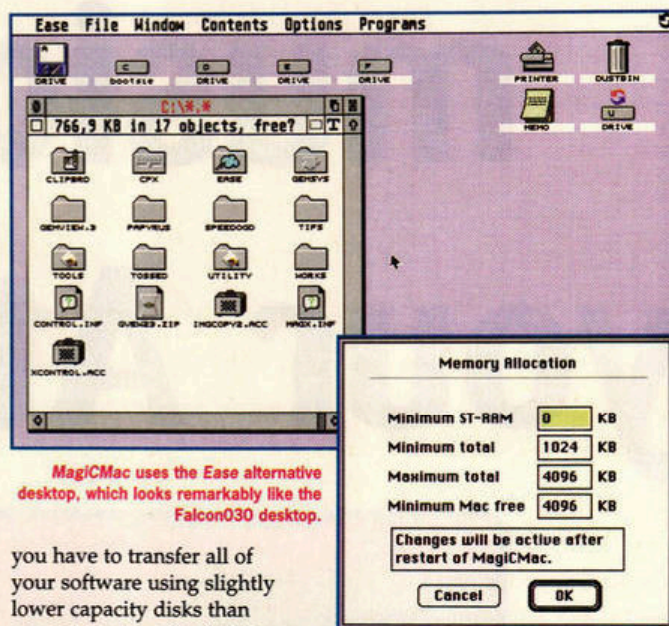
MagiCMac is an operating system for the Mac that runs TOS software

MagiCMac also needs a minimum of 2MByte of hard disk space to install itself. At the moment, *MagiCMac* does not run on the PowerMac (see this month's Euro News on page 13 for the latest developments).

Data transfer

MagiCMac reads floppy disks formatted to the standard Atari 9-sector, 80-track format, MS-DOS 720K disks and MS-DOS 1.44MByte disks. At the moment, it does not recognise extended formats like the 10-sector, 80-track disk we use for the *ST FORMAT* Cover Disks, although this may be rectified in later releases. Consequently

D:	Drive D	<input checked="" type="checkbox"/>	L:	AHDI-Partition	<input type="checkbox"/>
E:	AHDI-Partition	<input type="checkbox"/>	M:	AHDI-Partition	<input type="checkbox"/>
F:	AHDI-Partition	<input type="checkbox"/>	N:	AHDI-Partition	<input type="checkbox"/>
G:	AHDI-Partition	<input type="checkbox"/>	O:	AHDI-Partition	<input type="checkbox"/>



MagiCMac uses the *Ease* alternative desktop, which looks remarkably like the Falcon030 desktop.

you have to transfer all of your software using slightly lower capacity disks than normal – unless you have a high density 1.44MByte drive for your ST setup. This is a bit of a nuisance if you have made the 10-sector format your standard formatting method.

You can use ST hard drives connected to the SCSI port of the Macintosh, but the hard drive must be formatted using the Atari AHDI formatting software. If the drive has been formatted using any other software, such as the ICD hard

drive utilities, *MagiCMac* is unable to read it.

MagiCMac works very well indeed.

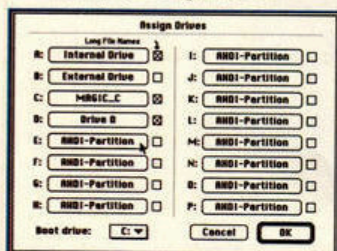
I've transferred a huge amount of software from my vast hoard of ST disks, and most of

You can only assign as much memory as is physically present in the Mac you are using.

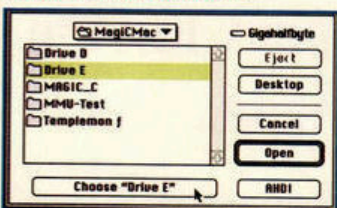
it works without any problems. Of course, PD and shareware programs that don't work under TOS 2.06 and *MagiC* on the ST also fail under *MagiCMac* on the Mac, but this is to be expected.

All correctly-written TOS software runs without problems. We'll be including a table of compatible software in the review next month, but so far we've had no difficulty using *Calamus*, *Calamus SL*, *SpeedoGDOS*, *Papyrus Gold* and *Atari Works* under *MagiCMac*.

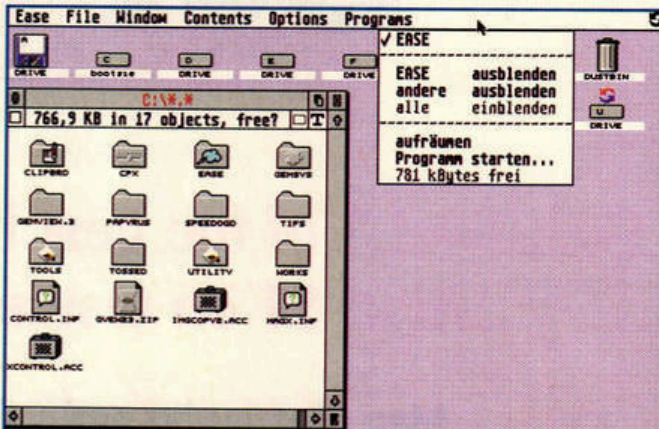
MagiCMac is available from System Solutions (☎ 01753 832212) for £149. We'll be reviewing *MagiCMac* 1.1.0 in depth in next month's *ST FORMAT*. stf



Assign up to 16 drives under *MagiCMac*. All TOS software used under *MagiCMac* is stored in normal MacOS folders.



It's dead easy to choose a Mac folder to use as a 'virtual' ST hard drive.



In *MagiCMac* 1.0.5, some parts of the *Ease* alternative desktop are still in German.

NeoN 3D preview

Create your own spaceships, *Babylon 5*-style, with this exciting new package. Frank Charlton raytraces and renders with glee.

If you've seen *Babylon 5* on television, you'll know how breathtaking raytraced computer graphics can be. We've seen lots of raytracing and rendering systems over the years, but most have failed to provide everything you need. Team Computer and Compo hope to change all that with *NeoN 3D*, a fully-featured object design, rendering and animation system.

NeoN runs on the Falcon030, and requires a maths co-processor. It needs a bare minimum of 4MByte of RAM, although 14MByte would be more realistic. You'll need a large hard drive, too.

Babylon and on...

NeoN has four basic parts: a toolkit for tweaking images, a converter for importing designs and objects in other raytracer formats, an object modeller for creating individual objects, and a scene editor for creating and rendering the final frames.

NeoN's Object designer looks like *CAD-3D* dragged into the '90s – a four-window system offers views of your objects from the top, front and side, as well as an isometric 3D display in colour. The views can be switched to suit your preferences, and any window can be expanded to full size for a clearer view.

The Matter system enables you to define an object's colour, transparency and reflectivity. However, the real power lies in *NeoN*'s ability to create textures for real-world surfaces like stone or rippling water. TrueColour TGA images can also be mapped on to the surface of an object, so creating textures like wood, marble or cloth is as simple as finding a good image.

Although other systems offer image-mapping, *NeoN* produced the fastest and

***NeoN* produced the fastest and smoothest results we've seen so far**

smoothest results we've yet seen on an Atari. We mapped a leopardskin pattern across a sphere, and the results were very convincing. Even when rendering small preview images, the image-maps were silky smooth, with none of the distortion sometimes encountered in other programs.

The Scene designer looks very similar to the other modules, forgoing GEM menus in favour of easy-to-use buttons. Clicking a button replaces the bar with a new one, and the bars are often nested several levels deep. Despite this, the interface is uncluttered and simple to use.

Creating a scene involves loading and positioning objects, then choosing the position and type of cameras and lighting. Light source design is excellent, and much less of a pain than most other systems. Defining the colour and intensity of a light is as simple as adjusting some sliders.

NeoN can render images using either full raytracing or a faster but less lifelike Z-Buffer method. Z-Buffering is very fast – small quarter-screen images using the simplest settings are generated in less than two minutes.

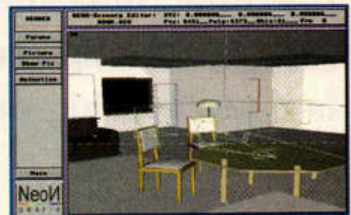
Rendering full-scale pictures seems very speedy too, although we didn't have time to give it a really thorough going-over.

In living colour

Rendering is fully user-definable and you can specify the size and colour resolution – either 256 colours or



Image mapping at its best, with wall paintings and textured surfaces aplenty.



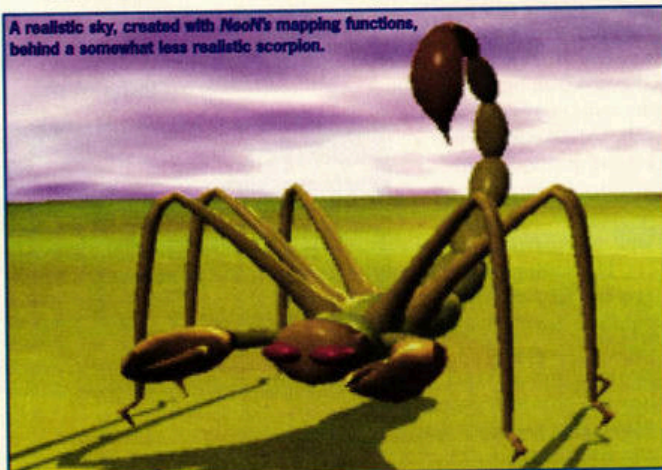
The Scene designer in full flow, with the 3D view expanded to full size.

TrueColour. Individual effects like transparency and shadows can be switched off to speed up render times, and *NeoN* can also anti-alias images before saving to disk.

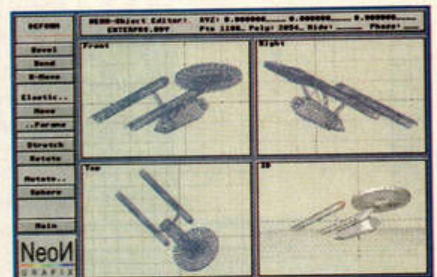
Rendered images can be nested several on the screen as they're built up, but toggling any advanced functions like anti-alias means you're forced to save to disk instead.

Rendered images are of excellent quality, as you can see from the examples on this page. These are only small 320x200 pictures too, so you can imagine the increased clarity at larger sizes. We didn't have time to do more than dabble with the animation facilities, but if the demo supplied – the *NeoN* logo over a superbly animated rippling lake – is anything to go by, it's an impressive system.

Compo is currently translating manuals – the software is already fully anglicised – but couldn't give us a release date or price. We'll bring you more news as we get it. *stf*



A realistic sky, created with *NeoN*'s mapping functions, behind a somewhat less realistic scorpion.



NeoN's intuitive Object designer at work on the USS Enterprise. Gosh, another gratuitous *Star Trek* shot.

Cubase Score 2

Cubase Score has been rewritten, upgraded, polished and packed up ready for sale. Is it worth a big wodge of dosh?

The latest version of *Cubase Score ST* represents a significant reworking of the famous *Cubase* sequencing package. There has been a fundamental rewrite of the score editing and printout functions, and there are many minor additions and cosmetic changes. These, together with some other refinements, represent Steinberg's attempt to keep *Cubase* as the premier ST sequencing package.

Installation

The installation program assumes, as always, that it is being run from your internal floppy drive, and setting the path and folder for the files to be installed is less than elegant. Once this is done, just click on the Install button and follow the on-screen prompts. The HP DeskJet printer driver is installed by default, but you can select your optimum driver instead.

The two manuals are of a good standard, and quite readable, although several of the new features were only described in text files on the program disk.

What's new?

When you launch the program it will look very much like *Cubase 3.1* - the layout and screen display are virtually identical. Don't be fooled by first impressions, though.

Probably the first changes you will notice are the alterations to the file selector used to open new arrangements. The new file selector enables you to delete and copy files as well as selecting them. If you don't already use a replacement file selector, this one is sure to please.

The selection of parts has

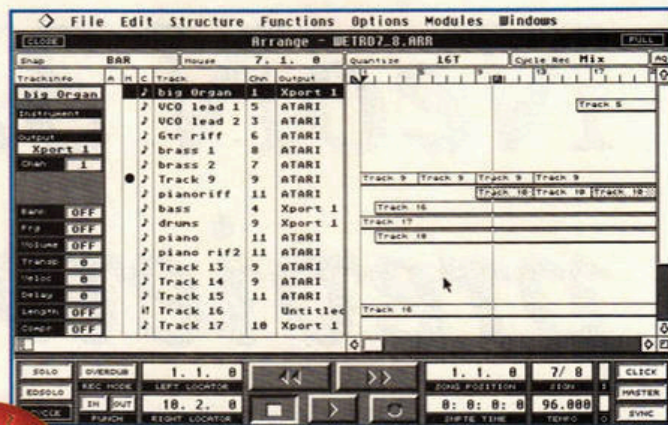
It has features everywhere you look and, behind them, more features

been made easier. It has always been possible to Select all, but now you can do some more creative selecting - for example, Invert deselects everything that is selected and selects everything else. You can also select

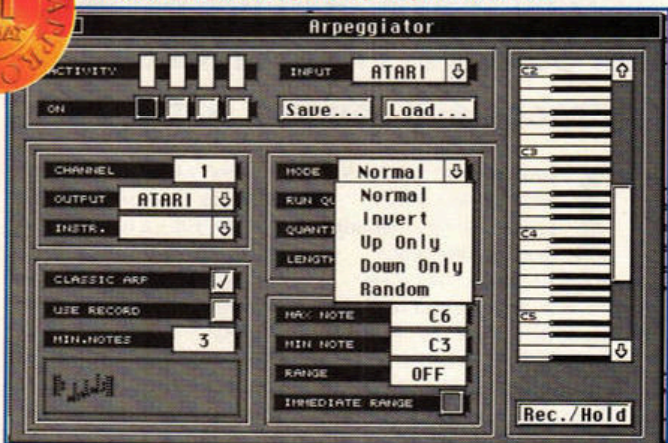
the parts outside the locator range, or within it.

The number of tracks in each arrange window has been increased to 128, and Steinberg claims that the window scrolling and screen updates have been speeded up. The arrange window will also scroll along, even if you are working in one of the other MIDI editors. By careful window sizing you can keep an eye on the context of a part as well as the detail.

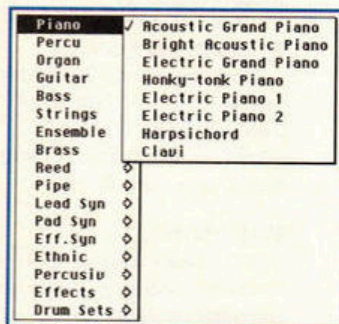
The setting up of grooves for Grooves quantize has changed to enable you to import rhythms from the List, Key or Drum edit pages. All you have to do is play and edit the groove you



Cubase Score 2 ST offers features aplenty coupled with a DTP-quality Score edit page, all for just £59 if you're upgrading from version 3.1.



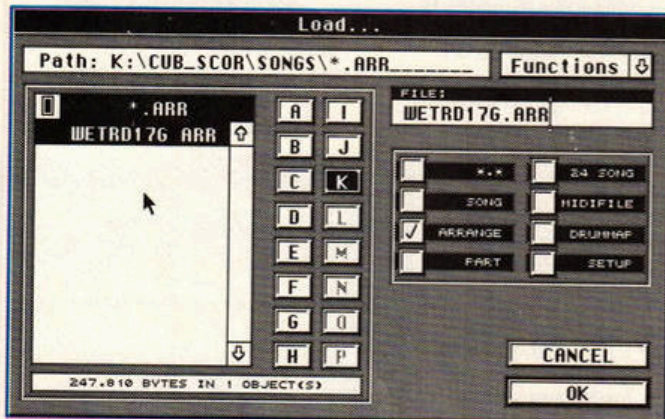
Just play in a chord and let Cubase do the rest. Standard and Customised arpeggios can be created and pasted into your arrangements.



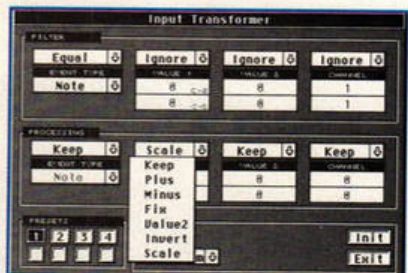
You can now work quickly and effectively with GM MIDI modules. Simply select the sound you need and Cubase sets up the module and the track.

want to use, then import it as a groove quantize value. Another bonus is that your groove is not limited in length.

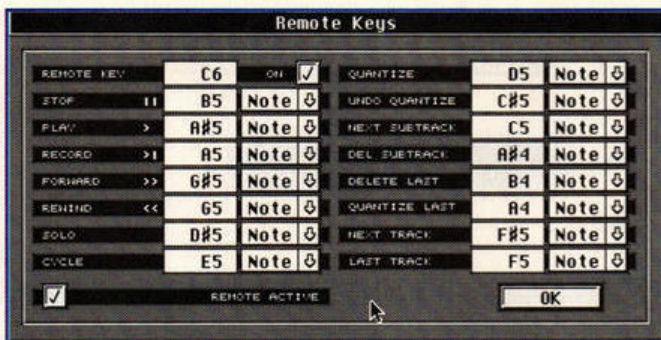
Steinberg has included an



Steinberg has included an upgraded file selector, enabling you to copy, move and delete files as well as select them. File selection has also been made easier.



Cubase can translate your MIDI input in real time. This flexible box enables you to transpose, change velocity, and so on as you input the notes.



If you are not near the computer, Cubase can be operated on a simple level from your MIDI keyboard. Simply assign a key note and set up the functions as required.

arpeggio generator for your added delight. Simply play in a chord and have it arpeggiated to your heart's content. We are told that there are many very serious and important uses for this feature. Regrettably, we cannot bring any to mind, but it was great fun to play with.

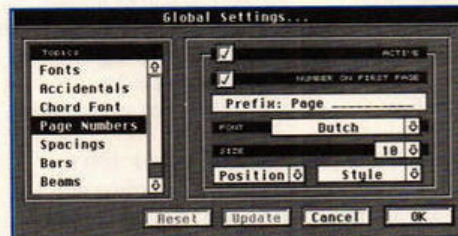
Steinberg has reacted to the increasing importance of GM compatibility with a GM menu module. The module assumes that your sequencer is hooked up to a GM MIDI-compatible module, and you simply select the sounds you wish to work with from a pop-up menu. Cubase then sets the program change number and the channel number, where necessary. Writing General MIDI files from within Cubase has never been so quick and easy.

Score editing

There are so many changes in the Score edit section that Steinberg found it necessary to write a substantial book about them. We certainly haven't got that kind of space here, but the screen grabs on this page should give you a flavour of what's on offer.

Even in Cubase 3.1 the Score editor was slow, cum-

bersome and ultimately a little unstable. All that has changed in version 2: re-written from the ground up, Cubase's Score editor has truly come of age. It presents itself as a fully-fledged score design and printout package, with a world-beating MIDI sequencer thrown in for good measure.



Setting up the Score Edit Page is vital. Here you can specify all the basic parameters to ensure the smooth running of your score writing sessions.

In action

In use, Cubase is still very much the same program you may have grown to know and trust – the changes don't intrude on the way you work. However, if you want to get the best value from your upgrade, spend some time experimenting with all the new functions.

Many people avoid Groove quantize because of its complexity. However, the new system is incredibly easy to

use. Simply play in your favourite drum pattern and use it as a quantize value. Complex rhythms can now be pulled into shape at the click of a button.

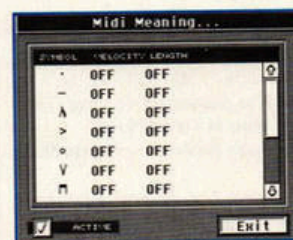
The new selection controls are great, but would be more usable if they had keyboard shortcuts. If you want to be sure, however, that you have selected everything between the two locator points, it's well worth a mouse ride up to the Edit menu. We didn't find the screen updates significantly faster than in the previous version – if there are speed increases, they are not dramatic ones.

The Score editor is, at first sight, a little daunting. It has features everywhere you look and, behind them, more features. If you want to use it effectively, there is no alternative to reading through the manual, which is set out as a tutorial. It is particularly well written and gradually takes you through the range of powerful options available.

The printing of scores on a standard HP DeskJet 520 is still very slow – in our tests it took over five minutes to print one page. The print quality, however, is excellent.

Compatibility

Steinberg seems to have left the compatibility problems of the past behind. Cubase is now quite happy running alongside NVDI, and runs without difficulty on accelerated machines, even machines fitted with the super-fast PAK 030 upgrade. The program is also fully Falcon-compatible, making it suitable for Falcon owners who do not wish to take the Cubase Audio option.



Composers use these symbols to show musicians how to interpret their work. Score 2 enables you to give them MIDI meanings, so that the sequencer can follow the instructions.

EH, WHAT?

If you're wondering how Cubase Score 2 can follow version 3.1, the answer is that when the product changed from Cubase to Cubase Score, Steinberg started again at 1. Simple, eh?

Quids in

Even without the enhancements to the Score edit page, this upgrade is well worth having because of the many improvements to the basic engine of the sequencer. Once the new Score edit page is added into the equation, this upgrade becomes a necessity.

Steinberg has generously kept the upgrade costs as low as possible. A reasonably-priced upgrade path has even been provided from Cubase 2, making this new version easily within the reach of all registered Cubase users. *stf*

ANDY CURTIS



This dialog enables you to edit every tiny detail of the music staff.

Product: Cubase Score 2 ST
Price: £449 (Upgrades from v3.1 £59, from v2 £149)
Contact: Harman Audio
Tel: 0181 2075050
Min system: All STs, 1MByte required (2MByte recommended)



Score edit is the jewel in the crown of Score 2, and its features are too numerous to mention. Write your own score or convert a MIDI sequence – it's all in the manual.

Cubase Score 2 ST

HIGHS

- Superb score editor
- Modular design, packed with features
- Reasonably-priced upgrade paths

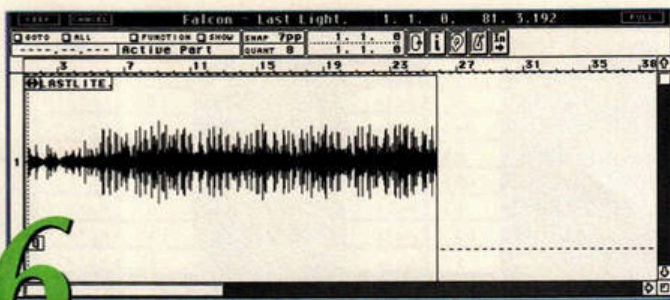
LOWS

- Poor documentation for some new features

In short...

Another feature-packed winner from Steinberg – upgrade, you won't regret it. **90%**

Cubase Audio 16



The Cubase Audio sample editor is characteristically simple to use. Cut, copy, paste and delete samples or sample segments quickly and easily.

Cubase Audio 16 combines a digital recorder, mixing desk, effects unit and sequencer – but can it make music?



Digital audio recording has been little more than a pipe dream for home musicians until now. With the advent of *Cubase Audio 16*, professional direct-to-disk (D2D) recording in the home studio becomes a reality.

Getting started

Once installed on to your hard drive via the easy install program, *Cubase Audio 16* is ready to go. The Falcon Digital Interface (FDI, see the External hardware panel) needs to be connected before the power is switched on, otherwise it will not be correctly initialised.

Cubase runs in two-colour mode on the Falcon and

presents you with the standard *Cubase* arrange screen. Apart from the audio drop-down menu, the display and features are exactly the same as for *Cubase Score 2 ST*.

To make a recording, create an empty track by double-clicking in the track list. Next, you must change the track's type to audio. From here on *Cubase* sees the channel number as an audio channel number, not a MIDI channel number. If you hit record at this point, *Cubase* prompts you for a filename and location for storing the sample. After this you can record your audio section.

If the input is from the FDI you have no control over the incoming volume level, except to change it at source. The quality of the recorded sound at 48KHz and 44.1KHz is excellent. Playback

through the FDI was completely neutral and uncoloured.

If you call up the mixer map from a mixer channel, it is possible to control and record volume, pan and effects changes in real time. If you are using the digital effects from within *Cubase* you will be limited to eight audio tracks as the DSP (Digital Signal Processor) has to be shared between applications.

Remember this

As well as recording direct to hard disk, you can record samples into your Falcon's memory for extra flexibility (or if you have run out of room on your drive). You can also load or record short samples into memory for use as virtual instruments. They can then be played from your MIDI keyboard.

Playback through the FDI was completely neutral and uncoloured

Brace yourself...

If you have an Atari Falcon, bear the following in mind:

- You really need 14MByte of memory for sampling and disk write caching.
- A SCSI hard drive is required. A 500Mbyte drive will give you around 12 minutes of eight-track recording.
- You will need a DAT machine with optical or coaxial digital inputs and outputs.



The FDI links the Falcon's DSP output with your DAT machine. Use it for dropping your mix on to DAT and for backing up your tracks.

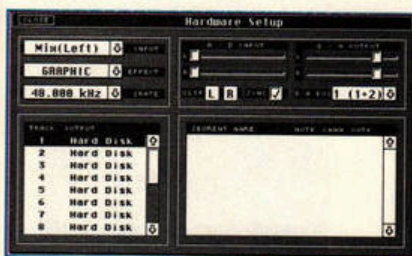


If you want to work through a conventional mixer, the FA8 provides eight individual analogue outputs.

C-Lab Falcon owners need not worry about all this, as your machine is guaranteed *Cubase Audio*-compatible.

If you like working in the *Cubase* environment and need to use hard disk-based audio in your music, it's impossible to find a more cost-effective solution. The C-Lab Falcon (reviewed in *STF 72*) coupled with *Cubase Audio 16* is a polished and professional tool for audio recording and MIDI sequencing. *stf*

ANDY CURTIS



Use this dialog box to set the input source of your audio. The FDI is your best bet for sound quality.

EXTERNAL HARDWARE

The FDI: The Falcon Digital Interface (FDI) provides a digital link between your Falcon and your DAT machine. This link can be utilised in three main ways:

- ◆ As a means of delivering high quality audio to your computer via a DAT machine.
- ◆ For mix-down of finished songs. The only analogue conversion then done is by your DAT machine.

◆ For backing up songs from hard drive. The FDI can be used to pass data to your DAT machine via a back-up program (which is provided).

The FA8: The Falcon Analogue 8 is simply eight digital-to-analogue converters which intercept the digital signal and provide eight analogue outputs. The signal then progresses to the FDI as usual.

Product: Cubase Audio 16
Price: £799 (£1,089 with FDI)
Contact: Harman Audio
Tel: 0181 2075050
Min system: C-Lab Falcon Mk2, or Atari Falcon with FDI, 4MByte required, 14MByte recommended

Cubase Audio 16

HIGHS

- Excellent sound quality
- Ease of use

LOWS

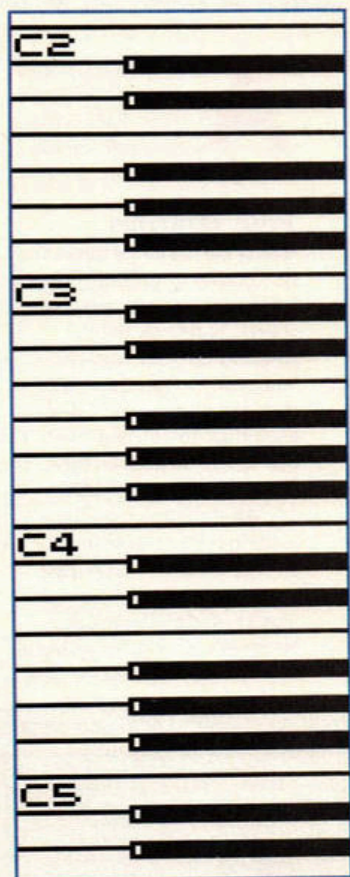
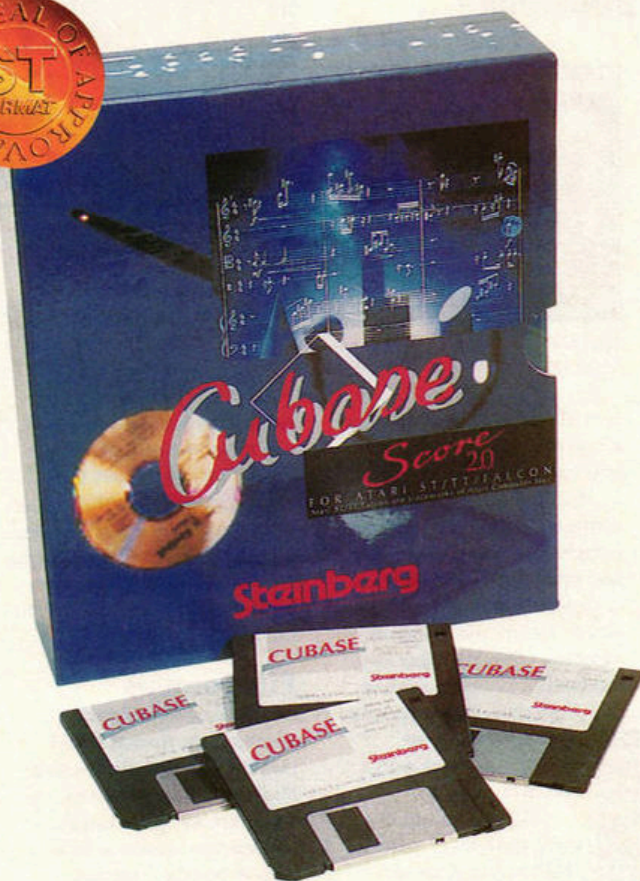
- Mono display
- Slow screen updates

In short...

Cubase Audio delivers professional digital recording power to the home studio. **90%**

Win a copy of Cubase Score 2!

Win a superb sequencing package, worth £449, in this month's exciting competition. All you have to do is create an original tune on your ST...



Steinberg has long had a reputation for quality musical software, and the latest update to its Cubase sequencing package only strengthens its position. Of course, quality software doesn't come cheap, and if you're not part of the Cubase upgrade chain, the £449 price tag can be a little daunting. What could be better than, than a chance to win your very own copy of this ST FORMAT Gold-winning sequencing package?

Yep, thanks to Harman Audio, the UK distributors of all Steinberg products, we

have a full version of Cubase Score 2 to give away. All you have to do is create an original MIDI composition of three minutes or less, save it on to a floppy in MIDI file format and post it off to:

Sounds of Success
ST FORMAT
Future Publishing
30 Monmouth St
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MUSiCOM 2

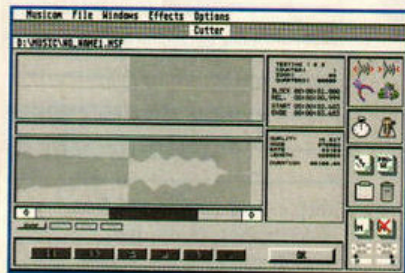
The Falcon030 has the technology to record stunning digital sound, but does it have the software? We take a look at one possibility...

Aimed at the home user, *MUSiCOM 2* offers Falcon owners a full sound-editing suite at a low price.

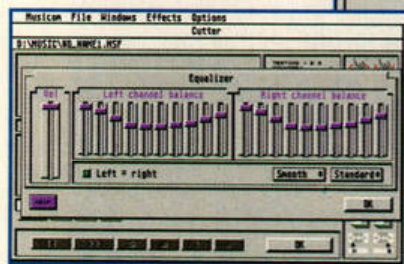
Free samples

Unlike professional direct-to-disk (D2D) recording systems, *MUSiCOM* doesn't need any special partitions to be installed on your hard drive. Samples are stored as standard (albeit very big) GEMDOS files, so you can copy and delete them from the Desktop. As with all D2D packages though, you'll need a relatively fast hard drive.

MUSiCOM can't handle the compressed DVS sample format, so drive usage also becomes an issue. Sampling at the top rate of 49kHz in stereo



The Cutter window is the main sound editing suite. Here you can zoom into individual sections and manipulate them as much as you like.



The excellent Stereo Equaliser can help transform a dodgy sample into a smart piece of digital audio.

will fill up your hard drive at a rate of knots, so make sure you have plenty of free space.

Sampling is easy – simply configure *MUSiCOM* for the sample rate you want to use, and open the Cutter Window. A panel of controls enables you to record and playback samples, while the Eject button loads a previous sample from disk. Hook up your audio source to the Falcon's minijack port, and away you go.

MUSiCOM offers a good peak-level meter, and you can dampen overloading signals in the software for audio sources without a hardware volume control. Left and right input channels can be boosted or cut, as can the output level.

SPECIAL EFFECTS

MUSiCOM 2 can apply a range of different effects to your samples:

Digital Delay: A fully configurable digital echo system – from slight reverb to that Mountainside echo.

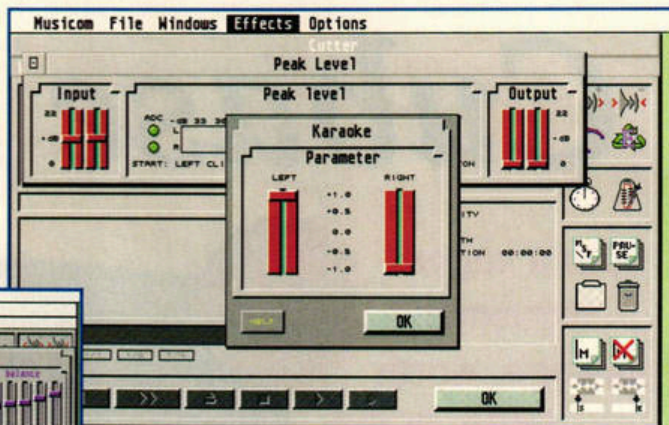
Graphic EQ: A full ten-channel stereo graphic equaliser which enables you to remove hiss and boost bass. The frequency ranges of the EQ sliders are determined by the rate of your sample.

Harmoniser: This function mixes pitch-shifted copies of your voice in real-time on top of the original

sound, so you can hear yourself sing in three-part harmony.

Flanger: That spacey 'wind tunnel' flanged effect found in '70s guitar music – a hard effect to describe. You have to hear it...

Karaoke: Hmm. Strip out the vocals so you can 'sing' along. A nice idea, but it relies on vocals being common to both channels while instruments are separated to left or right. The manual reckons that the routines work with 60 per cent of recorded music, but we had little success.



MUSiCOM's fully non-modal interface means you can switch between parameter dialogs without opening and closing them all the time.

There's also a Spectrum Analyser for examining the incoming sound.

Once you've recorded your sample, you can make use of the editing tools. Marking blocks is as simple as dragging the mouse over the required portion, and a smooth zoom lets you nip in for a closer look. It's easy to remove spurious clicks or edit out patches of silence.

File formats

Samples are stored in yet another new format – MSF (*MUSiCOM* Sample Format). However, marked blocks – or the entire sample – can be exported as standard AVR files. A word of warning, though – always keep your MSF sample, as *MUSiCOM* can't re-load AVR files.

A powerful re-sampler can convert existing samples to different playback rates, and it does a good job of it too. If you've got the drive space, sample at 49kHz and re-sample down later – you'll get a cleaner sound than you would sampling at the lower rate in the first place.

MUSiCOM 2 provides a full digital effects studio (see the Special effects panel). Effects can be applied 'on-the-fly' as you listen to the incoming sound, and you can tweak the effect parameters as you go for best results. Once a sample is in the can you can post-process it with any of the effects as well, but this alters the sample irretrievably. In general, the effects are great

fun, and the Harmoniser can produce some truly bizarre effects. With a little practice, the Graphic EQ is a very powerful tool, and it can clean up bad recordings no end.

MUSiCOM 2 is great fun – the ability to add effects to incoming audio without actually recording is a source of endless amusement. When compared to the old 8-bit mono sampling software available for the ST, it really shines, and it takes full advantage of the wonderful Falcon hardware hiding behind that innocuous jack socket. *stf*

FRANK CHARLTON

Product: MUSiCOM 2
Price: £79
Contact: Compo Software
Tel: 01487 773582
Min system: Falcon030 only, requires 4MByte and hard drive.

MUSi-COM 2

HIGHS

- Takes full advantage of the Falcon's built-in sound system
- Excellent effects

LOWS

- Can't reload other sample formats

In short...

Experiment with good quality D2D without going bankrupt – and have fun. **81%**

TrakCom

CD-quality music from your Falcon, without additional hardware? It's possible – and it's fun – with *TrakCom* from Compo Software.

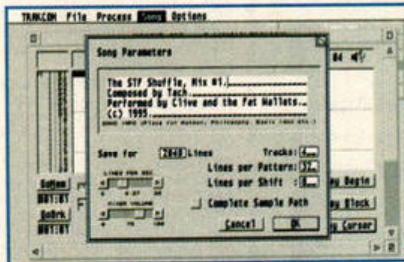
TrakCom, a sound-tracker specifically for the Falcon, is aimed at the home user who wants to have fun with music without lashing out for expensive MIDI kit. It takes full advantage of the advanced audio hardware and DSP lurking in the Falcon, and plays samples at up to 49kHz – better than CD quality.

Tracks of my tears

Soundtrackers work by building up songs using sampled instruments – drums, bass and so on. Using four or more independent 'channels' which are played back simultaneously, trackers can string these samples together to produce some excellent music.

TrakCom goes beyond the four-channel limitation imposed by *Quartet*, making up to eight tracks available. However, the number of channels you have to play with is linked to the sample playback rate. At 49kHz you can have six tracks; another two become available if you drop your sample rate to 25kHz. Instruments can still sound excellent at these lower rates, and speech or effects can be sampled at even lower rates without any noticeable loss of quality. Bear in mind too that high sampling rates eat into disk and memory space.

TrakCom can handle samples at either 8 or 16-bit reso-



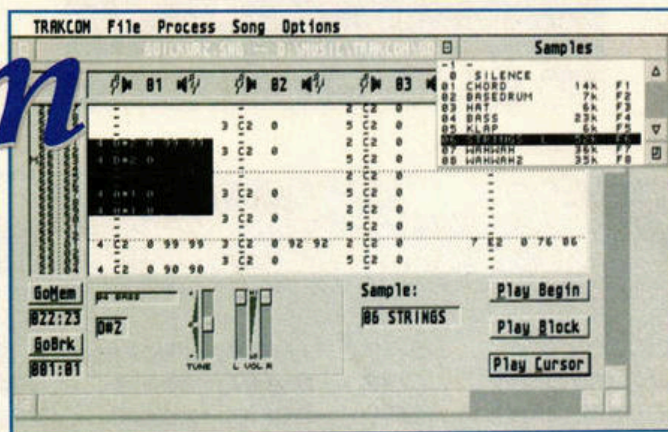
Songs can be annotated to help you remember what was on your mind while you were composing!

lution, although only in mono. Stereo samples are converted automatically as you load them, and very well, too.

Samples can be loaded and saved in the popular AVR format, and the compressed DVS type. DVS samples use 'lossy' compression, where the packed version isn't identical to the original – parts of the sound are 'averaged out', removing sections which the human ear can't really distinguish between. DVS compression cuts sample file sizes in half, and the loss of quality is negligible.

The Sample Manager displays all loaded sounds in a window, along with RAM used, and a function key assignment. When using DVS samples you'll notice that memory usage is roughly twice the disk space used, since *TrakCom* expands the compressed sample after loading. Double-clicking on an empty slot calls the file selector.

Double-clicking a resident sample opens *TrakCom*'s Sample Editor window. Here you can play with the sample, removing unwanted



The main Edit window is uncluttered and easy to follow, thankfully. All functions can be controlled with the mouse.

sections, increasing or lowering the volume or adding looping effects. A multi-level zoom feature makes those difficult edits easier to see.

You can also retune the pitch of an instrument to fit in with your other samples. The Falcon's keyboard will play the sound at various pitches, so you can test it out without actually altering your song.

If you can't find suitable samples – and there are lots of instrument disks available from PD libraries – you'll need to

record your own. *TrakCom* doesn't support this directly, but is complimented well by Compo's *MUSICOM 2* (reviewed opposite) in this respect, and there are several shareware Falcon samplers.

Notation station

When it comes to song creation, *TrakCom* is like most trackers (other than notation-based systems like *Quartet*). As per usual, it displays each channel in a separate column, with recorded notes shown as a numerical sequence representing pitch, sample number and so on.

An excellent Block Operations feature enables you to work with entire chunks of song – you can even transpose the pitch of a section. This frees up more time for creative work.

Unlike older trackers, *TrakCom* doesn't support accepted file formats like MOD. Another departure

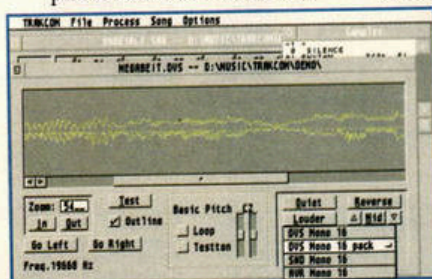
from that norm is that *TrakCom* doesn't embed the samples into the SNG files it saves, but stores each sample individually. The manual recommends keeping each song and its instruments in a separate folder on disk so *TrakCom* knows where to find them.

There's no dedicated player program provided for showing off your compositions in the PD arena, and no source code provided for writing your own, either. The manual does detail the SNG file format extensively though, so competent programmers may be able to write their own player routines.

TrakCom isn't aimed at the pro user, and it lacks facilities like MIDI sync. It is fun to use though, and with a little patience you can come up with some stirring stuff. *stf*

FRANK CHARLTON

Product: TrakCom 1.32
Price: £79
Contact: Compo Software
Tel: 01487 773582
Min system: Falcon030 only, 4MByte, hard drive recommended.



The Sample Editor, where you can fiddle with your sounds, alter the volume, or add looping effects.

VERDICT • SIF VERDICT • SIF VERDICT

TrakCom

HIGHS

- Superb sound quality
- Good block handling

LOWS

- Yet another Sound-tracker file format
- No standalone player to distribute with tunes

In short...

An eight-channel sound-tracker that's great fun for the home music hobbyist. **83%**

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Utilities:

- The SuperMon also has many utility functions available, including reset proof RAM disk, mouse trap function, time display, screen snapshot and 50/60Hz toggle.

- ULTIMATE RIPPER£25
- INC. SUPERMON£35



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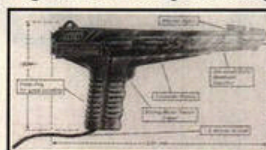
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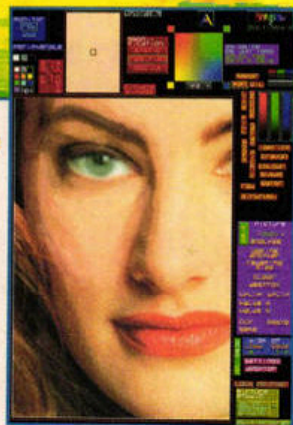
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Rainbow 2

The original *Rainbow* was a smash hit. Version 2, a Falcon-only multimedia extravaganza, looks set to do even better. We think it's great...



Some of the sample images are very effective. This one was created with the Oil paint tool, and has a much more natural look than traditional computer art.



We tried using oil paints over the top of a real 24-bit photograph. We've done around one eye, and it's starting to look like a painting.

When Addiction released *Rainbow*, it won critical acclaim from all sides. A low-cost TrueColour art package which didn't take all day to redraw the screen, it had some fine drawing tools, too. Everyone agreed it was the *Neochrome* or *Degas Elite* the Falcon needed – fun, powerful, and cheap.

So how can Addiction top the original? By adding multimedia: *Rainbow 2* takes all the things the Falcon is good at – TrueColour graphics, CD-quality sound – and wraps them up in a single package.

What, no manual?

Rainbow 2 arrives on a single high-density disk, along with a disturbingly thin 18-page manual. You'd expect a program with so much power to need something more like a telephone book, but Addiction's philosophy is very much a hands-on one: *Rainbow* provides all the help you'll need from within the program. A comprehensive help system can be called up at any time by clicking on the Tutorial button – just click on any item you need help with, and *Rainbow* runs through it with you. Every section of the program is explained in just the right level of detail, and it's all there on the screen. We

found very little need to go back to the documentation.

What, no GEM?

Rainbow dispenses with GEM, replacing it with Addiction's custom interface. Most people find it a bit odd to work with at first, and some positively hate it. It's unusual, to say the least, but it's fast. A standard 16MHz Falcon in TrueColour mode can be painfully apathetic, and *Rainbow's* 100 per cent assembly language interface makes you realise how slow GEM can be. In fact, *Rainbow's* faster than most 16-colour art packages I've seen running on the Falcon – quite a feat.

Rainbow 2's Desktop acts as a virtual window on to the screen. The size of the Desktop is easily changed without any data being lost, and it updates straight away. Work in progress is presented in a window in the centre of the screen, with the tools and icons surrounding it. Everything can be adjusted, and buttons and icons can be placed wherever you want.

Since the Desktop is bigger than the Falcon's screen, moving the mouse to the edges will automatically scroll

Natural media tools emulate oil paint, wax crayon and watercolour paint

the virtual screen. It's disconcerting to begin with, but you get used to it.

The original *Rainbow* introduced the 'studio' idea – it was composed of integrated parts, all freely switchable. *Rainbow 2* takes that idea forward with five studios which can interact with each other.

Picture studio

This is the basic art package. Here you can load or create TrueColour pictures of any size. As well as the standard drawing tools, *Rainbow 2* provides several natural media tools, which emulate the effect

produced by oil paint, wax crayon and watercolour paints.

The effect and size of every tool can be customised

by clicking the icon with the right mouse button. Watercolour provides a superb 'wash' effect, with the original colours still visible beneath

the new. The oil paint is stunningly effective, as some of the samples show – they don't look like computer art.

The natural tools can be difficult to use at first, but that's a testament as to how close to the real thing they are. With practice, you'll learn to blend colours with the pointer just as if you were applying oil paint on top of a still-wet shade. The days of scribbling with solid blocks of colour seem a long way away.

You can also paint with pure colour using RGB mode, and you can control exactly what's affected by the new shades. Again, some stunning effects can be produced. Our

HERE TABBY, TABBY...

The original *Rainbow* was the first third-party package to directly support the cheap and cheerful Tabby graphics tablet (£49.99 from 1st Computer Centre, ☎ 0113 2319444). Like the original, *Rainbow 2* will work with the Tabby directly – you don't need the original Tabby drivers to

be installed. Since *Rainbow's* drivers are faster and more efficient, response to pen movement is very good.

Using *Rainbow's* drawing tools with the Tabby really opens them up, and drawing on the tablet feels much more natural than working with the mouse.



With a full range of retouching tools, the Photo studio enables you to do things photographers can't even dream of at this price.

TRY IT OUT

A demo of *Rainbow 2* – fully functional except for saving – should be available from bulletin boards and PD Libraries by the time this issue hits the streets. Ring JCA, who should be able to let you have it at normal PD prices via Riverdene PDL.

static screen grabs really don't do the fluidity of the drawing tools justice.

Photo studio

Rainbow 2 comes with a full image-processing studio, too. Images loaded in the Picture studio are automatically transferred across when you switch studios.

As well as functions to smooth and anti-alias images, *Rainbow 2* offers some intriguing tools. You've no doubt seen the airbrushed pics of movie stars, taken through soft-filtered lenses. Well, you can do that to yourself in *Rainbow 2*. The Glamour filter will give the image a soft-focus look, blending and feathering the harsh lines between very different colours. A lens-flare effect is added to shades which are close to white, or very bright – for example, a light reflection on an eye will shine and sparkle in perfect anti-aliased

TrueColour. Other special effects include Embossing and Roughen.

If you don't want to process an entire image, you can cut out the section you want to work with. It's dumped into a buffer and treated as a new image. Once you've worked with it, selecting Paste back will pop the clip back on to the original image, exactly where it came from. This makes the tools much easier to use, and enables you to experiment with small areas before committing yourself.

Sound studio

Rainbow 2 starts to earn its multimedia tag in the Sound studio. It isn't a direct-to-disk system, but it's a very good sample processor. You can digitise sound via the Falcon's stereo minijack at 8- or 16-bit resolution, and in stereo or mono. All of the Falcon's standard sampling rates are

catered for, right up to 49kHz. You've got full control over the Falcon's hardware – the internal speaker can be switched on the fly, and you can monitor the sample as it's recorded.

We could have waxed lyrical for another page or so about *Rainbow*

Once you have your sample in memory, you can process it. Blocks are easily marked with the mouse, and a multi-level zoom is available for examining the sample more closely. Filters can be applied to suppress hiss or boost certain frequencies, and a clever Smooth filter will per-



More than just a toy, the Sound studio can achieve some clean-sounding results with very little fuss.

FILE FORMATS

Rainbow 2 supports the most common image formats, including 256-colour GIF and TrueColour Targa and TIF files. Sadly, there's no direct support for compressed JPEG images, but it would have added quite a bit to the memory overhead. If you want to use JPEG graphics, you'll need a separate converter like *GEMView 3*, available from all good PD Libraries.

Rainbow supports 12 image formats, but not JPEG.



If sprite animation is your thing, you can now do it in TrueColour with *Rainbow 2*.

form an averaging-out of the sound, removing as many clicks or noisy bits as it can.

Samples can be saved to disk in the standard AVR format, so all the resolution and frequency information is stored as well.

Sprite studio

TrueColour games aren't exactly falling from the trees, are they? Maybe they will be in future, thanks to *Rainbow's* fully-featured sprite editor and animation engine.

Each sprite is stored as a series of frames, called a sequence. Each sequence can be stored in a bank – you could have a number of banks, one for 'moving left' sprites, one for 'moving right' sprites, and so on. There's a full set of drawing tools for creating your sprites, and chunks can be moved to and from the Picture Studio using the Fetch and Store buttons. Programmers have the benefit of the file format being fully documented on disk, too.

Slideshow studio

The Slideshow studio brings work from all the other studios together to produce professional presentations. You can use images from the Picture and Photo studios as backgrounds, play samples while images are displayed, and even animate sprites over the top. Potential uses range from titling your home videos to creating rolling demos for shops and shows. The slideshows can be saved to disk for later use, or further embellishment.

One thing missing is a standalone player for the slideshows, to make it easier to show your work off. Something to think about in



Composing a full multimedia presentation with images, sprites and sounds is easy in the Slideshow studio.

the next version, guys?

To be honest, we could have waxed lyrical for another page or so about *Rainbow's* capabilities – a review like this only scratches the surface.

Rainbow makes being creative fun, and artists will find that skills from 'real' media will transfer more easily to *Rainbow 2* than to any other Falcon art package. The multimedia aspect is tremendous, and the separate facets integrate beautifully. There's nothing like it at all, it's great fun to use, and it's well worth the money. *stf*

FRANK CHARLTON

Product: Rainbow 2.0 MultiMedia
Price: £69
Contact: JCA Europe
Tel: 01734 452416
Min system: Falcon030 only, VGA/RGB/TV, 4MByte required

Rainbow 2

HIGHS

- It's stunning
- Lightning fast
- Excellent 'natural' drawing tools

LOWS

- Slightly quirky interface
- No JPEG support

In short...

An all-singing stunner that really shows off the Falcon. Cheap at twice the price. **96%**

VERDICT • STIF VERDICT • STIF VERDICT

HL-630 printer

Laser printers have been getting smaller and cheaper, but are they compact and affordable enough for home use?

In the bad old days laser printers cost an arm and a leg, and were bulky and cumbersome – not really the sort of thing to enhance your domestic decor. But times change, laser printer prices have dropped dramatically, and so has their size. Brother's HL-630 is

one of the new leaner, meaner machines, and we've been putting it through its paces.

Brother's new laser printer is very streamlined and futuristic looking. It has no power switch, so it's always 'On', but it shuts down into sleep mode during periods of inactivity to save power. PC owners can adjust the timeout period via the *Windows* printer driver, but there isn't a similar facility for us ST people.

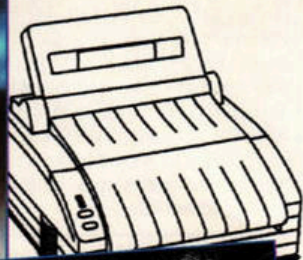
Setting up the printer is fairly simple. Hinge up the bonnet to install the laser drum unit, and slot the separate toner cartridge into place. The automatic sheetfeeder fits on to the top of the printer, and holds up to 200 sheets of paper. You don't have to program or adjust anything, and there's no LCD screen with indecipherable messages – this is Simplicity City, USA. However, the absence of such facilities means you'll need to control everything via your ST software.

Ready, aim...

We tested the Brother with the *ST FOR-MAT* Test Page, an A4 *Protex* page containing sixty lines of text in various styles (we



Brother's HL-630 laser printer is smaller and lighter than most, and its curvy profile is a change from the usual cube.



These photos have been expertly dithered by *Imagecopy* and beautifully printed by the Brother's new baby.

use *Protex* because it has so many printer drivers). The Brother responds to Epson FX-850, LaserJet IIP and IBM Proprinter commands, so we tried all these drivers.

Test page printing time was a respectable 25 seconds, and subsequent run-on copies took only 10 seconds each. The best results were obtained using LaserJet emulation.

Next we used *Imagecopy 3* (FaST Club, ☎ 0115 945 5250) to try the Brother's graphical abilities. Considering that the Brother doesn't have Resolution Enhancement, the

300dpi output is pleasingly clear and detailed.

Final tests were carried out with *PageStream* and *Papyrus*. Both

of these give a good indication of how well the printer copes with a range of text sizes and incorporated pictures. The results were just dandy, and printing was quick – the *PageStream* document took just over 2 minutes to output.

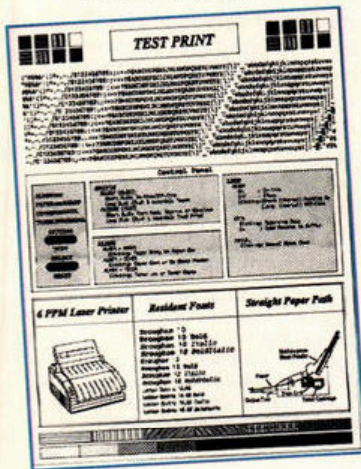
...print, print

The Brother HL-630 has a number of praiseworthy features, including the facility to reprint the last page sent at a touch of a button, without having to send the document again. Another good feature is the straight paper path, which eliminates paper curls and reduces jams. The separate toner unit should keep costs down as you don't have to replace the entire drum assembly.

On the minus

side, the printer only has a small range of fonts, and none of them are scalable. However, this isn't a problem if you mainly use graphical word processors like *That's Write* or *Papyrus*. Overall, this is a perky little machine which gives you all the important features, but not the frills you can live without. If you shop around you'll probably find it for under £400. *stf*

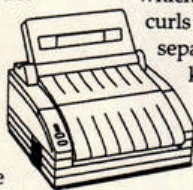
PETER CRUSH



The Brother HL-630's built-in test page shows off the printer's stuff very neatly.

TECHIE DETAILS

- Dimensions: 365mm wide, 642mm high, 394mm deep
- Weight: approx 9.2kg
- Speed: 6 pages per minute
- Media: Versatile auto-feeder handles many paper sizes
- Inputs: Bi-directional parallel port
- Memory: 0.5, 1 or 2MByte
- Economy: Prints 3,000 pages of A4 text per toner cartridge
- Emulation: HP LaserJet IIP (PCL level 4), Epson FX-850, IBM Proprinter
- Resolution: 300dpi (dots per inch), uses microfine toner
- Built-in fonts: Brougham 10, Brougham 12, Letter Gothic in normal, bold or italic



Product: Brother HL-630 printer
Price: £528
Contact: Brother UK
Tel: 0161 3306531
Min system: Any ST

HL-630 printer

HIGHS

- Cheap to buy
- Cheap to run
- Straightforward to use

LOWS

- Few built-in fonts
- Fan is a bit noisy

In short...

This basic but gutsy Brother is an excellent choice of printer if you're on a budget. **90%**

IF VERDICT • STIF VERDICT • STIF VERDICT • STIF VERDICT

Speedcom+ modems

Surf the Internet without upsetting your bank manager with these new low-cost fax/modems...



Identical apart from the badge on top (and the gubbins inside that makes the 28,800 go faster), the SpeedCom+ modems are spiffing bits of very affordable kit.

Back in issue 71 we did a roundup of V.34 modems from the big three manufacturers – Supra, Hayes and US Robotics. Two months later, cheaper 28,800 modems from the Far East have begun to appear. It's a good thing for all of us – with cheaper modems available, more BBSs and online services will switch to the faster standard.

Cheap and nice

The SpeedCom+ modems are made by Pro-Nets Technology in Taiwan, and you'll probably see them on sale from numerous sources – ours came from Siren Software.

Both models are compact and smartly designed. The rear of the case has connections for the supplied standard 25-pin RS232 cable, power supply, and line and phone jacks. Both line and phone sockets are the USA standard – a cable to connect the modem to your wall socket is supplied, but if you want to connect your telephone you'll need a UK to USA converter from Maplin or Tandy. The power adaptor is included, and you should always use this one – it's AC rather than DC (as used by most UK modems).

The ST comms program



The ubiquitous TeddyTerm comes with each modem, so you can get online straight after unpacking. Great stuff.

TeddyTerm is supplied with both modems. However, it can only drive the serial port at 19,200 and below, so if you've modified your ST's port or have a Falcon, you'll need an intelligent serial driver like HSMODEM6, which is available from PD libraries.

Setting up either modem is simply a case of plugging the right bits in and switching it on. You shouldn't need to reconfigure anything, unless you live in an area which doesn't allow tonedialling, in which case you'll need to set the pulse dial make/break ratio to UK standard.

The manual is more than adequate for normal use, and covers all Hayes commands supported. It's not quite the technical reference that some big names provide, but it's no skimpy pamphlet either.

The SpeedCom 14,400 supports all speeds from 300bps through to 14,400. LAPM/V.42bis error correction and data compression is available for all speeds above 2,400. MNP5 correction and compression is available for connecting to older modems.

The 28,800 model offers the same specs, with the addition of the V.FC and V.34 speeds of 16,800, 19,200, 21,600, 24,000, 26,400 and full-speed 28,800. However, it isn't a true 'V.Everything' modem like the US Robotics models – there's no provision for a tiny

prietary V.32terbo protocol.

In use, both modems proved to be very reliable at connecting, and generally very good at hanging on under difficult conditions. As usual, we tried connecting to a wide variety of modems at various speeds. All modes worked well, although the error recovery at 28,800 was occasionally flaky – although, to be fair,

We sent a number of fax pages during the test run, and had no problems

this could have been bad conditions rather than the modems themselves. Sadly, neither modem recognises the UK 'BUSY' signal for engaged calls, so you need to abort busy calls manually.

Just the fax, Ma'am

The fax side of things is fairly standard, with both models supporting both Class 1 and 2 fax commands at speeds of up to 14,400. There's no fax software supplied, so you'll need to pick up one of the PD offerings, or the excellent STRAIGHTFAX 2. We sent a healthy number of fax pages during the test run, and had no problems with other fax/modems or 'real' fax machines. There were no problems receiving faxes in Class 2 mode with STRAIGHTFAX 2, and the modem responded to all auto-answer commands.

The only complaint we had was with the internal speaker. Most modems provide something half-decent to help with connection diagnostics, but the SpeedComs use what sounds like a tiny

Piezo-electric sounder, resulting in the most hideous noises you've ever heard – barely recognisable as standard modem tones. We're willing to bet you'll turn the damn thing off within ten minutes of unpacking the modem.

Write that cheque

The SpeedCom series offers an ultra-cheap way of using the latest technology. If you've got an older 9,600 or 2,400 model, they're well worth the money. If you're already using a 14,400 device, the 28,800 is a good-value upgrade. Either way, you'd be hard pressed to come up with something as good at this price point. *stf*

FRANK CHARLTON

Product: SpeedCom+ 14,400 and 28,800 fax/modems
Price: £109.99/174.99
Contact: Siren Software
Tel: 0161 7965279
Min system: Any ST/STE/TT or Falcon030, high speed serial port recommended for 28,800 use

Speedcom+ modems

HIGHS

- Very good value for full 28,800 spec
- Trouble-free in use

LOWS

- No busy recognition
- That speaker!

In short...

Low-cost and high-speed – now there's no excuse for using old 2,400 modems. **84%**

VERDICT • STIF VERDICT • STIF VERDICT

Grafix the Easy Way

Can't draw for toffee? You need help, a friendly tutor to hold your hand through those first difficult strokes. Look no further.

The ability to draw is not necessarily a god-given talent; like anything else, drawing can be learnt. If you're not brave enough to join an art class, why not practise at home? *Grafix the Easy Way* provides a series of tutorials designed to get the novice artist off the ground.

Grafix teaches a cartoon style of drawing that's more Tex Avery than Michelangelo, although the basic principles of figure drawing are the same. There are over a hundred pictures complete with text, albeit terse, and an art package so you can put what you've learnt into practice.

There are fifteen tutorials, each of which is a series of static screens of pictures and text. You can also flip to a text-based manual where each

screen is explained in more detail. The text is on the light side and adds little – the visual examples are much better.

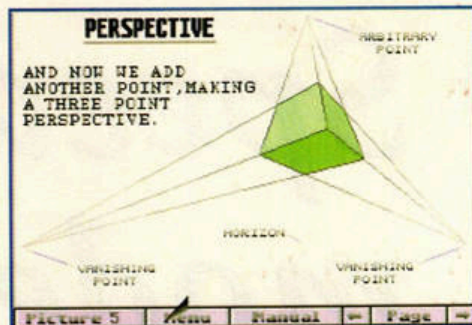
The drawings themselves are the best bit – the artists who put them together obviously know their onions. For the figure drawing, each subject is broken down into a series of simple shapes. A face, for example, starts as a circle and half an ellipse.

You are also taken through the fundamentals of perspective, colour and dithering, and the animation sections run through the tricky business of getting a convincing walk together. The cartoon approach is refreshing, and much less intimidating than life

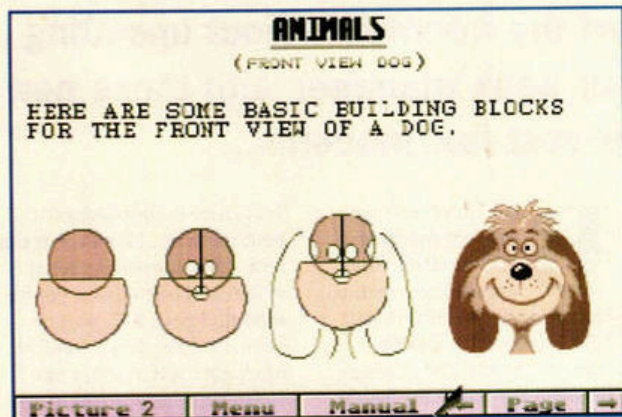
drawing. The amount of information isn't exactly overwhelming but there is enough to get you going.

The art package is very basic. You flip between a screen of tools – boxes, lines, a spray can, brush and so on – and your work screen. You can cut and paste sections, use text and incorporate the standard set of GEM fills.

The zoom box is one of the better bits: you get the zoomed view and the full-size view side by side, and it even has an undo, something lacking from the rest of the program.



Getting perspective right is an art in itself. The nine screens covering the vanishing point, the horizon, and arbitrary points.



Man's best friend – just look at that smile. The *Grafix* tutorial screens show you how to build up cartoon-style figures from simple shapes.

The eraser is also missing – you have to use a brush set to the background colour.

You can open up to nine screens at once, and use NEO and PII formats as well as the program's own GFX. *Grafix* also has its own file selector, which unfortunately can only

address your floppy drives. Although it is easy to understand and use, the art package lacks style – we don't recommend it unless

you have nothing better.

The tutorial and the art package are completely separate. Once you have explored the tutorials, you are dumped into the art package with a bare screen. There are no templates to get you going, and you can't even load the tutorial pictures to play with.

The information in the tutorial section is solid enough, but it could do with more depth, and it doesn't

explain how you get the effects in the art package – you are left to make that transition yourself.

There have been lots of art tutorials for your ST, but *Grafix the Easy Way* is

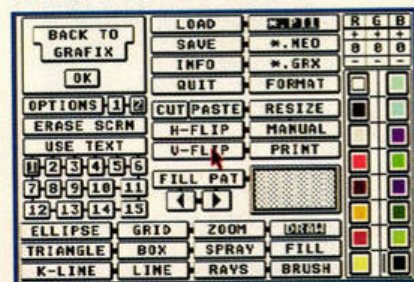
original, in so far as it comes complete with its own art package and concentrates on cartoon-style drawing. Other than that there is little special about it. The information is basic and there is no interaction – one area where your ST can score over any book. *stf*

CHRIS LLOYD

...a cartoon style of drawing that's more Tex Avery than Michelangelo...



Some tutorial screens have a zoom box that enables you to get a closer look.



The art package's main screen – you get the standard GEM-based drawing tools, but there are no frills.

Product: Grafix the Easy Way
Price: £19.95 (inc P&P)
Contact: Top Byte Software
Tel: 01622 763056
Min system: Any ST with 512K (1MByte for art package). Falcon version available.

Grafix the Easy Way

HIGHS

- Good quality pictures
- Covers basic principles of figure drawing well

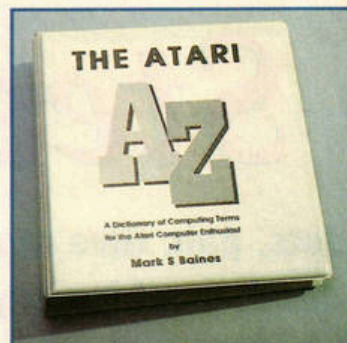
LOWS

- No integration between tutorial and art package
- Art package very crude

In short...
 A basic cartoon-style art tutorial, with no interaction, and a poor paint package. **52%**

VERDICT • STIF VERDICT • STIF VERDICT • STIF VERDICT

Atari A to Z



The Atari A to Z's ringbinder format makes it easy to leave open on your desk for quick reference.

Everything you need to know about Ataris, in one handy book.

The computer scene is riddled with jargon, and its many technical terms, acronyms and cyberisms make life difficult for new users – and more experienced ones. Thankfully, long-time Atari enthusiast and programmer Mark Baines has done something about it. The end result of several years of work is *The Atari A to Z*, a dictionary of modern computer terms for the Atari enthusiast.

Presented as a 337-page book in ring-binder format, *The A to Z* is as comprehensive a collection of jargon busters as you'll ever see. As you might have guessed, it's arranged alphabetically rather than by subject, and it covers everything from the Abaq

Transputer workstation through to Zoom boxes.

The page design is clear and easy to follow, and relevant information is cross-referenced, so you can skip about looking up related topics. The binder format makes it easy to leave *The A to Z* open on your desk, without the spine-cracking problems associated with regular books.

As well as explaining vast quantities of technobabble, the author provides an entry for each machine in the Atari family, covering everything from the model's history to its full specification. The book is also an excellent source of comms info.

Also included are excellent appendices, featuring a lengthy list of contact

addresses related to the Atari scene, a list of Atari-related books – both in and out of print, with ISBN numbers to help you track them down – a helpful list of common file extensions, and a complete list of pinout specifications for every port on every machine.

This section is well researched, and corrects information which has been wrongly presented in other sources, such as the Falcon's LAN connector. The list of file extenders could be misleading though – for example the MOD extender is listed as being *Modula-2* program code, when it's much more often used for soundtracker modules. A minor niggle though, since nobody could hope to cover all possible extensions.

Most reference books are dry as dust, but not this one. The author has demonstrated his sense of humour online for

years now, and it comes across in the pages, as does his genuine enthusiasm.

The Atari A to Z is a bottomless source of information which certainly comes into its own for budding journalists, writers, programmers and comms users. We found it so useful we've bought a copy for the office. *stf*

FRANK CHARLTON

Product: The Atari A to Z
Price: £12.50
Contact: Linnhe Computing
Tel: 01862 871624

STF RATING: 91%

Vector Graphics XChange

Convert vector graphics with VGX – it's not very pretty, but it works.

Convertors for bitmap image formats like GIF and IMG have flourished on the ST, but vector graphics utilities have been sadly neglected. As a result, the many megabytes of vector-based clip-art available for the Mac and PC have

been a largely untapped source of quality scalable images – until now.

Vector Graphics XChange, from Eines Computing in Norway (distributed in the UK by the FaST Club), is here to open up that wealth of images. Put simply, it's a con-

version tool for vector graphics files. Er, that's it – there isn't even a viewer.

If your DTP package supports vector-based images, chances are you'll have built up a library of clip-art. However, there's a wealth of vector clip-art on other platforms, and this is what makes VGX so handy. For example, we found 200MByte of colour clip-art (*Windows MetaFile* format) on a PC CD-ROM from a magazine. VGX converted every single file to *Calamus* format without complaint.

Many Mac and PC formats can handle colour vector images, as can ST packages like *Outline Art* and *DA's Vector*, but unfortunately VGX converts colours to greyscale,

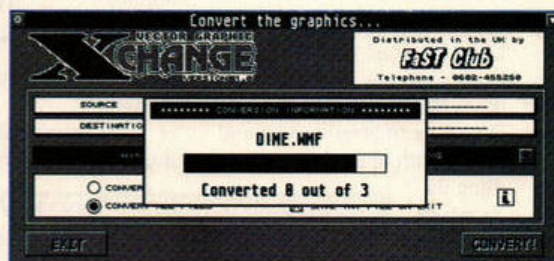
and saves the image in CVG and *OL 1.0* formats. It can read colour *OL 3.0* files and save them as *Adobe Illustrator* files for use on a Mac or PC, but there's no support for saving ST colour files – a sad omission. There's no support for GEM metafiles either, so *Papyrus* users are out of luck.

These failings aside, VGX has no real competition and fills its niche very well. Worth it if you're into DTP. *stf*

FRANK CHARLTON

Product: Vector Graphics XChange 1.0
Price: £14.99
Contact: FaST Club
Tel: 0115 9455250
Min system: Any ST/STE/TT or Falcon, 512K

STF RATING: 76%



Vector Graphics XChange in action. There's only one screen, and not much to see.

ALIEN FILE FORMATS

VGX can also handle alien files from other machines, including:

Adobe Illustrator (EPS or AI): A Mac/PC format. EPS files may contain bitmaps and text, which VGX ignores during conversion.
Aldus Freehand (EPS): Almost identical to Adobe Mac/PC files.
Calamus Vector Graphic (CVG): Supported by ST software like

DA's Vector, Arabesque and of course Calamus: This has become the ST's most popular standard.
Outline Art (OL): VGX supports files from both versions.
Windows MetaFile (WMF): Another PC standard.
WordPerfect Graphic (WPG): A PC format which can hold either a bitmapped or vector image – VGX will reject the bitmaps.

Steel Talons

Jets, pah. Give me a rotary-wing death machine any day, says Flight Lieutenant Charlton (retired).

Remember the truckload of wonderful games that was promised for the Falcon? The games were all finished, but most have spent the last few years languishing in Development Hell. Step forward 16/32 Systems, bearing these hallowed bits of code. *LlamaZap* and *Pinball Dreams* we liked, but what of *Steel Talons*, the Falcon-only 3D helicopter shoot-'em-up?

The original Tengen coin-op was a fast, colourful blast that involved flying a military chopper across a vector graphics world. The Falcon version of *Steel Talons* is as close as the '030 can get to matching the custom hardware in the arcade machine, and it's still fast, colourful and fun.

Joyful padding

Like *LlamaZap*, *Steel Talons* uses the Jaguar PowerPad controller exclusively. The D-pad controls movement and speed, with up and down handling the chopper's acceleration. A gadget on the instrument panel shows your relative speed, and although the chopper is fiddly to fly at first, you'll soon be hovering expertly and dodging about with the best of them.

Two of the 12 buttons on the pad control your altitude.



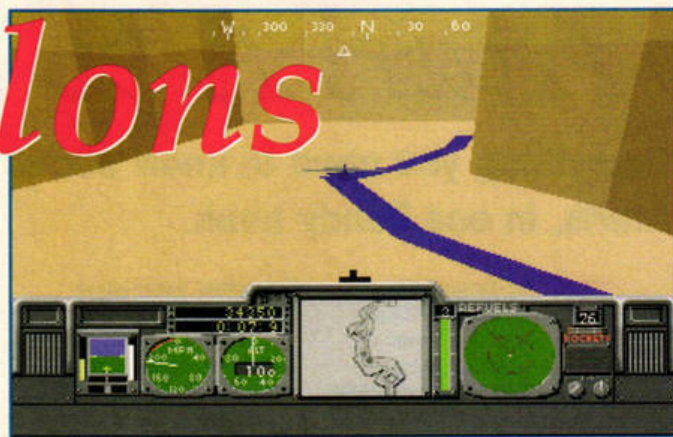
Coo, it's gone all foggy - we must be flying over England.

This takes some practice - it's all too easy to hit the wrong one in the heat of battle and drop yourself on to a mountain. The manual mentions holding [B] and pressing the pad down instead, but this is even more confusing.

Your bird can fire at the enemy with a cannon and missiles, using the [B] and [C] buttons. Cannon shells seem to go on forever, but you might run out of missiles.

Steel Talons is divided up into missions, each with a specific objective. Each has its own weather conditions, from standard daytime jaunts to night flights where you can't see much but the tracer fire streaking toward you. The first mission is a training flight - you have to follow squad leader through a series of loops - and then the real combat starts.

The beef we had with most of the missions was the time and fuel limits. Each mission has to be completed in a given time, although you can happily go over it without knowing. Only when you've finished does the



Thoughtful of them to drop me in the Grand Canyon, eh? Just wait 'til I get back...

game tell you you've failed. Failure means you don't get much bonus fuel to carry to the next mission, and failing a few times in a row usually sees your chopper hit the ground with an empty tank. The only mission we managed to finish within the time limit was the training sortie.

Combat is over simplified, but fun. When

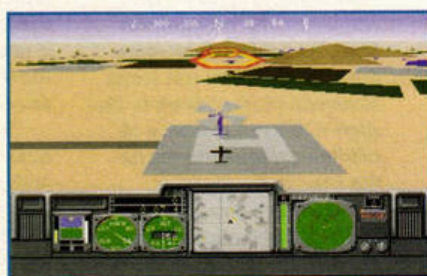
you're in range, either hold the cannon button, or pop off a missile when the sight shows you have a lock. Repeated cannon fire

takes care of anything, but jets require some careful stalking and a missile up the tailpipe. It's fun lurking in a valley, waiting patiently for that pesky chopper to dawdle around into your sights...

And out to the left

The graphics are impressive - the polygon landscape seems to take advantage of the Falcon's expanded palette, and the scenery belts about with alarming speed. Your default view is from behind the chopper, but pressing the [Option] button zooms into the cockpit for added realism. Flying at full whack and dodging between mountains in this mode is great fun, and gives a good sensation of speed - we kept ducking as enemy planes went over.

Sound varies from excellent to awful. The sampled speech is used to good effect, and the rousing military tune at the mission select screen gets you in that gung-ho mood. Where they got that



The Training Mission is simple enough, and a chance to get to grips with the controls.

helicopter engine sound from is beyond me, though. A rattling squeak, it's as close to the real thing as I am to Brad Pitt - yep, that's saying something. It really gets on your nerves after a few missions.

Steel Talons isn't a brilliant game, but it's fast and slick enough to go back to, even for a quick blast. If you persevere with the controls, it's an enjoyable experience - not red hot, but certainly worth a bash. *stf*

FRANK CHARLTON



The Mission selection screen offers a choice of excursions. Gentlemen, to your whirlybirds!

Product: *Steel Talons*
Price: £24
Contact: 16/32 Systems
Tel: 01634 710788
Min system: Falcon030, Jaguar PowerPad

Steel Talons

HIGHS

- Fast and colourful
- Lots to shoot

LOWS

- Controls take practice
- That engine sound

In short...

Above-average blasting fun, - entertaining even if you just go for a quick sortie.

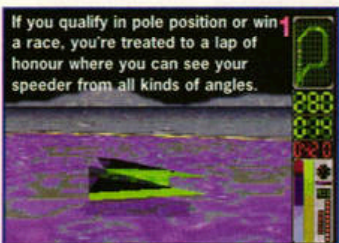
83%

Moon Speeder

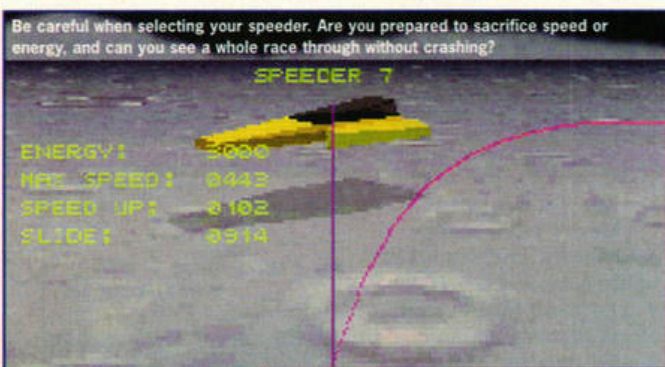
Vast, empty and covered with flat bits – yep, the moon is a perfect place to go for a bit of a spin. *Moon Speeder* is the logical result.

Moon Speeder is an intriguing racing game for the Falcon. Reflecting the French trend towards Falcon-only games, *Moon Speeder* is just one of the many Gallic games that have yet to see the light of day in the UK. The lack of a British distributor is hardly surprising when you look at that hefty price tag, but unfortunately it also means the manual hasn't been translated, although the game itself is in English.

Moon Speeder takes place over a selection of race tracks, which are subdivided into groups according to difficulty. Once you've chosen which courses you wish to tackle, you have to decide how skilled your opponents are.



If you qualify in pole position or win a race, you're treated to a lap of honour where you can see your speeder from all kinds of angles.



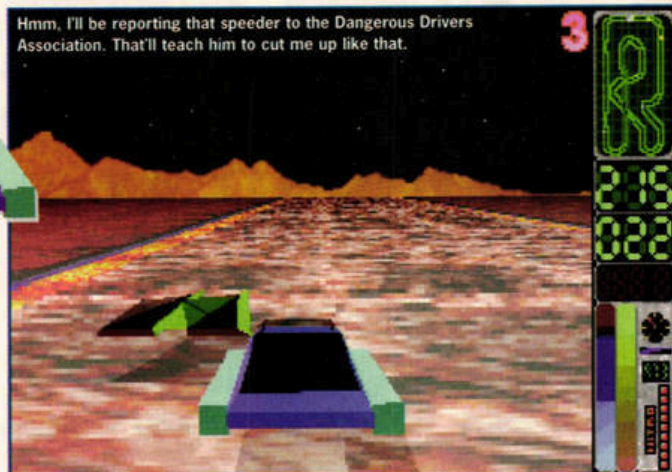
Be careful when selecting your speeder. Are you prepared to sacrifice speed or energy, and can you see a whole race through without crashing?

Then, finally, choose one of the eight different speeders on offer. Be warned, though, getting the right balance between drivability, acceleration and top speed is essential – it's no good opting the fastest car on the track if you're continually lurching from side to side and crashing into everything.

Once you've selected your options, it's on to the race itself. After a qualifying lap to decide where you're placed on the grid, you must race seven laps against your opponents.

As with most driving games, the other racers mainly function as barriers between yourself and first place as you jostle for position on the tracks' various twists and bends. As such, they provide effective competition because the tracks are designed in such a way that if your concentration wavers for even a second

The different tracks and speeders keep you coming back for 'one more go'



Hmm, I'll be reporting that speeder to the Dangerous Drivers Association. That'll teach him to cut me up like that.

you've had it. As your speeder becomes critically damaged, it loses substance. This bizarre circumstance means that occasionally you'll be competing in an invisible speeder before you take a final knock

and explode in a spectacular ball of flame. Naturally, this defies most of the laws of physics, but it is an effective way of letting you know when to slow down.

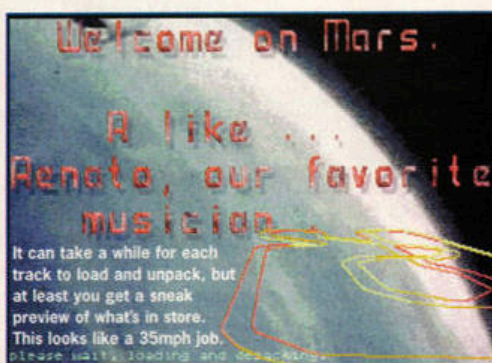
If you manage to survive and finish the race without being lapped, you'll be rewarded with a time, and if you

were placed fourth or higher, you qualify for the next track.

Aiding you in your quest are a number of spinning letters that pop up around the track to boost your energy and acceleration. You may even be given a laser to attack your opponents with. You need to be careful, though, because

there are also two letters that hinder your progress, one slowing you down and another making it difficult to steer.

Moon Speeder is a superb demonstration of the Falcon's graphical capabilities. It's a roller coaster of a ride marred only by a stupidly high price and lack of variety, especially on earlier levels. Nevertheless, the different levels, tracks and speeders keep you coming back for



Welcome on Mars. A like ... Renata, our favorite musician. It can take a while for each track to load and unpack, but at least you get a sneak preview of what's in store. This looks like a 35mph job. please wait loading and unpacking.

'just one more go'. Another point in its favour is the link option, which enables you to connect to a friend's Falcon via a null-modem cable.

Although *Moon Speeder* might look like 'yet another racing game', it possesses enough novel twists to keep it fresh. A rip-roaring race you won't regret. *stf*

NICK PEERS

Product: Moon Speeder
 Price (inc shipping): approx £45
 Contact: Composcan France
 Tel: 00 33 147 35 89 66
 Min system: 4MByte Falcon, VGA or RGB monitor

Moon Speeder

HIGHS

- Slick racing action
- Excellent graphics and great sound

LOWS

- Check out that price
- Long wait between races

In short...
 An addictive roller coaster of a ride which shows off the Falcon's true potential. **79%**

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TOTAL FOOTBALL

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Catacombs of the Undead Sorcerer

Pull on your boots, strap on your sword, dig out that book of spells – it's role-playing time.

COTUS, or *Catacombs of the Undead Sorcerer* to give it the full title, is an overhead-view role playing game (RPG) similar in concept to the early *Ultima* games. The manual (the file on disk, that is) describes the standard RPG plot – penetrate the Dungeons, kill the Undead Sorcerer, return to win the hand of the King's daughter. Standard stuff, and ignoring the school-boy attempts at smutty humour, we'll plod on.

Plod, plod, plod...

COTUS is written in *STOS*, and compiled for an *STFM*. A quick session with *STOSFIX3* was enough to get it running on an *STE* or *Falcon*, though. Your character is repre-



The main screen, complete with unexciting map.

and press the fire button a few times when you're close enough. Deadly dull.

Dotted about the map you'll find establishments like the Gambling Hall, where you can try to improve your finances. As well as betting on coloured arrows racing across the screen, you can arm wrestle. Yes! A joystick waggler! Just when you thought you'd seen the last of games which require you to wrench hell out



Time for combat. Shame it's all over with a few presses of the fire button.

sented on the small map as a static sprite. Moving the joystick moves him, one square at a time. Slowly. You can see the screen updating after every move. Certain map squares have objects in them – press the fire button to use the icons at the top of the screen, and you can pick them up.

Moving into a square occupied by a monster brings up the combat screen. Here you jiggle your bigger sprite about, avoiding the monster's limited attempts to kill you,

of your joystick, along comes *COTUS* – and, despite what the manual says, only Superman could win.

The graphics are passable, the sound is meagre and the entire affair is as much fun as watching paint dry. A

tired idea given a very tired treatment, *COTUS* might be passable as a PD game, but not at £8. Try it if you're a serious adventure-head, but don't say we didn't warn you. *stf*

FRANK CHARLTON

Product: *Catacombs of the Undead Sorcerer*
Price: £7.99
Contact: Merlin
Tel: 01452 770133
Min System: *STFM 512k. STE and Falcon needs STOSFIX3.*

STF RATING: 35%

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HARD DRIVES: THE SPACE & TIME SOLUTION



Andy Curtis explains how a shiny new hard drive can solve all your storage problems – and save you time.

Believe it or not, there was a time when hard drives were only talked of in hushed, reverent tones by eager ST enthusiasts. To those people – who, after years of struggling with sluggish, limited-capacity cassette loading systems, had only just begun to discover the wonders of floppy drives – hard drives systems were almost the stuff of fantasy: the ultimate space and time

solution, indeed.

Time went on, though, and adverts for hard drive systems started to appear in ST magazines, but the prices were prohibitive because drives had to be specifically made for use on the ST – drives made for other platforms were simply not compatible with the ST's hard drive port. The 'slab' design was the most popular of this period, with hard drives doubling up as monitor stands.

Since then, the increasing popularity of hard drives has meant that a lot of money has been spent on development, with companies such as GeSoft and ICD leading the way. This, in turn, has driven the price down to a level where almost everyone can seriously consider owning a hard drive.

In 1990, for instance, a 42MByte drive would have cost you around £500, but today a similar capacity only

costs around £170. Even a 500MByte unit ready to plug into your ST only costs around £350.

All of this means that the dream of yesteryear is now the practical purchase of today. A hard drive is a luxury you can afford and, in many cases, a tool that you can barely do without. And trust us, once you have a hard drive, you will never want to go back to the limitations of a floppy-only system.

Hard drive heaven

You really fancy a hard drive, but your bank manager wants to know why. Here's what to say...

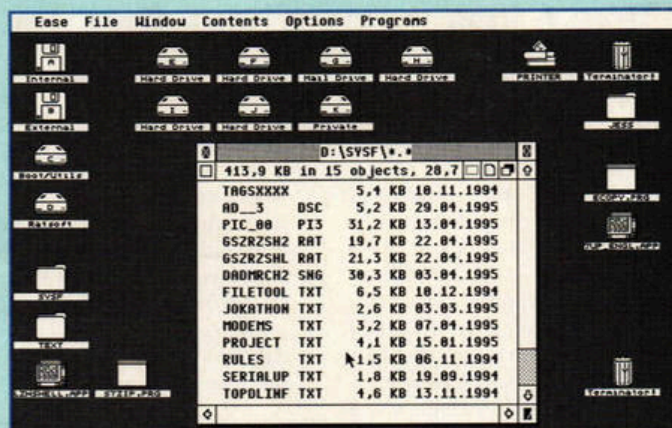
Hard drives may be better value now than ever before, but why should you buy one? The answer is that even a small, inexpensive hard drive can dramatically change the way you work with your ST.

If you only use your ST for game playing, a hard drive will make little difference. Some of the more enlightened game creators make their games hard drive-installable, which makes playing them a real joy because you don't have to wait while the floppy

and you can keep everything in one place.

Most ST software will work on a floppy-only system, but if you have a hard drive you will be able to install full - rather than cut-down - versions. With DTP programs, for example, a hard drive enables you to install as many fonts as you want, rather than just what will fit on to a floppy disk.

There are a few programs which just will not run from



Replacement desktops like Ease make file management effortless. You do, however, need plenty of RAM and that all-important hard drive.

grams and a replacement desktop system quickly and easily at boot-up (you should use a boot manager, such as *Boot Manager 1.3* from Cover Disk 72, to choose which Auto folder programs and accessories are loaded, because some will clash).

Memory

If you're going to run extra programs at boot-up, you'll use more of your ST's memory. The upshot of this is that you will find yourself needing at least 2MByte, and preferably 4MByte, of RAM. This also makes more memory available for the programs you run, meaning, for example, that more modules can be loaded simultaneously in *Calamus SL*. If you have a 512K

machine, a hard drive will be barely usable. Given that memory upgrades are relatively cheap, it is worth topping your machine up to 4MByte before you buy a hard drive.

Feel good factor

It's hard to describe the pleasures of working with a hard drive, but once you have

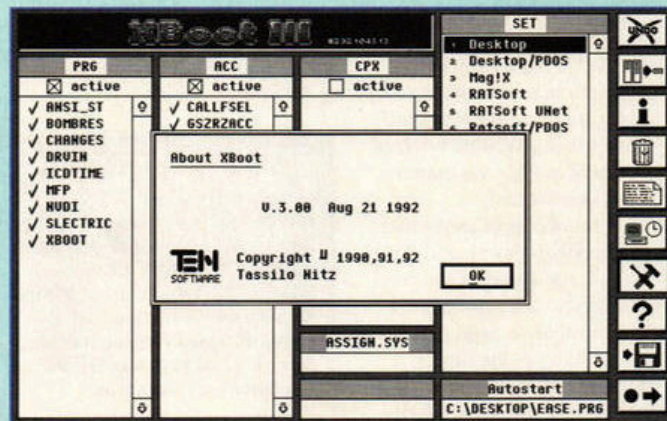
experienced the lightning-fast responses, you will not want to go back to floppies. It is a credit to ST software devel-

Whatever the task, your ST will do it faster and better with a hard drive

opers that so much software does run on floppy-only systems, but hard driving is a whole new ball game.

So, where do you start?

What should you know? Which drive should you buy, and what software? Just turn the page...



Boot managers, such as Xboot 3 (above), make it possible to boot your hard drive with different combinations of Auto folder programs and accessories.

drive chunters away between levels. While this is a bonus, it is probably not reason enough to part with £200.

Having said that, these days very few people use their STs purely for playing games. There are thousands of other programs available for your ST - something for everyone, in fact. As far as serious applications go, whatever the task, your ST will do it faster and better with a hard drive.

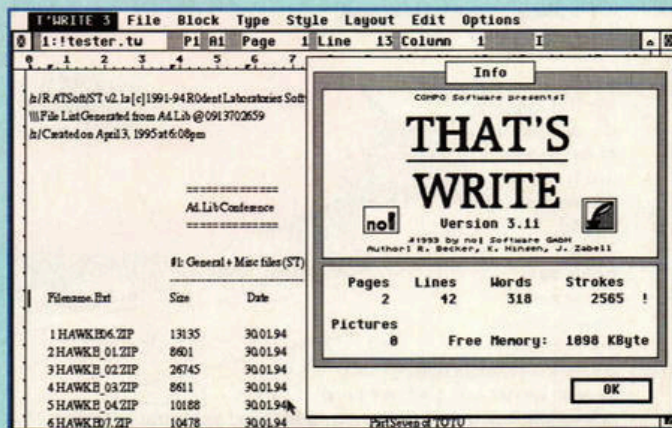
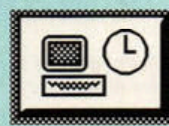
Hard driven

The two chief advantages of a hard drive are increased speed and greater storage capacity. Your software will launch more quickly,

floppy no matter what you do.

These include BBS software and some high-end graphics packages. However, the vast majority of software will run on a floppy-only system, but runs far better on a machine with a hard drive. For example, it's all very well being able to create a 3MByte sample in *Mastersound*, but where do you save it to? Naturally, a hard drive is the answer.

If you would like to work with a replacement desktop such as *Ease* (STF 69, 97%), a hard drive is a necessity. It's really not worth using *Ease* to run a program if you have to wait a minute for *Ease* itself to load first. A hard drive enables you to run a large number of Auto folder pro-



It is possible to run powerful packages like *That's Write 3* on floppy-only systems, but the limitations on the installation and the waiting time for disk loading are discouraging.

Inside the box

Take a look inside a hard drive and find out what all the components do. Don't try this at home, though.

Today's external SCSI hard drives are nearly all shoe box-sized devices that look deceptively similar to sandwich toasters. Of course, if you were foolish enough to feed your hard drive with half a pound of cheddar and loaf of bread, you'd soon realise your mistake. The internal components are really quite different.

A hard drive, in essence, is a spinning magnetic disk that's read by a head tracking over its surface. If you're thinking that this description

would do just as well for a floppy drive, you're right. The principle is exactly the same. However, there are several factors that enable hard drives to store substantially more data and retrieve it at a faster rate than any floppy drive.

Hard and fast

First, there's the multi-oxide coating used on a hard disk platter. This is of a much higher density than the coating used on floppy disks, so it can hold a far greater number of tracks per inch – on our test unit (a 42MByte Quantum

mechanism) it was almost 19 times as many. It also increases the possible number of sectors per track – from nine to 54 in our tests.

The second point worth considering is the spin speed. Hard drives spin considerably faster than your average floppy mechanism – the ratio for our test unit was 12:1 – so more of the data is accessible more of the time. This reduces the time taken to return to the same point of the drive's spin cycle, meaning the next piece of data in a sequence can be read more quickly.

Third, unlike floppy drives, hard drives use a number of platters (or disks) which are stacked above each other. Both sides of the platter are used, so there's a read/write head associated with each side of every platter. This system means your hard drive is well placed to retrieve data very quickly, no matter where it is located.

A fourth significant difference between floppy and hard drives is the speed of the head assembly. In a floppy drive a stepper motor is used to move the head across the floppy disk. This method is reliable, but not very fast. In modern

SIZE MATTERS

To see exactly how floppy drives and hard drives (in this case, one housing a Quantum 42MByte hard drive mechanism) compare, check out this table:

	Floppy drive	Hard drive
Tracks per inch	96	1,800
Sectors per track	9	54
Revolutions per minute	300	3,600
Time to return to same point	200ms	16ms
Data transferred per second	30K	2,000K

hard drives, however, a voice-coil is used instead.

Voice-coils are normally used to drive loudspeakers – they translate voltage into sound. In the case of a hard drive, the voice coil translates voltage into movement. Because they were designed to respond at the speed of sound, voice-coils are considerably faster than conventional stepper motors.

All these factors combine to give the super-fast data transfer rates that we have come to expect from hard drives. In fact, normally the only speed limitation you'll come across is the speed of your ST's processor.

ONCE MORE IN ENGLISH

If you think that all this seems far too complex and involved to take on board, just bear the following in mind. There are three main components that go into making up an ST's hard drive. The mechanism is the actual hard drive itself. It holds the disk on which your data is stored. The second part is the case, which holds the mechanism and the power supply. The final part is the SCSI interface which links your ST to the hard drive.

The interface looks like an oversized plug, and simply fits into the back of the drive case. Most suppliers will sell you a fully assembled package including all three elements – all you have to do is plug it in and use it.

Due to the low cost of assembled packages, it's no longer cost effective to buy the component parts and build up your own drive. It's far better to buy a complete item that's guaranteed to work with your ST.

FALCONS

Falcon owners can use exactly the same type of hard drive package shown here, but you will need a SCSI2 to SCSI lead instead of the ST hard drive interface lead. If you're thinking of buying a drive, be sure to tell your supplier that you require a Falcon lead.

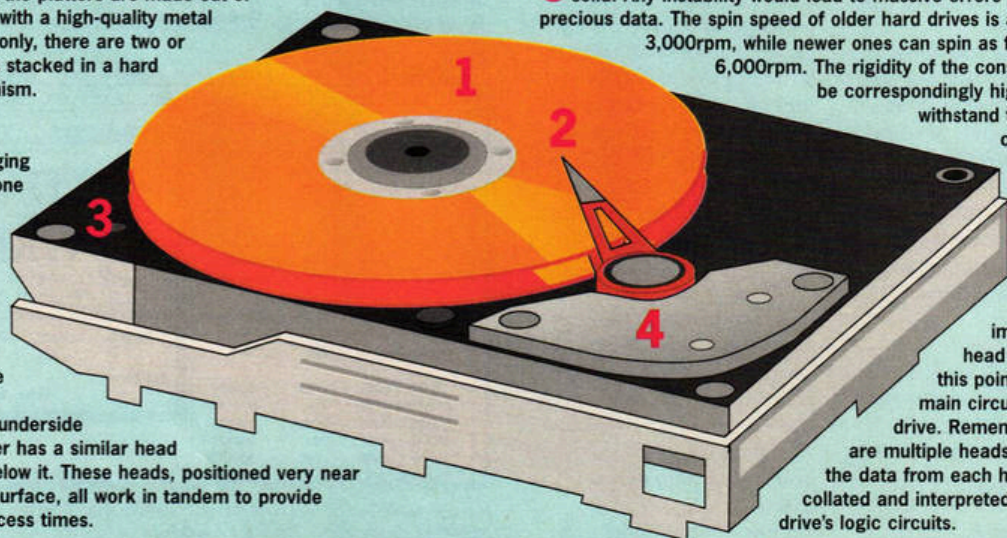
HOW YOUR HARD DRIVE WORKS

1 The hard drive platter. These used to be made of aluminium but nowadays the platters are made out of glass coated with a high-quality metal oxide. Commonly, there are two or more platters stacked in a hard drive mechanism.

2 This swinging arm has one of the drive heads mounted at its end. These heads sit a fraction of an inch above the platter's surface. The underside of each platter has a similar head poised just below it. These heads, positioned very near the platter's surface, all work in tandem to provide super-fast access times.

3 The chassis for the hard drive mechanism itself has to be rock solid. Any instability would lead to massive errors with your precious data. The spin speed of older hard drives is around 3,000rpm, while newer ones can spin as fast as 6,000rpm. The rigidity of the construction has to be correspondingly high in order to withstand the vibration caused by a disk spinning at these kinds of speeds.

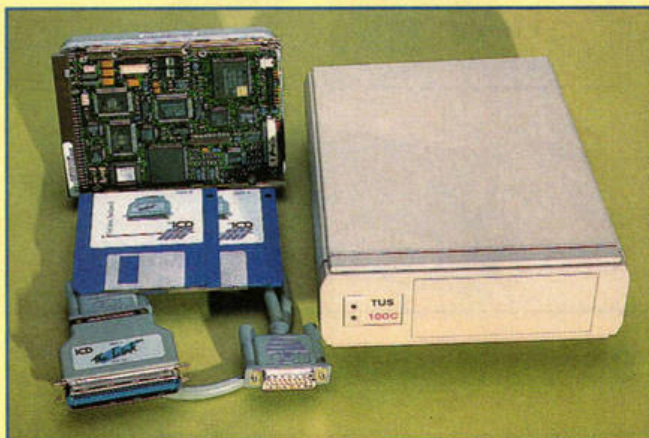
4 The tiny electrical impulses from the head pass through this point and into the main circuitry of the hard drive. Remember that there are multiple heads, and that all the data from each head has to be collated and interpreted by the hard drive's logic circuits.



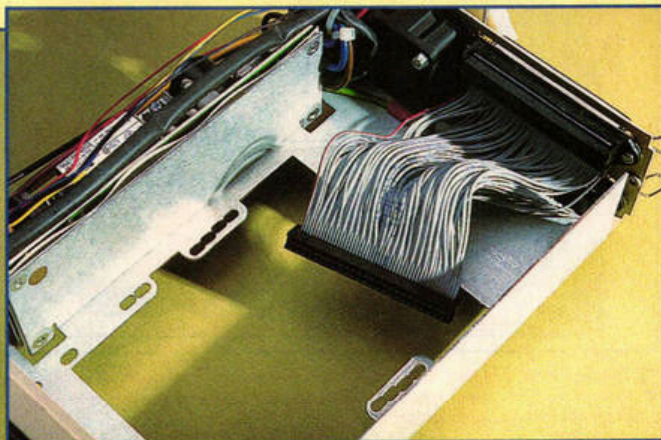
PUTTING IT ALL TOGETHER

We know you're curious, so we thought we'd show you how a modern hard drive is put together. We must stress though, we do not recommend you build your

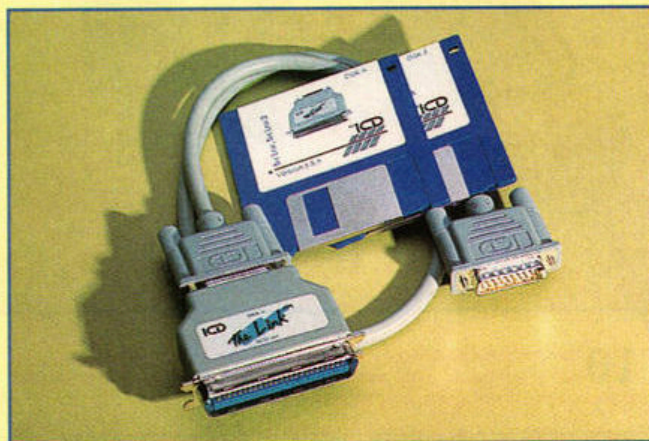
own unit – it costs more than a ready assembled drive and it's hard to predict whether the SCSI devices are compatible.



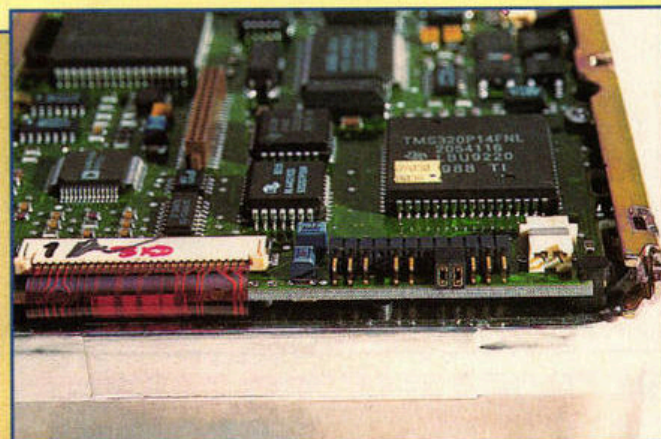
1 Here are the basic components of a working hard drive: the drive mechanism itself (left), a SCSI controller to link your ST to the drive (lower left), and a case (right) fitted with a power supply unit.



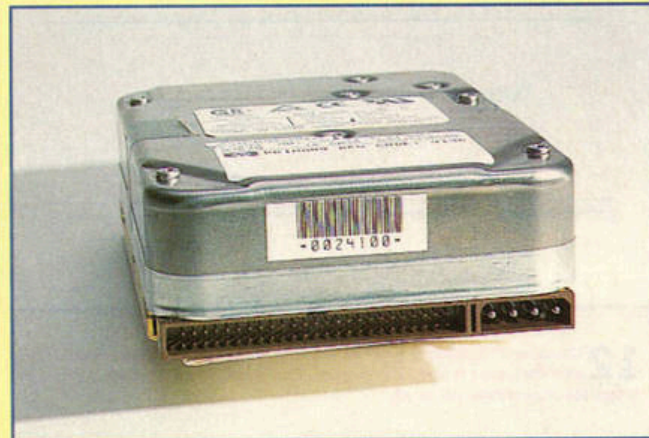
2 The case contains an empty bay for a hard drive, CD-ROM or tape streamer. The holes enable you to fit different brands of mechanism. Note that the 50-way SCSI cable has been 'shredded' to enable easy positioning.



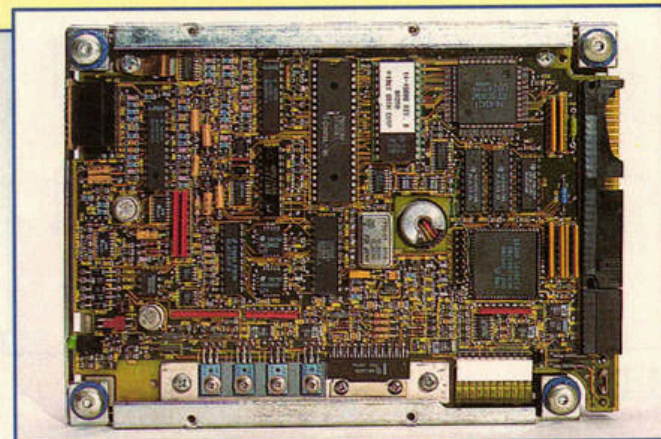
3 The Link 2 is one of several devices available to form a link between your ST and the hard drive. It converts the hard disk controller messages from your ST so that they correctly operate a SCSI drive.



4 It's easy to miss this little bank of pins on the end. They are used to assign a SCSI device number to your drive. On this drive, jumper wires attach to the pins so that you can select the device number from a panel on the rear of the drive.

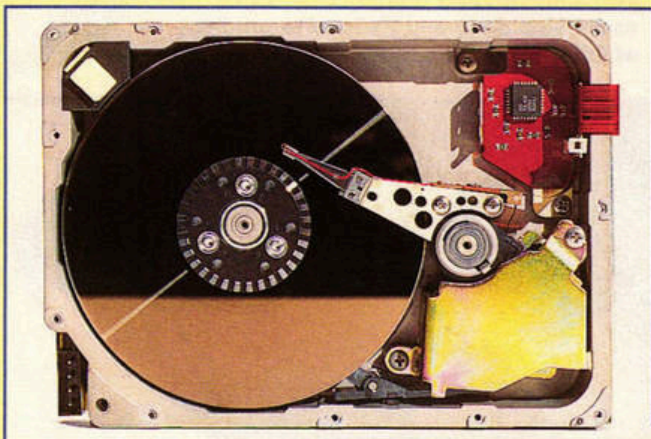


5 At the bottom left of this picture you can see the bank of SCSI pins. This is where the internal 50-way SCSI connector is attached. To the right of the pins is the power input socket.

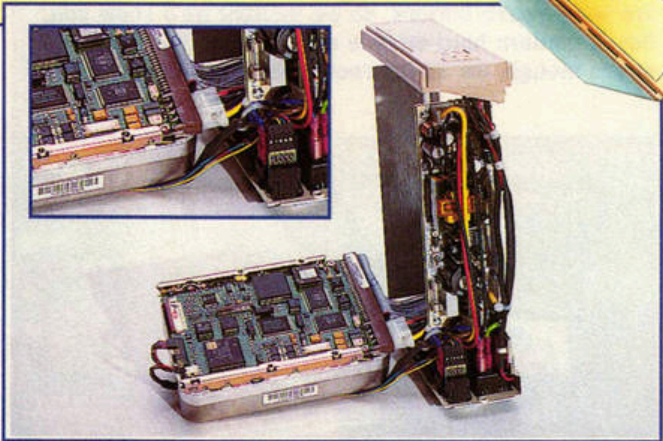


6 This is the underside of a SCSI drive mechanism. When you consider the pin-point precision needed to write and retrieve data, it's easy to understand why the mechanism looks so complex.

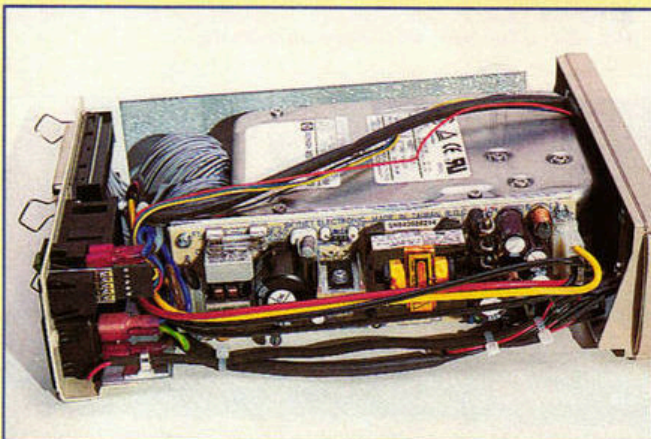
PUTTING IT ALL TOGETHER



7 This hard drive is broken, so we pulled the lid off to give you a look. This action renders the drive completely useless, because they need to be sealed to create a completely dust-free environment.



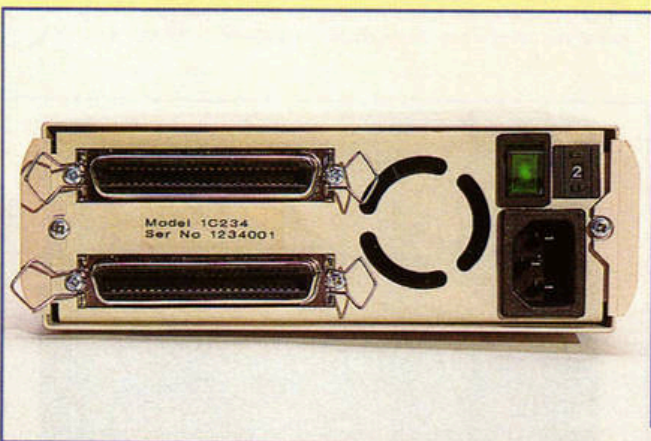
8 Here all the cables have been attached to the hard drive in readiness for mounting it in the chassis. This has to be done first, because there's no room to work in the tiny drive bay.



9 The drive is attached by means of four screws to the chassis. The power supply board runs alongside the drive. These are commonly rated at 40W, but most drives use little more than 8W.

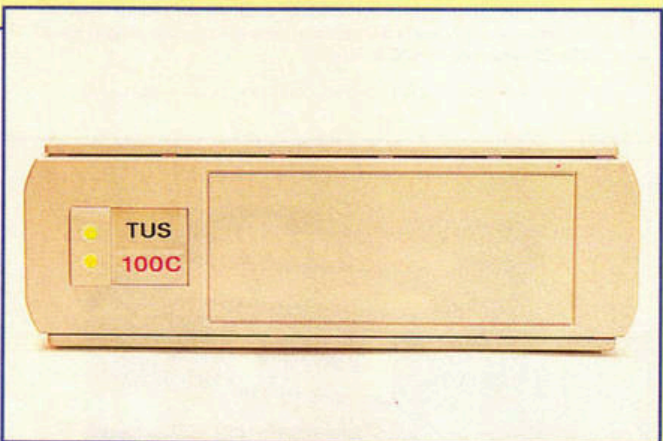


10 The final job is to slide the chassis into the external case, making sure not to trap or tension any of the wires. Two screws on the rear panel hold the case in place. We're almost ready to try the drive out.



11 There are two external 50-way SCSI sockets on the rear of the drive to enable you to chain other SCSI devices such as extra hard drives or CD-ROM units. Note also the SCSI device number selector in the top right hand corner.

And there you have it, the TUS 100C from The Upgrade Shop – lovingly reconstructed by the ST FORMAT spanner brigade. We must emphasise again though, that



12 The drive is completed, and it works. During the initialise phase, immediately after the power is switched on, both LEDs are lit. When the drive is ready for action the access light will go off.

you shouldn't take your drive apart just for the fun of it. Not only might you seriously damage it, but you'll invalidate the manufacturer's warranty as well.

Six of the best



You've got lots of lovely cash to spend, but you don't know which drive to buy. Here are six of the best, plus a selection of software.

Choosing a hard drive is never easy. There is a tremendous range of drives available, of different designs and storage capacities, and with different price tags.

A lot depends on how much storage space you actually need. If you only really use one main application, such as a sequencer or word processor, you can probably get by quite comfortably with a 40MByte drive. If, however, you like to work with a variety of applications and utilities, you may well need an 80MByte or 120MByte drive.

Even larger drives can be useful if you need to store a lot of images or MOD files. Upping the capacity adds relatively little to the price, so it can be worth paying out a little more for a 350MByte or 500MByte drive. You never know when you might need the extra space.

We have included a range of prices for each manufacturer so that you can see which drive represents the best value for you. All the prices given are for ST owners – if you have a Falcon, you may pay slightly less. It's best to contact the supplier and ask.

When you purchase a

hard drive, you will also get some software to enable you to format and partition it. Partitioning creates several 'virtual' drives on your ST's Desktop. This helps you keep your data organised but, if you want, you can just create one huge partition.

While the supplied software will definitely get your drive working, there are other options available which may do a more efficient job. You'll find some of the alternatives on these three pages, as well as some back-up and hard drive maintenance software.

MiniS

System Solutions
☎ 01753 832212

120MByte £249
270MByte £279
730MByte £399

The MiniS drive is compact and neat. It is easily the smallest drive we tested, and there is room for just one hard drive mechanism in the case. It sits happily next to your computer on its end, rather than flat.

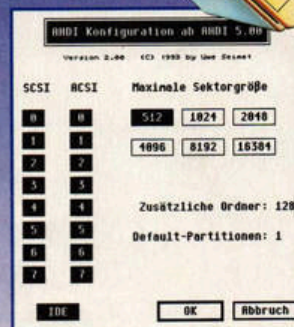
The drive comes with the ICD Link 2 to connect it with your ST, and it uses a Quantum mechanism. A second SCSI socket is provided

AHDI

AHDI is the official Atari software offering, and has the advantage of working with most, if not all, hard drive SCSI interfaces.

AHDI is pretty straightforward to use and does an effective job of formatting, partitioning and auto-booting a drive. However, it is very slow. Replacing the AHDI boot system with any of the alternatives on these pages will speed things up noticeably.

However, if you need compatibility, or do not have any other software, AHDI is freely



available from all good PD libraries and BBSSs.

STF RATING: 69%

on the back for chaining purposes. The drives are supplied with the SCSI translator and HD Driver partitioning software. MiniS drives are tested before they are delivered to you, and each one comes with a two-year warranty.

The MiniS is very easy to use. The fan is as quiet as any we tested, and drive access is barely noticeable. It's easy to forget that the drive is there at

all. Even when it was left on for long periods, the case did not get too warm. Overall, it is a small and efficient drive which performed very well.

STF RATING 88%

MaxiS

System Solutions
☎ 01753 832212

120MByte £269
270MByte £309
540MByte £369
270MByte SyQuest £549
270MByte SyQuest and 270MByte hard drive £709

The MaxiS is the big brother of the MiniS. Its case has been designed to enable two mechanisms to be fitted, instead of just one. This means that two hard drive mechanisms can be



The MiniS is neat and compact.



HD DRIVER

HD Driver is a little different from other hard drive utilities in that it doesn't have an option to format your drive. You are expected to use one of the other packages (even AHDI) to format the drive, then use HD Driver to partition the drive and install the auto-boot system.

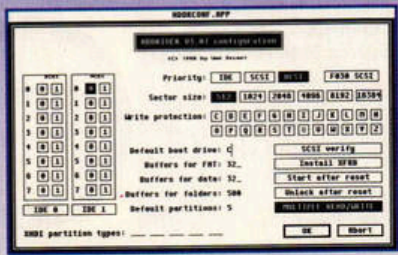
The MiniS and MaxiS drives from System Solutions come with HD Driver. They are ready formatted, so all you have to do is partition them to your specifications.

Aside from not formatting your drive, HD Driver provides everything you need in a suite of programs. It enables you to use IDE

drives, and has a number of specialist format options. It also speeds things up. We booted the same drive with the ICD software and HD Driver, and HD Driver was significantly faster.

This is a very good program and comes highly recommended. Get it from System Solutions (☎ 01753 832212) for £19.98.

STF RATING: 90%



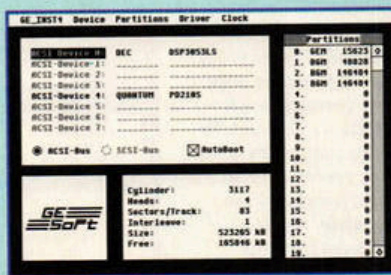
GESOF

The GeSoft hard drive software is included with hard drives from The Upgrade Shop. It is easy to see that it originated in Germany, but all the important stuff is in English.

This is an easy to use program and it works with ICD as well as Toplink SCSI interfaces. The uncluttered screen layout, coupled with plenty of advanced format options for the expert, makes it an excellent package. The

GeSoft software costs £14.95 and is available from The Upgrade Shop (☎ 01625 503448).

STF RATING: 81%





You can add a SyQuest drive to the MaxiS whenever you want.

GASTEINER

- Gasteiner
 ☎ 0181 3456000
 120MByte £189
 270MByte £239
 540MByte £299
 730MByte £329
 1GByte £439
 2GByte £729
 4GByte £799

Gasteiner does an excellent selection of hard drives, in a range of storage capacities, and at prices to suit most people. These are the only drives we

installed or, more importantly, a SyQuest removable media hard drive can be used alongside a standard hard drive.

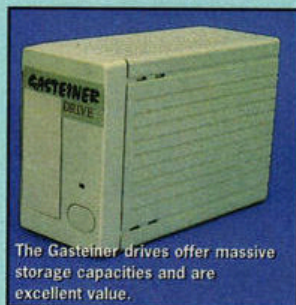
SyQuest cartridges are, essentially, removable hard drive platters. They come in a number of sizes and enable you to add storage capacity without shelling out for a bigger hard drive. As long as you don't need instant access to everything, this is an ideal system. Again, the drives are supplied with the SCSI translator and *HD Driver* partitioning software

The MaxiS system enables you to pass data from hard disk to SyQuest and back with ease. The access times on the SyQuest drive are a fraction slower than a conventional hard drive, and it is a little noisier, but the hard drive and SyQuest combination works well. If you can afford it, it is also a great way to keep your data backed up.

STF RATING: 91%

tested with a power switch on the front of the drive. That may not sound important, but it's really handy. It avoids all that delving behind the computer, hoping you've located the switch, not the remains of last week's pizza.

The drives are available in sizes up to a massive 4GByte, which is far bigger than most people will ever need. This sort of size is worth considering, however, if you are interested in direct-to-disk recording on a Falcon (a 4GByte drive would give you one hour 36 minutes of eight-



The Gasteiner Drives offer massive storage capacities and are excellent value.

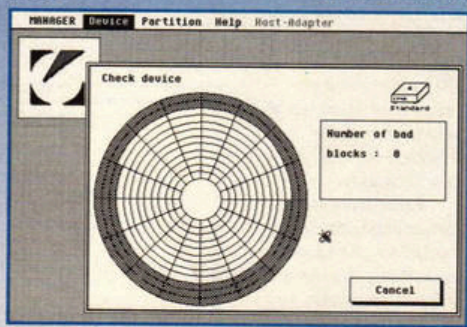
PROTAR

Unfortunately, the Protar software only works with the Protar SCSI interface. It is, however, a beautiful environment to work in. Instead of a screen full of techno-garble about cylinders and interleave, you progress through a simple, graphics-based set of screens. When formatting commences, the famous Protar 'spider's web' appears, giving you a graphical representation of progress. This software is completely effortless to use



and it is a matter of considerable regret that it cannot be used with other SCSI interfaces. This is a product which would sell very well to those needing a simple start to hard driving.

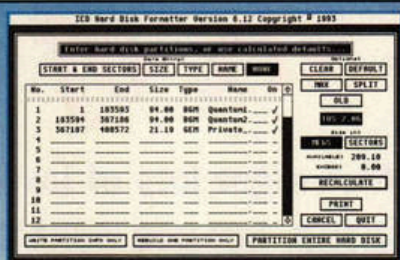
STF RATING: 94%



ICD

ICD has been in the SCSI interface and hard drive formatting business for a long time, and its formatting and partitioning software is the well-established industry standard.

The full ICD package is a large suite of programs which cover all aspects of hard drive maintenance, plus formatting, partitioning and auto-booting. The Squirrel drives come with a version of the ICD utilities designed to work specifically with



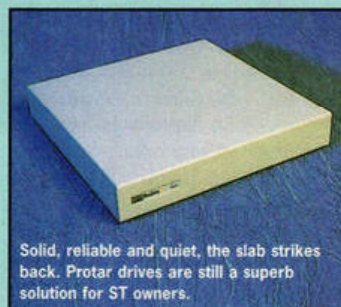
the Link 2. If you would like to work with the ICD software on other SCSI interfaces you will need ICD Pro Utilities (£39.95) from System Solutions (☎ 0181 693 1919).

STF RATING: 89%

track recording with *Cubase Audio 16*).

The drive was well-constructed and performance for copying and writing data was as good as any of the drives we tested. The supplied formatting and partitioning software was not the easiest package to use, but it did the job and, once it was installed, worked very well. These drives are certainly very good value for money.

STF RATING: 89%



Solid, reliable and quiet, the slab strikes back. Protar drives are still a superb solution for ST owners.

PROTAR

Analogic Computers

- ☎ 0181 5469575
 420MByte £299.95
 540MByte £319.95
 850MByte £399.95
 1GByte £499.95
 (lower capacity drives are available - call for a quote)

The Protar drives are different from all the others covered here because they are in the 'slab' format, rather than the 'sandwich toaster' format.

Big enough to stand your monitor on, these drives have

solid metal cases and are built to cope with life in the most demanding environment. They have a fully internal SCSI interface board, so all that is needed to connect them with your ST is the supplied cable. The drive we tested was whisper quiet, certainly the quietest of all those we tested. The fan is carefully tucked away underneath the drive, so be sure to stand it on a surface where that fan can do its work. If you remove the feet to make it stack better the drive will overheat. This isn't a criticism, just something to be aware of.

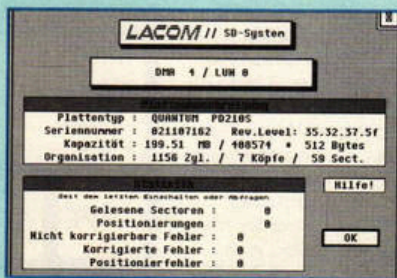
The Protar drives really do have a feeling of quality and dependability about them.

SD MANAGE

SD Manage comes with the Gasteiner drives. This software does a very good job when installed, giving respectable speed and reliable auto-booting. Having said that, it is an awful program to use. Many of the dialog boxes are jam-full of German text, and at times we were just guessing which option was correct. To compound matters, the manual refers to an older version of the software, which is different from the current version. If you

use this software, be very, very careful. It's easy to make a mistake, especially if your German isn't too good.

STF RATING: 48%



DIAMOND BACK 3

The thought that your hard drive might suddenly go belly up is enough to make most people think seriously about backing up their data. *Diamond Back 3* is an excellent commercial solution to this problem.

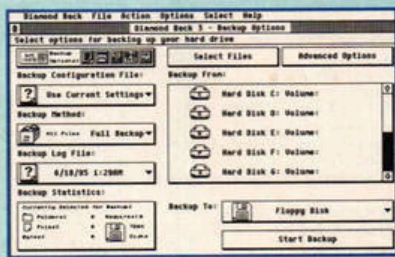
Diamond Back 3 can store backups on a tape streamer, a hard disk, or floppies. It keeps a careful record of what you have backed up, so that even a single file from a large backup can be retrieved easily. There are many hard drive backup programs



available, but *Diamond Back* is now the industry standard, and it does a very good job.

Available from HiSoft (☎ 01525 718181), *Diamond Back 3* costs £49.95.

STF RATING: 91%



Each one comes supplied with a spare bay for a second mechanism, spare power tap and a SCSI plug. The formatting and partitioning software is a joy to use, being both straightforward and graphical. These drives come highly recommended for high build quality and dependable performance.

STF RATING: 88%

SQUIRREL

HiSoft Systems
☎ 01525 718181

365MByte £318
540MByte £338
730MByte £378
1GByte £538

(take off £69 if you already have ICD Link 2 and the ICD software)

The Squirrel drives are housed in a tough plastic case which



HiSoft's Squirrel drive is a winner.

is lined internally with metal to form an electronic shield (this also applies to the Gasteiner and System Solutions drives). Firmly in the 'sandwich toaster' domain, this drive is light, fast and very easy to use. It comes with the ICD Link 2 SCSI interface and the excellent ICD software, so you can easily customise its partition layout.

The Squirrel, along with the System Solutions drive, was the fastest drive we tested. It is meaningless to quote access times – we simply used a large boot set-up and a stop watch. These drives had about a two second advantage over the rest when running the same boot setup. Build quality is as good as any of the plastic-cased drives, and it quietly minds its own business while you carry on computing.

STF RATING: 92%

THE UPGRADE SHOP

The Upgrade Shop
☎ 01625 503448

42MByte £169
80MByte £189
234MByte £239
500MByte £324

The Upgrade Shop drives combine the build quality of the Protar drives



DIAMOND EDGE

Diamond Edge is principally a hard disk defragmenter.

As you read from and write to your hard drive, the data becomes spread about the disk. The drive keeps a record of where everything is, but from time to time everything needs sorting so that all the data associated with each file ends up in one place. Eventually, if you do not optimise your drive, you will lose data – maybe even a whole partition.

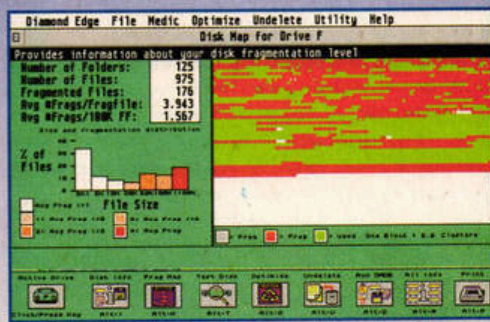
Using *Diamond Edge* every couple of weeks will help you avoid problems. If you don't trust any program that messes



around with your drive at a fundamental level, you should back up your data before using it.

The program also includes utilities for undeleting files which you have erased by mistake, and it has a limited hard drive partitioning function. *Diamond Edge* is available from HiSoft (☎ 01525 718181) for £49.95.

STF RATING: 90%

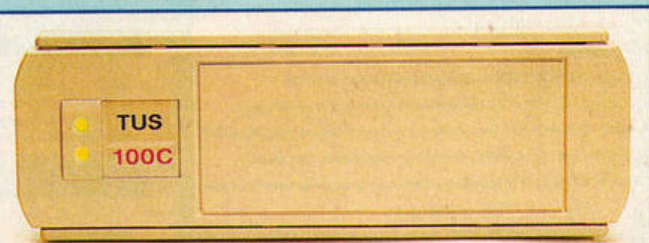


with the 'sandwich toaster' design. They have all the usual features for this type of drive, including a SCSI ID switch and SCSI through port. Because of the build quality of the case, the drive is very quiet and emanates a Protar-like sense of security.

The formatting and partitioning software from GeSoft is very straightforward and functional. The GeSoft Toplink

SCSI interface is supplied, and worked just as well as the ICD Link 2. Once again, this is a drive that eases itself into the background so you would hardly know that it is there, apart from the occasional faint clicking of hard drive access. The TUS100c is a cost-effective, well-built solution for ST hard driving. Highly recommended.

STF RATING: 91%

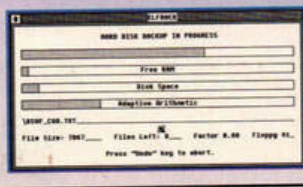


The TUS100c combines superb build quality with dependable and quiet components.

ELF BACKUP

If you don't want to pay out for a commercial backup package, you might consider *Elf Backup*, which seems to be the best of the shareware offerings. The author asks for a measly \$10 in return for what is quite a competent package. It has few of the features of *Diamond Back*, but it does back up hard drive partitions and files to floppy disks effectively. *Elf Backup* is available from Ad.Lib PD (☎ 0191 3702496) for £1 plus an SAE.

STF RATING: 78%



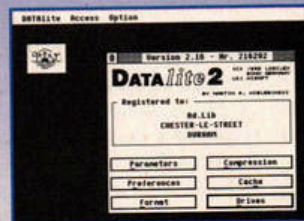
DATALITE 2

Datalite attempts to expand your hard drive using real-time data compression and expansion. The idea is very clever, and *Datalite* partitions can contain up to twice as much data as standard ones, but the system is way too slow to be practical. Access times from *Datalite* partitions may fool you into thinking you're working from floppy disk – an ST running at 8MHz does not have the processing power to perform real-time data compression at a reasonable speed.

Given that hard drives are now so cheap, you would be better advised to add a second

hard drive or replace your current one. Real-time compression is a nice idea, but it just doesn't work well enough on an ST. *DataLite 2* is available from HiSoft (☎ 01525 718181) for £39.95.

STF RATING: 45%



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- L.87 STORM 94: (STE) Aliens meet Goufflet for superb blasting action! (order 91 for STFM version) (£3.00)
- L.79 DARKLYTE II: Sequel to the highly-rated Space Crusade type game (1Mb £2.50)
- L.41 MURDER ON THE ORION EXPRESS: Murder solving game set on an interstellar cruiser (£3.00)
- L.21 DEAD OR ALIVE...I: Large, complex and challenging text adventure (£3.00)
- L.97 STONE COLD SOBER: An adventure game with graphics (£4.00)
- L.84 WORD WIZARD: Word puzzle game with a gamble feature from Nice Bytes (£3.00)
- L.101 DUNCES CAP #1: Four super puzzle games: Outrageous Fortune, Matchmaker, Frame of Mind and Cryptogram (£3.00)
- L.110 QUICKFLIP by Nice Bytes. Mind-bending tile flipping game (£3.00)
- L.66 HARBREAK: Highly addictive and challenging arcade puzzle game. (£3.00)
- L.31 THE CURSE OF AZKEL: Fantasy trading/adventure game (2 disks £4.00)
- L.60 CONQUEST: A God game in the style of Populous (£3.00)
- L.58 NICE BYTES #1: Gridword, a word game & Rego, a tile flipping game (£2.50)
- L.50 DEMON: Fantasy game with 3D view, monsters, magic, teleports, traps, secret walls, etc (£3.00)

DAVE MUNSIE GAMES

Munsie Games, some of the most playable and fun-filled games on the Atari, can now be registered via L.A.P.D.I! Send us the code number from your game and we'll send you the pass-code giving access to extra lives, extra levels, etc.
Cost is just £2.00 per title. Games that can be registered in for any Asteroids, Frogger and Space-Off.
All registrations receive a FREE copy of Dave's SEA WOLF game FREE MUNSIE DISK-O-ZINE
For a free copy of Dave Munsie's magazine disk with information and screen shots about his games just send a blank disk and an s.s.o.e. to the L.A.P.D. at the address above.

BUDGIE UK

- BU.119 FOOTBALL TACTICIAN 1: The original £19.95 Premier League version of the soccer management game!
- BU.111 INTERNATIONAL CRICKET II: Animated 3D game (1Mb)
- BU.50 SPACE INVADERS: Classic arcade action by Robert Leong
- BU.90 MATCH IT: Possibly the most addictive game ever devised
- BU.89 HORSE RACING SIM: Quality sim from the sale ring to the track
- BU.30 QUEST FOR GALAXIA: The 'Galaxians' return to your ST
- BU.70 PACMAN ST: The definitive version by Robert Leong
- BU.71 DARK WARS: Role playing adventure with a 3D view

MUSIC

- S.4 YAMAHA PSS: Patch editor and facility to print tablature music
- S.144 EKSEK 1: A 100 track, 240ppn sequencer with many features
- S.145 OPTIKONIX MUZZAK: Rip and play music from other programs
- S.8 NOISETRACKER: Soundtracker .MOD player with eight starter tunes
- S.7 ACCOMPANIST: 16 Voice Henry Cost sequencer (full instructions on disk)
- S.19 ALCHMIE JR: Impressive Swiss multi window, multi-track sequencer (1Mb)

PROGRAMMING

- P.44 GFA BASIC V2: Full version of language with tutorial & compiler! (NB this disk is not PD - L.A.P.D. have permission to distribute it)
- L.68 SPRITE WORKS: New commands for games writers using GFA V3+ (2 disks/£7.00)
- DSF.1 SOZOBON C: A complete C compiler with documentation
- P.24 MENU-MAKER: Make your own menus with music, sprite and scrolling message
- P.33 ZX SPECTRUM EMULATOR: Emulate the old Speccy on your ST/STE (1Mb)
- P.17 68000 PROGRAMMING COURSE: 10 'How to do it' document files
- P.19 GFA EXPERT: Massive text file and help routines for GFA-Basic 3.0
- P.16 C ADVENTURE TOOL KIT: Write professional quality adventures in C.

UTILITIES

- L.111 SUPER HACKER: Replace a picture in almost any game or demo with your own! (£3.00)
- U.67 ST TOOLS: An exhaustive collection of Atari ST utilities
- U.53 TERADESK V1.36: Replacement desktop for the ST/STE (1Mb)
- U.20 FASTCOPY 3: Excellent disk copier for cover disks
- U.48 PREMIER PACKERS: 13 of the best program packers, plus a de-packer
- U.42 PICTURE HUNTER: Rips picture screens from other programs
- U.66 BEFORE DAWN: Animated screen saver that will use your own animations
- U.47 PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc
- U.52 VAULT & TURTLE: Fast hard disk back-up utilities.

ART & GRAPHICS

- A.103 OFFICE CLIP ART: 33 PCX images of office related items
- A.100 ANIMALS CLIP ART: Over 170 PCX images of animals (5 disks/£7.50)
- A.101 ANATOMY CLIP ART: 36 PCX images covering every zodiac sign (3 disks/£4.50)
- A.99 MINIPICS II (1Mb): All resolution picture converter and catalogue.
- L.77 AUTO-STEREOGRAM: (1Mb) Create your own 3D Magic Eye pictures (£3.00)
- A.95 VISUAL ILLUSIONS: A collection of 24 Magic Eye 3D pictures
- A.98 STEREOGRAM ANIMATIONS: Now see 'Magic Eye' pictures move!
- A.36 KZMIC 4: Complete version of the stunning psychedelic pattern creator
- A.1 ANI ST: Commercial quality animation program (once cost £60.00 to buy!)
- A.84 GENVIEW: Load, view, convert just about any picture format (1Mb)
- A.45 CRACK ART: Demo version of the excellent German art program
- A.75 POLYFEM by Martin Brownlow: Make films from multiple 3D polygon objects
- A.44 FANTASY SLIDESHOW: Spectrum 512 pictures on fantasy theme (over 16's only)
- L.26 L27, L28 TYPY WHITE CLIP ART: 4 disks sets of quality clip art in IMG format £10 per set

MISCELLANEOUS

- M.177 LOTTERY COMPANION: Valued assistance with your lottery entries.
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- L.111 SUPER-HACKER: Put your own picture into demos, games etc. (£3.00)
- M.146 AWARD MAKER: Design and print awards certificates.
- M.155 ROUTE FINDER: Route finding program for England, Wales and Scotland.
- M.161 THE GARDENER: A special database for gardening enthusiasts.
- M.175 FISHERMANS DATABASE: The ultimate record program for the keen angler.
- M.19 AIR WARRIOR: Flight sim with World War II aircraft.
- L.17 ADDRESS BOOK: Neat and easy to use database for name and addresses (£2.50)
- L.18 CIRCUIT: Easy to use electrical circuit diagram producing program (£2.50)
- M.93 STITCH MATRIX: Pattern making program for knitting machines.
- M.111 NORTHERN & EQUATORIAL STAR ATLAS: Superb serious astronomy program S/W
- M.77 THE BIBLE: King James Authorized version. 3 disks (£4.50)
- M.76 FORM-FINDER: Proven horse race analysis and prediction program.
- M.81 NEWSDISK: Construct your own newsletters and magazine disks.
- M.100 GERMAN TRANSLATORS: Three programs to translate German text to English
- M.26 GENEALOGY: 2 programs for the family historians to trace their forebears
- M.5 YOUR SECOND ATARI ST MANUAL: Text files to supplement the official manual.
- M.17 WORD PUZZLE: Stuck with word games? Then this disk may help.
- M.30 EXTRA WORD LIST: 70,000 extra words to use with disk M17.

BUSINESS

- W.21 MARCEL: Super word processor with built in spell checker.
- M.106 ACCOUNT-ABILITY: Fully featured accounts program. 10 accounts, 2,000 transactions.
- M.148 INVOICE MASTER: Excellent invoicing system for small businesses.
- M.13 OPUS 2000: A superb spreadsheet program (1Mb)
- M.83 INVENTORY PRO: A stock control system.
- U.23 DOUBLE SENTRY: Impressive accounts package for the small company (no VAT)
- U.33 FAST BASE: A powerful and flexible data-base.
- W.3 FIRST WORD: Word processor that set the standard for others to follow.

EDUCATIONAL

- L.20 SUPER SPELL: Teaching games for the 4 to 9 year old (£2.50)
- L.37 SUPER FUN: More teaching games for the 4 to 9 year old (£2.50)
- G.266 WITCHES, MICE & FAIRY TALES: Games for younger users.
- G.83 NOAH'S ARK: Collect the animals, two by two - addictive for adults too!
- M.95 ABOUT THE HOUSE: Excellent collection of programs for young children
- M.28 KIDZ EDUCATIONAL: Alphabet, Maths Test, Numerical-Go-Round & Number Maze
- M.37 KIDZ DISK #1: Colouring Book, Spell Pic, Word Pic and Flash Card
- M.42 KIDZ DISK #2: Dot to Dot, Keyboard Capers & Matching
- M.67 BODY SHOP: Graphic quiz-type human anatomy tutor
- M.104 SOLAR SYSTEM GEOGRAPHY: Effects of the sun & moon on tides, seasons, etc
- M.16 KIDZ COMPILATION: Kid Graph, Grid, Music, Notes, Piano, Publisher, sketch and story...all on one disk!
- PRO.27 EARLY LEARNING MATHS 2: by Philip Rankin for 9-12 years
- L.01 ROBOT MATHS: Maths Tutor for children aged 6+ (£2.95)
- L.02 MOON LETTERS: Spelling game for ages 5+ (£2.95)
- L.04 ROBOT WORDS: Hangman in a modern format (£2.95)
- L.08 ALL BLOCKED UP: Mathematical puzzles for the young (£2.95)
- L.10 DROP DOWN WORDS: Spelling/memory game for youngsters (£2.95)
- L.12 MATHS FUN: Maths for children 4 to 7 years. (£2.95)
- M.20 G.C.S.E. STUDY AIDS: Help with Algebra, Trigonometry and Geometry
- M.1 PLANETARIUM: Excellent, easy to use, astronomy program
- M.153 WORLD WAR II: Home front study pack for Sec. school work (3 disks £4.50)
- M.7 HISTORY FILE: Investigate a historical murder in Scotland (3 disks £4.50)
- M.86 DEATH OF A PRESIDENT: Investigate the Kennedy assassination (3 disks £4.50)
- M.114 FRANGLAIS 3 & 4: French language tutor programs
- M.123 C.I.A. WORLD FACTBOOK: Facts and figures on countries. (4 disks £6.00)
- W.22 HOMEWORK: A word processor for the younger user.

COMMUNICATIONS

- L.113 BBS DIRECTORY: Money saving directory of UK BBS's (£2.00)
- C.22 TEDDYTERM: A superb multi-function communications program
- C.7 VANTERM V4: Excellent multi-function comms program
- M.138 MORSE CODE TUTOR: Practice and perfect your skills
- C.24 OFF-LINE READERS: Four off-line reader programs

BUDGET PRICE DISKS - ONLY £1.00 each!

- B.45 FIGHTING SAIL: Naval Battles
- B.51 COLOSSAL CAVE: Original adventure
- B.39 ASTEROIDS: A loving restoration
- B.15 ROLL N NUDGE: Fruit Machine
- B.20 HACMAN: Pacman action
- B.36 B BALL POOL: Bar game simulation
- B.27 FROGGY: The arcade classic
- B.50 STAR TREK: Save the Federation

AUTHORS

As a leading P.D. library for the Atari ST and Falcon computers we are always seeking to maintain a catalogue of the very best and newest titles around. If you wish to get maximum distribution for your work either as PD, Shareware or Licenceware then please send us a copy at the address above. We respond to ALL submissions and enquiries.

FREE CATALOGUE

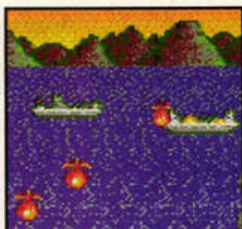
For a FREE copy of our latest, user friendly catalogue disk just send a blank disk and s.s.o.e. to the address above and we'll send you one by return, complete with a selection of quality PD.
Alternatively send us £1.00 and we'll send you the same catalogue and free programs on one of our disks. (Please quote STFB)

PRINTED CATALOGUE

Now available, listing hundreds of PD/Shareware/Licenceware titles. Only £1.00 including P&P or 50p if ordered with disks.
Please state if you have a Falcon.
Please make all cheques/postal orders payable to L.A.P.D.
Credit cards welcome



PD Action



A rather good month for PD games, says Nick, especially if you're a spurned lover.

BOMBZAI

The Computer Dungeon,
File number P15004
All Ataris, joystick required

This is a rather slick demo of a French *Dynablasters* clone for two or three players. The object is to get to your opponent(s) and destroy them with a well-timed bomb.

Various bonuses enable you to stretch the reach of your bombs, lay more than one at once and even blow through more than one obstacle at any one time. Others enable your player to move faster or fire laser beams instead of placing bombs. Nasty, I'm sure.

The inclusion of teleport pads and tunnels adds variety, as do the arrow squares which prevent you from moving in anything other than the direction indicated. There's more to *Bombzai* than just blowing a path through to your opponent and trapping him – a more cunning game of hide and seek prevails.

Bombzai is slickly presented and adds some novel twists to the genre. Colourful graphics and fluid animation are let down only by the beepy



sound effects.

The accompanying documentation suggests the full game was released in France last November, and we think you'll be keen to see more. It's just a pity there isn't a one-player option in the demo.

STF RATING: 90%

SQUARE OFF

The Computer Dungeon
STE, TT or Falcon with
1MByte. Hard drive
recommended

Square Off is the definitive *Tetris* clone for upper-echelon Ataris. A Dave Munsie title, it runs best on machines with 2MByte or more. The extra memory is used to store game data, which cuts down disk accessing time – useful if you don't own a hard drive.

Square Off incorporates three versions of *Tetris*. The first, and by far the least

inspiring (because there are thousands of others out there) is the classic one-player version. Twist and position the tiles to fill a line and therefore score points, yawn.

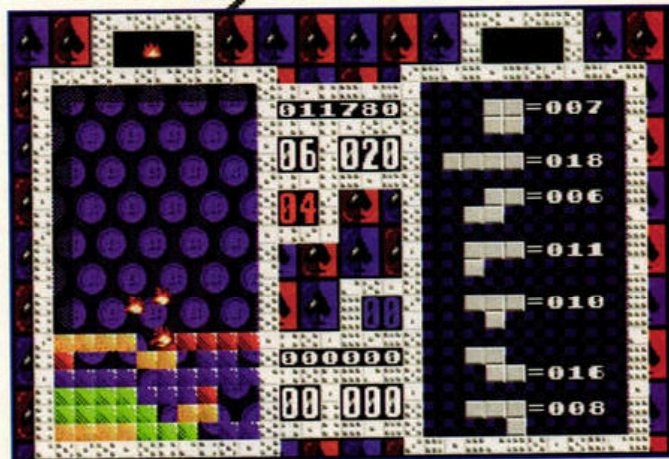
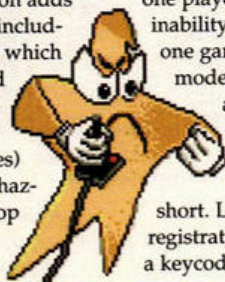
The one-player arcade version adds a few novel twists, including little fire bombs which can clear spaces and save you from disaster (or create more awkward holes) as the tiles pile haphazardly towards the top of the screen.

The battle

version enables you and a friend to go against each other in an attempt to resolve that age-old question of who's the better *Tetris* player. Adding to the challenge is the possibility of hindering your opponent – clear enough lines before one of his or her tiles is placed and you can transfer those tiles (minus one), to his screen.

Square Off has the customary shareware restrictions – a maximum of seven levels in one player mode, and the inability to play more than one game at a time in battle mode. These restrictions

are cleverly judged – you can just get into the game before being pulled up short. LAPD is handling UK registrations and can give you a keycode that lifts the



The arcade version of *Square Off* breathes new life into the well-used *Tetris* format.

PD: WHAT'S IT ALL ABOUT, THEN?

There are three terms commonly used to describe the software that's distributed by PD libraries. Here's a brief guide:

Shareware programs are a 'try before you buy' product. Some are complete and rely on your honesty in paying up to encourage future product development. Other programs are restricted in some way – registering provides a keycode to unlock the program and access all the features. Alternatively, authors may offer extra programs in return for registering, or free

updates of the program you've registered, as and when they become available.

Freeware programs aren't charged for – you can use and copy them freely provided you follow the author's terms and conditions as laid down in any documentation accompanying the program (this can include having to keep all the files together, or not altering the files).

Public domain software, in its strictist sense, is identical to freeware, with the exception that

the author surrenders all claims of copyright to his software, which means you're free to do what you like with it.

If in doubt, always read the accompanying text file. If the author says you can't do such-and-such, don't. PD Libraries should also take note of this, and ensure that any software they distribute has all its files intact, not just the program ones. It's also a good idea to contact the author to triple-check that it's okay for you to distribute the program under your banner.

KEV'S WORLD

Floppyshop, Disk FWG52c (£3.00)
All STs (not TOS 2.06 or Falcon compatible), joystick required

This is the full version of a game originally released as shareware a few years ago. The plot revolves around two former friends, set against each other by the arrival of a woman (*Nick is therefore more than qualified to pass judgement - Karen*).

You are Kev, and your girlfriend Katherine has been snatched by Kolin. This means that you've got to battle your way through ten levels of platform hell to rescue her. Along the way you'll face all manner of weird and deadly creatures. Luckily you can destroy them, but some require more blasting than others, and



Having been left out in the cold and all, I should really be playing 'baddie' Kolin in *Kev's World*. Bitter, bitter, sad, sad.

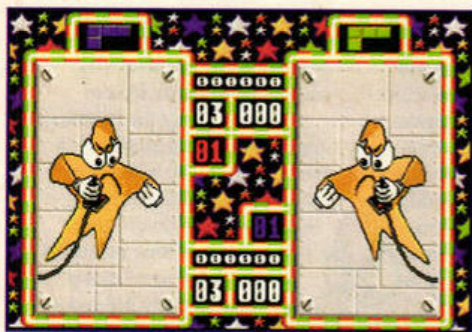
with the timer ticking away, you can't afford to hang around.

The game is very well presented - the graphics are appealing and the sound effects are effective, without ramming themselves down your throat. The major minus points are the lack of scrolling and general sluggishness of it all. Everything moves a bit too slowly, and your controls aren't as responsive as they could be. Nevertheless, *Kev's World* is



quite addictive and serves as a gentle introduction to the platforming genre.

STF RATING: 76%



This is the screen which introduces two players to *Square Off's* battle mode. Be warned, it could end friendships.

restrictions. Remember that when you register you're also voting for the continuation of the Atari shareware market.

The brightly-coloured graphics are top notch, and make the most of the limited opportunities offered by a *Tetris* variant, while the sound samples introducing various parts of the game add to the its cartoon-like atmosphere.

At the end of the day, *Square Off* is a *Tetris* clone, but the inclusion of the arcade and two-player sections make it the best Atari version we've seen for a long, long time. Well worth a look, if only for old times sake.

STF RATING: 84%



"I remember it well, the spring of '44. There was this submarine commander who just wiped out whole Allied naval and air squadrons." Rewrite history with *Seawolf*.

SEAWOLF

Wonder Disk 73
All Ataris, joystick required

Seawolf is the free-ware result of a 'project gone wrong', according to its author, Dave Munsie. It's an undemanding shoot-'em-up that's a cross between the

original *Sea Wolf* arcade game and *Operation Wolf*.

You are in control of a submarine and must shoot down as many ships and aircraft as possible before their shelling destroys you. The helicopters hover, and are pretty straightforward targets, but the various boats move across the screen at different speeds and require precisely-timed shots to send them to the depths of the ocean.

Luckily you have unlimited firepower, so you can blast away without worrying about where your next salvo's going to come from.

Seawolf is a fun game that becomes a little monotonous after a while. The graphics are adequate without being stunning, and it's easy to see how further development could have turned it into a shareware title. As it's a freebie, you can't really go wrong.

STF RATING: 66%

RELICS

Floppyshop, Disk F5150
Falcon only, can be run from floppy disk

Relics is Black Lotus' first attempt at demo coding on the Atari, and while the authors inexperience shows (they freely admit that all their routines are at least six months old), there are some elegant touches which give it a little individuality.

These include the 'demo' section where a digitised picture of a computer is combined with a mini-animated piece that fits (originally at

least) inside its monitor. We also liked the three shapes rotating in, around and through each other. Otherwise, there's nothing (including the forgettable dance-oriented soundtrack) to recommend it.

STF RATING: 56%



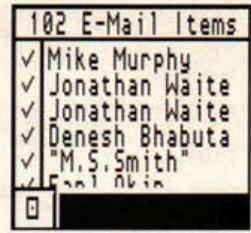
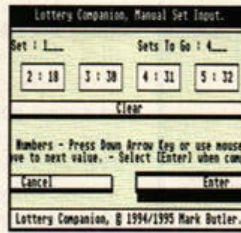
A innocent-looking computer that, but it's not much like an Atari. And they would have got away with it too, if it hadn't been for those pesky ST FORMAT kids and their shark.

PD ACTION ROUND-UP

So many games come your way courtesy of PD Action that you'd be forgiven for forgetting what was reviewed when. Thank goodness, then, for this indispensable guide to what's been reviewed in the past four months:

TITLE	PD LIBRARY	ISSUE	RATING
Conquest 2: Viking Hordes	LAPD	69	87%
Asteroidia	LAPD	72	86%
Aliens	STellar PD	70	85%
Datachess 2	Floppyshop	70	85%
PD Pack Eight	Chaos PD	69	82%
Stone Cold Sober	Floppyshop	72	81%
Pothole 2	Chaos PD	70	75%
Falctris	Ad.Lib	71	71%
Project Purify	LAPD	69	63%
Revival	Power PD	71	59%
Ultimate Arena	Riverdene PDL	72	58%
Max	Power PD	69	55%
Armoured Operation	Power PD	72	53%
Pop!	LAPD	69	51%
International Manager	LAPD	70	49%
Quick Flip	LAPD	71	40%
Crazy Letters	LAPD	70	35%
Starburst	Power PD	69	20%
Mad	Chaos PD	70	20%

PD Choice



The latest PD releases, reviewed by Frank Charlton and his monkey (Nick).

ST-GUIDE 1.3

HENSA Software Archives,
stored in micros/atari/tos
/o/o001

All Ataris, any resolution

Back in the mists of time, Commodore produced a free-ware utility for the Amiga called *AmigaGuide*. It was a full hypertext help system, and programmers were encouraged to distribute documentation in *AmigaGuide* format. Hypertext documents are friendlier than ASCII files, because you can skip to any topic you're after.

German author Holger

Weets then

created

ST-Guide,

the Atari

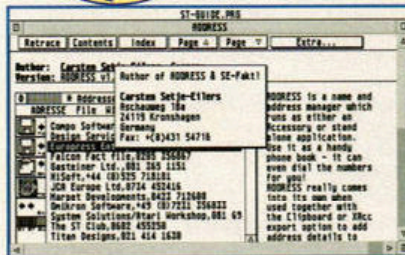
equiva-

lent

(except it's

quicker and

has more



E-mail Joe Connor at jconnor@cix.compulink.co.uk for details of how to register *ST-Guide*.

LOTTERY COMPANION 1.1

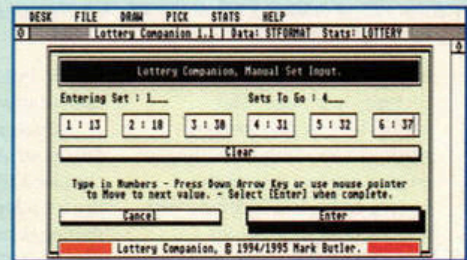
Floppypshop

All Ataris, medium or high resolution

Lottery Companion is a program for those of you (those of us) hooked on the National Lottery. You can store all the winning numbers as they appear each week and compare them with your own selection of numbers. Up to a 1,000 different lines can be entered.

The program also enables you to view previous draws (the first twenty are included in the unregistered version, and registering brings an update). You can view them in a variety of ways, including the order they were drawn, or as a series of 'hot' and 'cold' numbers, depending on how often certain numbers have been drawn in the past.

You can also generate a fresh set of lottery numbers by a number of methods. Options include random, manual, hot (the most commonly selected numbers), cold (guess), range (a number within a set range) and wheel (which gives a range of numbers from a set, so seven different values would give a maximum of seven sets). Whatever turns you on, I guess.



Should this set of numbers (or any of our other 'lucky' combinations) come up in the National Lottery, expect wholesale changes in the *ST FORMAT* team.

The accompanying *MANUAL* offers more than just details of using the program, including some helpful hints about tax and legal problems you may encounter, especially if you're a member of a syndicate. You can access this from inside the program – a useful touch which means you don't have to quit the program to find out how to use it.

It's a very detailed program, and while it might take the fun out of the lottery (we reckon statistics and dreams don't tally), it should keep the ardent mathematicians happy. *Nick Peers*

STF RATING: 60%

features). The software consists of the *ST-Guide* hypertext reader itself, plus tools to develop your own HYP files, including the compiler. Whereas *AmigaGuide* files are specially-formatted ASCII text, *ST-Guide's* are compiled and then compressed into a space-efficient packed file.

ST-Guide can be run as an Accessory or a standard program, and will happily multi-task. The simplest method is to install it as an application from the Desktop, so that when you double-click a HYP file, *ST-Guide* loads and displays it. 'Hot' links are highlighted in bold and underlined text. Just click on a link, and you're transported to the

relevant section.

Although not as widely accepted as *AmigaGuide* is on the Amiga, more and more programmers are including *ST-Guide* documents in their programs (you can often access these documents by pressing HELP).

As well as being faster than *AmigaGuide*, *ST-Guide* has a lot of enhancements, includ-

UPDATE CORNER

525 v2.1

Ad.Lib, HENSA

All Ataris, colour or monochrome

The latest version of 525 (previously described as "the ultimate sample conversion program") enables you to convert samples to different frequencies as well as different formats. You can also perform a low pass filter to remove hiss from the sample, and abort the conversion process at any time by pressing [Esc] or [Undo]. There's still no facility to play samples from within the program, however. Version 2.01 was reviewed in issue 69.

STF RATING: 84%

WARP ISSUE TWO

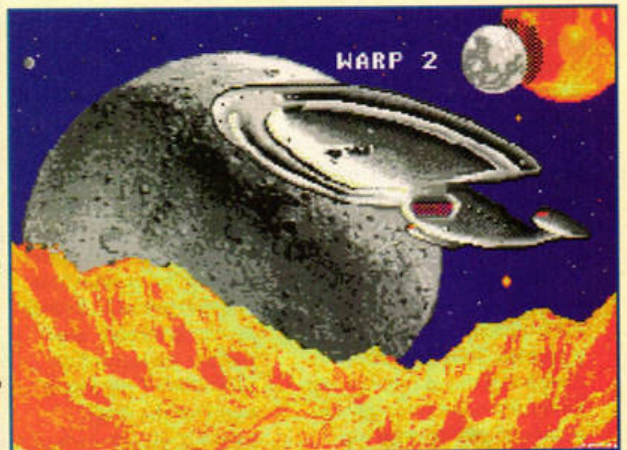
Keefy's PD

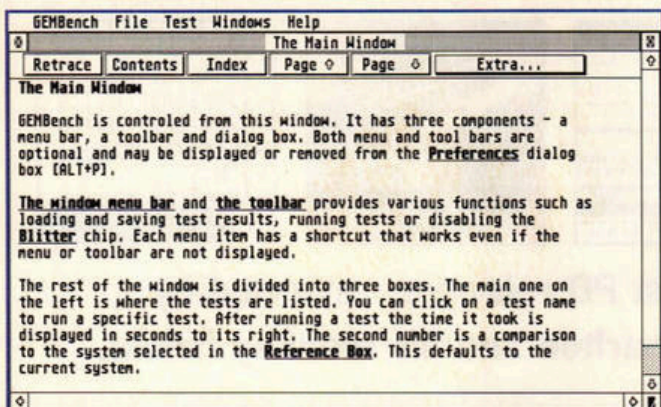
All Ataris (TOS 2.06 and Falcon with STOSfx 3.0), 1MByte recommended, colour only

The second issue of this excellent *Star Trek* disk magazine has an updated interface and includes loads more quirky samples. The usual batch of news, reviews, short stories and features make for a lively and entertaining read. *Warp One* was reviewed in issue 70.

STF RATING: 92%

Head for the stars with *Warp 2*, the excellent *Star Trek* disk magazine.





Programs such as GEMBench include HYP files, and user groups like the Falcon FacTT File distribute their monthly updates in hypertext format.

ing the ability to include IMG pictures in a page. The Compiler can also 'reverse-engineer' existing HYP files, so you can learn from the source code, and it comes with a load of helpful guides - everything from how to use *ST-Guide* to creating your own texts. With UK support by Joe Connor, *ST-Guide* is establishing itself as the best way to write and read help files on any subject, and we certainly encourage every programmer to use it. **Frank Charlton**

STF RATING: 95%

TAZ

**GL-PD, Disk GL1888
All Ataris, 1MByte
recommended**

If you've ever watched a PC owner logging on to a BBS (you sad person, you), you might have 'enjoyed' some highly colourful - and occasionally garish - 16-colour displays. Many PC BBSs use a system called ANSI - defined by the American National Standards Institute - to display text and rudimentary graphics in up to 16 colours.

TAZ from Neat and Nifty software is a full 16-colour ANSI terminal package for all STs. Although it runs in medium resolution, it uses a palette-switching technique to boost the screen display from four colours to 16. The problem with this is obvious if you use it for any length of time - the display flickers like mad. After half an hour of flitting about the boards we had a nasty dose of eye-ache.

Beyond that, *TAZ* is a competent, if basic, comms package that can't really compete with *TeddyTerm* or *ConNect*. If it had more power under the hood we might be willing to put up with the

flicker, but as it stands, it's really not worth it.

If you really want to see 16-colour ANSI displays on a standard ST, pick up a copy of the wonderful *ANSITerm* - it manages full ANSI with no flicker at all, and is screamingly fast to boot. Now, where did I put the paracetamol?

Frank Charlton

STF RATING: 55%

OASIS

**Download from
/pub/atari/oasis at
ftp.demon.co.uk
All Ataris, 1MByte**

OASIS is a complete GEM shell for use with the AtariNOS Internet access software. Since we first looked at OASIS (alt.comms.stf@, *STF 72*), it's been updated to version 1.05.

The new version features some nifty enhancements. The *OASIS* Editor has been substantially improved, but if you still don't like it you can use your favourite text editor instead (*How about SpiritEd from Cover Disk 70?* - Nick). A full toolbar menu has also been added, so you can access your favourite utilities at the click of a button from an icon box.

The e-mail section has been beefed up, and items of incoming mail can be forwarded to other addresses. A smart mailing list enables you to define up to 16 lists of people to receive 'mailshots' - we created an *ST FORMAT* list so we could send a single e-mail to all our writers.

OASIS sent the mail separately to each recipient rather than telling NOS to send a single file to multiple addresses, so it's not perfect, but it's a start, and authors Dave and Phil are looking into other methods. If you operate multiple user names from one account, you can switch between mailboxes easily, too.

Bugs in the Usenet news-reader have been fixed, so adding new groups with the mouse works properly. Dave and Phil have mastered the art of calling NOS directly, so *OASIS* no longer needs to call *TOMSHHELL* and process that pesky batch file.

The entire suite of programs is leaps and bounds ahead of the original TOS-based shell NOS came with, and makes setting up a new Internet account much less of a headache

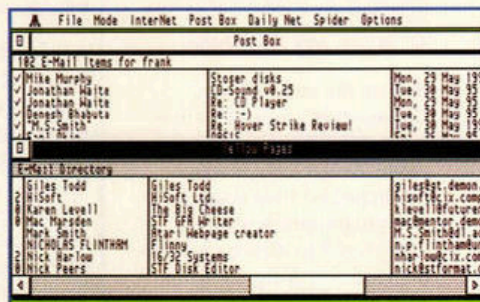
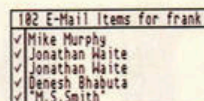
than before. Friendliness is the strong point of

OASIS, and it does go a long way toward making Net use with AtariNOS a more pleasurable experience.

With future upgrades in the pipeline, including a direct uuencode and PGP encryption for e-mail, *OASIS* looks set to become the de-facto netsurfing package for Atari machines and their owners.

We certainly hope *OASIS* will prosper. **Frank Charlton**

STF RATING: 84%



With future upgrades in the pipeline, *OASIS* looks set to become the de-facto netsurfing package for all Atari machines.

PD CHOICE 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 Choice reviews over the past four issues.

TITLE	PD LIBRARY	TYPE	ISSUE	RATING
Speed of Light 3.7b	Cover Disk 72	Art	71	93%
GEMBench 4.03	Hensa	Utility	72	93%
Warp Issue One	Keefy's PD	Diskmag	70	92%
NovaDisk 6	James Bird	Diskmag	71	92%
Selectric 1.10E	Ad-Lib	Utility	69	91%
MultCAD	Floppyshop	Art	72	91%
Autowaschen Verboten	Floppyshop	Falcon	70	90%
Freedom 1.11	HENSA	Utility	71	90%
Power 26	Power PD	Diskmag	72	89%
Toys on Disk	GL-PD	Misc	71	86%
Third Dimension 10	Floppyshop	Diskmag	69	85%
Grafix PD Demo	Silly Software	Art	71	84%
525 v2	Ad-Lib	Utility	69	83%
STellar Diskzine 14	STellar PD	Diskmag	69	83%
Compact Office Mgt System	Chaos PD	Utility	69	81%
BoxKite	FaST Club	Utility	69	80%
Ghostlink	Riverdene	Utility	71	80%
Calamus Font Utilities	Locutus PDL	Utility	70	79%
Lexicon	LAPD	Misc	70	79%
Visual Illusions	LAPD	Misc	69	75%
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Electron	AGPD	Demo	72	41%

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ST Answers

Readers take over ST Answers! A deluge of tips forces Clive Parker into the back seat! Read on for details... and remember, you heard it here first.

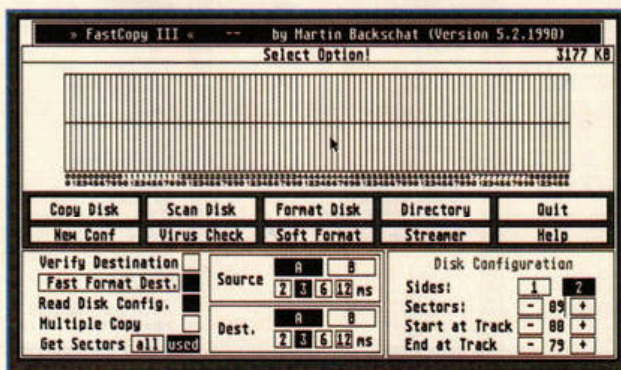


CUT AND PASTE

Anyone who has downloaded demos from the Internet will have noticed that some of the files are greater than 720K in size. Unless you have a high density drive, or a hard drive, you can't save them to disk.

I've devised the following procedure to split the files. You will need a RAMdisk program, a program capable of appending text files, the *Magic Shadow* archiver and a uencoder/udecoder utility. You also need at least 2.5MByte of memory to follow these instructions.

- 1 Download the demo to memory and uencode it. An 860K program expands to about 1.2MByte.
- 2 Split the file into two parts of about 600K each.
- 3 Copy each file to a separate floppy disk.
- 4 Install a 1.2MByte RAMdisk and copy the first part of the file on to it.



Use Fastcopy 3 to create extended disk formats and store more data on a disk.

- 5 Append the second part of the file to the first on the RAMdisk.
- 6 Make another RAMdisk, of around 900K in size.
- 7 Use the uencoder to decode the file and save it to the second disk.
- 8 Use the *Magic Shadow* archiver to compress the file and save it to a floppy disk.

I hope that these hints are helpful. If anyone wants to

swap demos from the Internet, please contact me by e-mail. Paul Hill, hp276@greenwich.ac.uk

stf: Thanks for those tips, Paul. You should find that most demos for the ST are designed to fit on to 720K disks, and remember that you can format disks to around 800K using formatters such as Fastcopy 3. You could also use packer programs such as Pack

Ice, which creates compressed, executable versions of programs. All the software mentioned is available from PD libraries (see page 73), or from BBSs and Internet sites.

NAKED SCSI

Having seen many advertisements for cheap(ish) CD-ROM drives for PCs, I was wondering if it would be possible to fit one of these bare SCSI devices to my existing SCSI hard drive controller.

I understand that I would have to adjust the ID numbers, but how would I connect the actual drive to the controller? Would it be enough to obtain a splitter cable to connect both the hard drive and the CD-ROM drive to the controller, or is it more involved than that? And what about power supplies - is a CD-ROM drive fitted with the

STAND AT EASE

Colin Ballantyne has been using *MagiC* and *Ease* for a few months and thinks other readers may find the following tips helpful. We agree - in fact, we're so impressed we're sending him a handful of crumpled fivers from my fat wallet. Well done, Colin.



Setting the Desktop colours

If you want to set the Desktop colours in *Ease*, you can't just use the Control Panel and save an *EASExxx.INF* file. Instead, you must call the Program Manager using [Alternate], [Control] and [Esc]. Terminate *Ease* by pressing [Delete] when it is highlighted in the menu. This returns you to *Magnadesk*. Use the Control Panel from here to set the colours and save a *MAGX.INF* file to disk. When you re-boot, *Ease* loads using the new colours.

Superbooting

If you want to make programs run automatically in *Ease* after using Superboot, follow this procedure.

- 1 Create two folders on one drive partition to store your *EASExxx.INF* files for medium and high resolutions, and name them *MEDINFO* and *HIINFO* respectively.

- 2 Next, run *SUPER_CS.PRG* and select Configure other files.
- 3 Fill out two configuration slots as follows, then save the configuration.

Descriptive Name: Medium Res
File Extender: .INF File Type: 2
Source: C:\MEDINFO
Destination: C:\EASE\EASE02.INF

Descriptive Name: High Res
File Extender: .INF File Type: 2
Source: C:\HIINFO
Destination: C:\EASE\EASE.INF

- 4 Return to *Ease* and select an application which you want to run automatically (for example, *STZIP*), then select the Applications command from the Options menu. A dialog box appears with the application you have chosen listed. Select the Autostart program option and exit the dialog box.

- 5 Now save the Desktop to either the *MEDINFO* or *HIINFO* directory (depending on the resolution you are in), and give it the same name as the application you have selected. In this case you would save it as *STZIP.INF*.
- 6 Repeat steps 4 and 5 for each application

you wish to set up as an autostarting program within *Ease*.

- 7 Run *SUPER_CS.PRG* and select the Edit Function Keys option.
- 8 Select a function key to edit and study the applications listed under Medium Res and High Res. Choose an application you wish to assign to the function key. Repeat for all of the other applications you have defined in steps 4 and 5.
- 9 Save the changes you have made and re-boot your ST. When you choose a function key application from the Superboot menu, the application will run as soon as *Ease* has loaded.



Step 8: Use the Applications command in *Ease* to define autostarting programs.

WHICH VERSION OF TOS?

How do I know which version of TOS is installed in my ST, and what are the benefits of upgrading to TOS 2.06?
Dave Green, Swindon

stf: Look at the Atari copyright message in the Desktop Info box, which displays a long line of copyright dates. The last date in the line indicates your TOS version. Check it against the table below to see what version of TOS is lurking in your ST.

Originally in the ST, STM, STF, STFM and Mega ST

- © 1985: TOS 1.0
- © 1986: TOS 1.2 (also known as TOS 1.09)
- © 1987: TOS 1.4 (also known as Rainbow TOS)

Originally in the STE

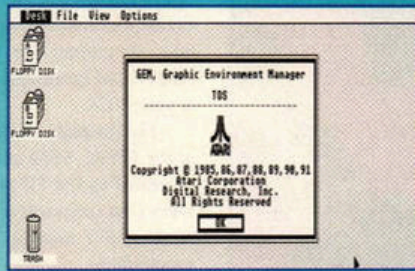
- © 1988: TOS 1.6
- © 1989: TOS 1.62

Originally in the Mega STE

- © 1990: TOS 2.05
- © 1991: TOS 2.06

Good reasons for installing TOS 2.06 include:

- ◆ File copying operations are faster.
- ◆ Faster and more efficient disk access.
- ◆ It has a fast, built-in file search function –



When you select the desktop info command from the Desk menu, the Atari copyright message is displayed. The newer your version of TOS, the longer the list of dates in the dialog box. This machine has TOS 2.06.

essential for hard drives.

- ◆ Atari's XControl Panel has been designed to work with TOS 2.06.
- ◆ Icons fit snugly into windows so you don't have to scroll sideways.
- ◆ Up to 20 programs can be assigned and launched from function keys.

And in addition, you can:

- ◆ Alter the desktop's patterns and colours.
- ◆ Set colours and patterns for window gadgets and scroll bars.
- ◆ Bypass Desk Accessories and Auto folder

programs by pressing [Control] when booting.

- ◆ Activate Desktop commands using time-saving keyboard shortcuts.
- ◆ Load alternate NEWDESK.INF files whenever the urge takes you.
- ◆ Open drive windows by pressing [Alternate] and the drive letter.
- ◆ Open up to seven GEM windows at once.
- ◆ Place folders on the desktop for fast access to large numbers of files.
- ◆ Place program icons on the desktop.
- ◆ Assign customised icons to any file.
- ◆ Use custom icons created in an icon designer like Makelcon.
- ◆ 'Drag and drop' files over a program to launch it and load the file.
- ◆ Drag text files to the printer icon to send them to your printer.
- ◆ Set file masks enabling you to view specific files or types of file.
- ◆ Move files to a new location by pressing [Control] and [Alternate] when copying them.
- ◆ Rename files when copying by pressing the [Alternate] key.
- ◆ Rename files when moving them by pressing [Control] and [Alternate].
- ◆ Switch to low resolution using the [Alternate][1] keypress combination.
- ◆ Switch to medium resolution using the [Alternate][2] keypress combination.

normal disk drive power socket, and will it work from my hard drive's power supply?
Mr G Kelly, Portsmouth

A If you already have a hard drive with a SCSI controller, it is possible to add a SCSI CD-ROM drive to the setup using a standard 50-way ribbon cable. As long as the ID numbers of the two drives are different, you can connect them both to your SCSI controller.

The ID number of the CD-ROM should be pre-set to either SCSI ID 3 or SCSI ID 4. These are the standard ID numbers for removable media devices. You probably won't have to adjust the ID number, but it's easy enough to change it using small jumpers found on the drive.

You can't use a splitter cable, because all SCSI devices must be connected in a serial chain. This means that one device must follow another on the chain, so the cable should run from the SCSI controller to SCSI device 1 and then to SCSI device 2. Using a splitter cable would create a radial system with signals from each device clashing with each other.

You need a length of 50-way ribbon cable, and three 50-way female connectors with one connector at each end of the cable and one near the centre. Connect the cable to the SCSI controller, then the CD-ROM drive, and

then finally the hard drive.

You must also ensure that only one drive is equipped with terminator resistors – the last drive on the chain. Because your hard drive already has terminator resistors installed, you just have to remove the resistors from the CD-ROM drive.

All power connections on CD-ROM drives are the standard plug-in connectors found on hard drives, so you can use a power cable splitter to power the drive. As long as you have room in the original hard drive case, you should be able to mount the CD-ROM drive inside it. Remember that you will normally need the equivalent of a 5.25-inch full-height drive bay to do this.

It may turn out to be simpler to buy an external SCSI CD-ROM drive to use with your system, and just daisy-chain it to your hard drive. You'll still have to make sure that the last device in the line (that is, the one farthest away from the SCSI controller) has terminator resistors.

You'll also need CD-ROM controller software such as ExtenDOS Pro, (£29.99). Give System Solutions a call on ☎ 01753 832212 and ask about drives and driver software. Even if you end up getting your drive somewhere else, System Solutions is the best source of CD-ROM driver software for the ST and Falcon030.

MYSTERY ST

Q I was given my ST about two years ago, and I'm wondering what type of ST it is. It was made in 1985 (I can tell from the dates on the files) and the label on the bottom says 'Atari STM'. It has two external double-sided disk drives and I think it is a Mega ST, but I'm not sure. Do you know what it is, and whether it's better or worse than an STFM?

Nick Nicholaou, London

A You've answered your own question, your machine is an Atari STM, as it says on the label.

The dates on the files are based on the date the operating system was created, so you could have a 1987 ST with ROMs created in 1985. But as you have an STM, it's likely your machine was built in 1985 or 1986. You

have an external power supply unit (PSU) as well, don't you?

The first ST was simply called the Atari ST, and you needed a monitor to use it because you couldn't connect it to a TV. It also had external drives. The next version of the ST had a built-in TV modulator so you could connect to a TV. It was called the Atari STM, with the 'M' standing for 'modulator'.

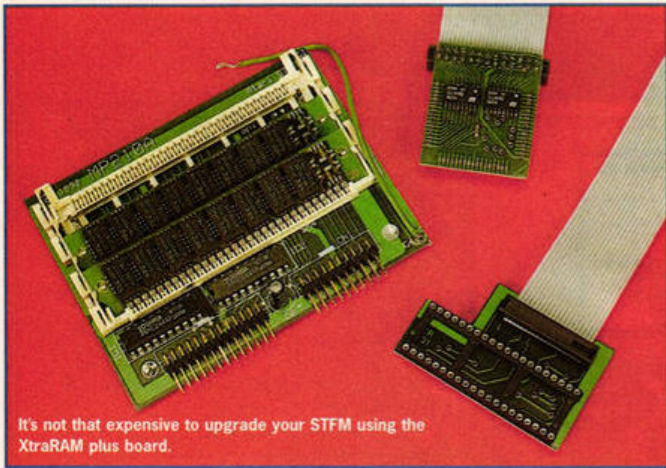
There was also a new ST called the Atari STF, with an internal PSU and floppy drive – hence the 'F' in the name. It was the same shape as the better-known STFM and STE.

The Atari STFM, with internal PSU, floppy drive and TV modulator, was released soon after the STF. This was obviously the best design so far, and the same basic layout was used for the STE (ST Enhanced).

Phew, that's enough different STs for one day.

This is an external CD-ROM drive. If you have enough room in your hard drive case, you could install an internal SCSI CD-ROM instead.





It's not that expensive to upgrade your STFM using the XtraRAM plus board.

MEMORY LOSS

Q Is there a way I can load GIF images from my friends Amiga 1200 on my ST? I have tried many ways, but so far nothing works. The problem isn't the viewing software (I have viewers from your Cover Disk), but the fact that I only have 0.5MByte of RAM in my STFM. Is there any way around this because I can't afford to upgrade to 1MByte.
Ross Barnes, London

A If you can't use image software because you haven't got enough memory, there's no way around the problem except to upgrade. An upgrade to 1MByte of RAM isn't that expensive - you can get the XtraRAM Deluxe for the STFM for £35 from Analogic Computing. And if you nip down to the workshop in Kingston-Upon-Thames, Analogic will upgrade your ST while you wait. Call 0181 5469575 for details.

FALCON OWNER

Q I've just bought a Falcon030. Does Future Publishing

have a magazine dedicated to this machine? Are there any PD libraries that support the Falcon030? Can I get add-ons like CD-ROMs for it?
A Whiting, Lancs

A There isn't a Falcon-specific magazine, but ST FORMAT covers all Falcon hardware and software releases and carries comprehensive reviews.

Almost all ST PD libraries carry Falcon PD - take a look at the list in the Directory (page 73). You can also get CD-ROM drives and software for the Falcon. Contact System Solutions on 01753 832212 for details.

VIDEO OUTPUT

Q When I connect the composite video and RGB outputs from my second-hand Atari 1040 STF to the SCART inputs on my video recorder, I only get a monochrome picture.

Why is this? Can I buy an external RF modulator for the ST so I can connect it directly to a television?
Paul McDonald, Milton Keynes

A First of all, you should only ever connect one video output to a TV or video recorder. In this case, you should just connect the RGB lines, the ground lines and the vertical and horizontal sync lines to your VCR.

The composite video output in the STFM, STM and STE is generated by the TV modulator. There's no composite output from an Atari STF because there isn't a modulator.

Contact Meedmore on 0151 5212202, with details of the make and model number of your video recorder, and the staff will make you a lead for around £15. As far as I know, there are no external modulators available for the ST.

NEWDESK HELP

In the Big Icons question in ST Answers 68, you said that the NEWDESK.INF file might have become corrupted, causing the problems mentioned [icons were displayed differently after the DESKICON.RSC file was edited].

The problems could be caused by the NEWDESK.INF file being too big - if it's more than 4K in size it can behave badly. The problem arises mainly from the use of the Install Applications command. Every time you use this command to assign a program to a function key, a line is created on the NEWDESK.INF file. However, if you later change the program assigned to a specific function key, a new line is added to the NEWDESK.INF file, but the old line is not deleted. The best way to remove these extra lines is to use a text editor and delete them manually.
Alan Stevens, Cardiff

stf: Thanks, Alan, I'm sure a lot of TOS 2.06 users will benefit from this information.

FALCON BASIC

As you probably know, the GFA Basic interpreter works on the Falcon030, but the compiler program doesn't - it crashes with two bombs.

To get a working version of GFA Basic for the Falcon, get version 3.6 for the TT. Both the interpreter and the compiler in this version work on

the Falcon. You can get the TT version from GFA Data Media on 01734 794941.

A couple of commands don't work on the Falcon, including LPRINT. You must open a channel to the printer and print the data to the channel number. Don't forget to close the channel after printing. Here's an example:

```
open "0",#1,"LST:"
Open channel #1 to the printer
print #1,data
Send data to the printer
close #1
Close channel #1
```

The other problem concerns editing program listings in the interpreter using the block commands. The on-screen commands don't work, but the keyboard shortcuts do. All the shortcuts are listed in the Block menu.

I've never had problems running compiled GFA Basic programs on the Falcon if they worked in the interpreter.
Steven Lewis, Boston

stf: Cheers, Steven. We've had loads of queries about using GFA Basic on the Falcon. Has anyone else got any Falcon programming tips we can use?

WITH FLAIR

Q Is there anyone out there with a copy of Wordflair 2, complete with manual? I have tried HiSoft/AVR, which has no more stock, but thinks some may still be in the distribution network. If you have a copy and want to sell it to me, please contact me at the address below.
N Barnett, Flat 1 Co-op Building, The Square, Headley Road, Greyshot, Hindhead, Surrey GU26 6LG

A If you have a copy for sale, contact the above address. If you have any ST software or hardware for sale, or if you are after a specific item, why not use our free reader ads page? There's a form on page 72.



ST FORMAT carries the most comprehensive range of Falcon030 software and hardware reviews you can get.

E-mail your questions and tips to Clive at: cparker@futurenet.co.uk or clive@netmag.cityscape.co.uk, or post them to: ST Answers, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon, BA1 2BW.



He doth bestride the narrow world, like a Colossus... and he knows all about comms. Frank Charlton, this page is all yours...

alt.comms.stf@

SLOW BUT SURE

Q I have recently bought myself a Hayes 1200 modem. Could you please tell me where I could buy communications software which will work with my Atari STE and this modem? John C Crossley, West Ealing, London

A John, there's a truckload of comms software waiting for you in your local PD Library. As a beginner, you might like to check out TeddyTerm - it's easy to get started with, but has more powerful features in reserve. Other faves include Terminology, ANSITerm and that reliable old chestnut, VanTerm.

If you're after commercial software with full printed manuals, you have two choices - STalker 3 (£39.99) from Compo (☎ 01487 773582), or our personal favourite, ConNect (£29.95) from System Solutions (☎ 01753



A superb comms package, ConNect is probably the most well-behaved choice for Falcon users, too.

RIP FALCON'S REALM

Sad news recently: The Falcon's Realm BBS run by Rob Hall has closed down. Rob has been very reluctantly forced to close and sell off his gear, so it's unlikely that he'll return in the near future. The Falcon's Realm was one of the best - if not the best -



16-colour ANSI emulation is most often used for flashy graphics on PC bulletin boards, like the Metallica BBS shown here.

832212). Both have excellent manuals and are widely used.

Once you've got into comms, you'd be advised to give up on the 1200 modem and go for something a little faster - it really will pay for itself in terms of time spent online. Turn to page 35 and check out the SpeedCom+ range.

BAUD TO TEARS

Q I bought myself a second-hand Telebit T3000 modem, but I'm getting stuck with it. I have some questions for you:

1 How do I configure the RS232 port to connect to a BBS? **2** What's the highest baud rate the port on the STE can manage? **3** Which flow control is best? **4** Which terminal emulation should I use - VT200, VT100, VT52 or what?

If I don't get help soon I'll go ga-ga and eat my modem

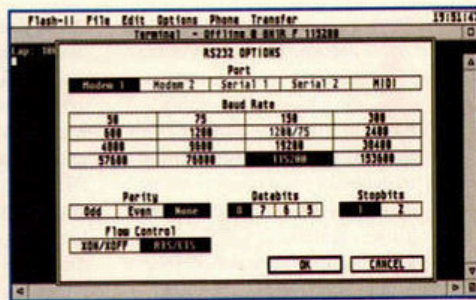
BBS with Falcon030 support. I for one will miss Rob and The Falcon's Realm greatly, and wish him all the best. Rob was also Mail Hub 400 in the NeST network. This unenviable job has now fallen to our very own Andy Curtis and the Ad.Lib BBS.

with peanut butter. Stephen Boyd, Letchworth

A Firstly, it would help if you could let me know a little more about your particular modem - take note, if you have an obscure model and you're about to write in.

Because I don't know the T3000, I can't say what its maximum connect speed is. Let's see about the rest, though: **1** All comms software will let you configure the RS232 port. Look for a menu entry or button labelled with something like 'RS232' or 'Port Settings'. For a 2,400 or slower modem which doesn't have data compression, set the port speed to the modem's speed. That

is, for an 1,200, set the port speed at 1,200. If your modem is a 9,600 or 14,400 with compression, set the port to 19,200 and make sure you have flow control switched on. **2** Without the hardware modifications we showed you in issue 71 (turn to page 75 for back issues), the STE can only drive the serial port at 19,200 or below. **3** Always use



All comms software should let you configure the serial port. For slower modems, set the port speed to the modem's speed.

RTS/CTS flow control, not XON/XOFF. Thanks to a bug in most (if not all) versions of TOS, you'll need an AUTO folder patch for flow control to work properly. Our recommendation is HSMODEM6, available from all good PD libraries.

4 Terminal emulation depends on the BBS you're calling. All Atari BBSs offer VT52, and most have ANSI too. VT52 is probably a good start if your modem is slow. All BBS systems will let you logon with a raw ASCII terminal, but you'll have to change your settings on the BBS for that. Stick to VT52 and you'll be OK.

As for the peanut butter, that's a bit drastic, Stephen. Jam is much cheaper.

It's been a few months now since we launched this column, and while the e-mail and BBS feedback is great, it's gratifying to see some queries coming in via 'snail mail' at long last. Don't forget, if you haven't got access to a modem yet, you can still drop Frank a line the old-fashioned way. Write to: alt.comms.stf, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW, or e-mail your questions to: frank@tachyon.demon.co.uk, or Frank.Charlton@adlib.centron.com.



Contrary to popular misconception, GEM programming is not only for C fans – assembly programmers can do it too. Don Maple explains.

Assembly Line

It's a common mistake to assume that GEM is far too labour-intensive to be viable in assembly. Nothing could be further from the truth. GEM programming in assembly is as easy – or as difficult – as in any other language. Besides, a GEM program in assembly is not only highly streamlined, but also considerably shorter than an equivalent high-level language version.

COMPONENTS

GEM itself has two components. The VDI (Virtual Device Interface) is the lower level responsible for things such as graphic primitives – circles, lines, etc. The AES (Application Environment System) builds on the VDI to create windows, menus and so on.

All communication with GEM is done by using several data structures or tables. First of all there are two 'control and command' arrays:

```
global: DS.W 15 ;global array
control: DS.W 11 ;control array
```

Although the global array contains some interesting internal information, we'll be manipulating the control array more often. That's how we tell GEM what to do.

In addition, there are three pairs of arrays used to pass data to GEM and, conversely, receive data from it:

```
intin: DS.W 128 ;general input array
intout: DS.W 128 ;general output array
addrin: DS.W 128 ;address input array
addrout: DS.W 128 ;address output array
ptsin: DS.W 128 ;points input array
ptsout: DS.W 128 ;points output array
```

All of these structures are normally composed of words, with the exception of address arrays, which are normally longwords. INT arrays contain general parameters and data. PTS arrays are used to specify and obtain 'points'. Each 'point' is defined by two coordinates, x and y, so PTS arrays normally contain pairs of words. Finally, ADDR arrays contain longword addresses. The exact layout of all these arrays is beyond the scope of this article, but will be specified in the GEM reference book you use to obtain the function opcodes.

The above structures are accessed through yet another table/array called the parameter block (PB). There are two, one each for AES and VDI:

```
aespb: DC.L control,global,
        intin,intout,addrin,
        addrout
vdi pb: DC.L control,intin,
        ptsin,intout,ptsout
```

Your assembler may have a different syntax, but each entry in a PB is a pointer to the corresponding array. You may have to enter these pointers in brackets: '(control),(global)' etc. The order of these pointers is essential, even though it's inconsistent.

GEM CALLING...

To invoke these structures, fill out the arrays with data as required by the function you wish to use. For actual function opcodes, refer to your GEM reference. Both AES and VDI

ONE

```
;-----
; call VDI
;-----
vdi:
    move.l #vdipb,d1 ;address of VDI parameter block
    moveq.l #$73,d0 ;VDI number
    trap #2 ;GEM
    rts

;-----
; call AES
;-----
aes:
    move.l #aespb,d1 ;address of AES parameter block
    move.w #$c8,d0 ;AES number
    trap #2 ;GEM
    rts
```

TWO

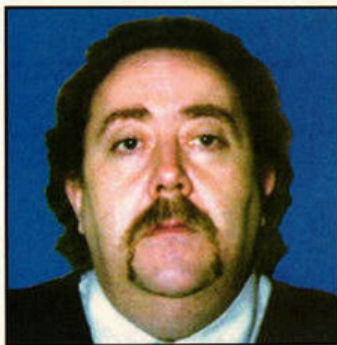
```
;-----
; initialise application
;-----
initapp:
    move.w #10,control ;APPL_INIT opcode
    move.w #0,control+2 ;INTIN array is empty
    move.w #1,control+4 ;one INTOUT value - app id
    move.w #0,control+6 ;no address input
    move.w #0,control+8 ;no address output
    bsr aes ;call AES
    move.w intout,apphandle ;save app handle, error?
    bge getgrh ;no
```

THREE

```
;-----
; set clipping rectangle
;-----
clip:
    move.w #129,control ;vs_clip opcode
    move.w #2,control+2 ;two PTSIN values
    move.w #0,control+4 ;no PTSOUT values
    move.w #1,control+6 ;one INTIN value
    move.w #0,control+8 ;no INTOUT values
    move.w virhandle,control+12 ;device handle
    move.w #1,intin ;flag: 1=clipping on
    move.w clipx1,ptsin ;x coor
    move.w clipy1,ptsin+2 ;y coor
    move.w clipx2,ptsin+4 ;opposite x coor
    move.w clipy2,ptsin+6 ;opposite y coor
    bsr vdi
```

are then called through TRAP #2 as shown in panel One. Just to be perfectly clear, panel Two gives an AES call which every GEM application must start with. Finally, panel Three gives a VDI call that any application wishing to write to a window must also use.

Send your queries to Don Maple at: Assembly Line, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail them to: donm@ucon.gun.de.



Mac Marsden dons his rollerblades and twirls around the screen, producing circles and spirals galore. The *ST FORMAT* team is impressed.

GFA Workshop

TIME TO SLEEP

Q I want to put the date on screen in the format MM/DD/YYYY, but all I can generate at the moment is DD.MM.YYYY.

Also, I want to limit the screen output of a mathematical formula to four characters, ignoring the decimal point. Is there a GFA Basic command to do this? If so, please help me get a good night's sleep.

Edward Hawley, Aberdeen

A Edward, get your nightcap out. The way to control the DATE\$ output in GFA Basic is to use the command `MODE n`, where 'n' is a number between 0 and 3. If you examine the panel below you can see that `MODE 1` is the command you want. Place it at the beginning of your program.

`DEFNUM n` placed before a print statement restarts the output while rounding up/down to the number of places you wish to use. The following short listing should help:

```
FOR F=10 DOWNT0 4
  DEFNUM F
  PRINT 100/6
NEXT F
```

The program starts by printing the result of `100/6` to 10 characters (16.66666667), and ends by printing only the first four characters (16.67), rounding up the last digit in each case.

There are four modes available for altering the output of the DATE\$ command.

Mode	Using	Date\$
0	#,###.##	DD.MM.YYYY
1	#,###.##	MM/DD/YYYY
2	#,###.##	DD.MM.YYYY
3	#,###.##	MM/DD/YYYY

TAKE A DRIVE

Q I want to examine all attached drives/partitions, while at the same time being able to change directories and find how much free space is available on any particular drive.

Stephen Tailford, Canterbury

A Take a look at the By your command panel to see how to do this. Be careful to get filenames and pathnames correct if you are going to delete or move files, or you may end up deleting or moving the wrong files.

IN A SPIN

Q I would like to draw or plot spirals on the screen, but I have been unable to find the correct command(s) in GFA Basic. Is there a command or routine that enables me to do this?

John Bunyop, West Lothian

A John, this isn't really the simple task you seem to think it is. First, you have to draw a circle without using the `CIRCLE` command, then you need to alter the radius to create a spiral.

In Listing 1, the outer 'G' loop goes through the circle function twenty times. The command `radius=RAND(100)` generates a number between 0 and 100 that gives the radius of the circles. The 'F' loop loops through from 0 to 2π in steps of 0.03 (the starting point of our circle to the finishing point. Try altering the step

BY YOUR COMMAND

The following GFA Basic commands enable you to manipulate drives, directories and free space:

DFREE(0) returns the free space on the currently selected drive.

DIR ("path") prints the catalogue found in a specified path. For example, `DIR a$` where `a$="A:\"` or any other path, such as `"D:\STFORMAT\GFA"`.

CHDRIVE n where 'n' is a number (0-16) or a letter (A-P). `CHDRIVE`

3 changes the default drive to 'C'. `CHDRIVE 0` is the current default drive and `CHDRIVE A` would change the drive to 'A'.

CHDIR n, where 'n' is the path of the new directory. `CHDIR "A:\AUTO"` changes the default directory to AUTO. If you then use the command `CHDIR "STFORMAT"` the default directory is "A:\AUTO\STFORMAT". Now if you use `CHDIR ".."` the default directory reverts to "A:\AUTO" and `CHDIR "\"` takes you back to the root of drive 'A', that is "A:\".

size). The 'x' and 'y' lines work out the co-ordinates for the point to be plotted. `PLOT`

`320+x,100+(y/2)` centres the circle on screen, while `(y/2)` maintains the circle's shape (try `100+y`). Note that these values are for a medium res display.

REM Listing 1

```
FOR g=1 TO 20
  radius=RAND(100)
  FOR f=0 TO 2*PI STEP 0.03
    x=radius*SIN(f)
    y=radius*COS(f)
    PLOT 320+x,100+(y/2)
  NEXT f
NEXT g
```

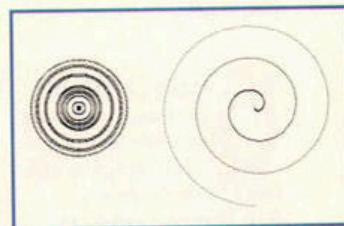
Listing 2 begins with 'radius' set to 1. Note that this time the 'F' loop is now 6π because we are travelling through the circle co-ordinates three times. The only other alteration I have made is that the radius alters after every pass, producing the spiral output you require. Try altering the value of radius - both the set value and the step value.

```
REM Listing 2
radius=1
FOR f=0 TO 6*PI STEP 0.03
  x=radius*SIN(f)
  y=radius*COS(f)
```

```
PLOT 320+x,100+(y/2)
radius=radius+0.3
```

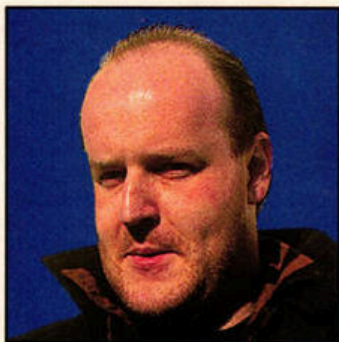
NEXT f

If you examine the results in the screen grab, you can see the difference in the output between the two listings. The first produces the concentric circles; the second draws your spiral.



Spot the difference between keeping 'radius' constant and increasing it every 'F' loop.

If you have any questions, or would like to see a particular subject covered, please write to Mac at GFA Workshop, *ST FORMAT*, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail him at mac@mentor.demon.co.uk



Whatever you want, it can't be done. A gloomy Frank Charlton fails to complete his 'missions impossible', but gets in a good word for STOS.

STOS Corner

WORMHOLES

Q I am writing a game in STOS, similar to WORM on the PC. I need to increase the length of the worm when he picks up the number, but I'm not sure how to do it.

Ben Pope, Polegate, East Sussex

A Sorry to be negative Ben, but I've never come across WORM, and nor had anyone I asked. Without a few more details as to what you want to do, I'm stuck for an answer, I'm afraid. Put what you've done so far on a disk and send it to the usual address (see below), and I'll see what I can do. Though we don't usually do this, if you include an SAE I'll make sure you get your disk back. Be warned, everyone - this is my once-a-year, not-to-be-repeated-until-next-year, generous gesture. We don't normally have time to return disks.

ACCESSORISE!

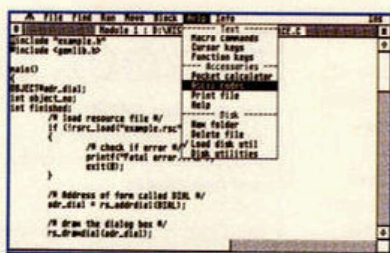
Q Is there a way I can compile and save a STOS program as a GEM Desk Accessory?

Bob Teague, Lewisham

A I'm afraid not, Bob. As we've said before, STOS ignores GEM totally, relying on its own custom routines to drive the mouse, read the



If you want to write Accessories, you'll need another language. Try C, then you can send your questions to Mac Marsden as well!



HiSoft C, interviewed yesterday. When asked about alleged liaisons with STOS, C told us, "No comment".

keyboard and suchlike. GEM Accessories can be troublesome to write at the best of times, due to the nature of TOS. If you want to get into it, you'll need a more 'operating system-friendly' programming language, such as GFA or HiSoft BASIC, or C. HiSoft is especially good, with full GEM toolboxes to take the pain out of GEM work.

ALL AT C

Q I have been following Mac Marsden's C tutorials recently, and experimenting with the HiSoft C Interpreter. I understand that it isn't a compiled language, but if I bought a full C compiler, could I write small routines which I could then link into my STOS programs? I know you can link assembly language routines, but that's all Greek to me.

Dipesh Kandola, Bradford

A Unfortunately not, Dipesh. When you use assembly routines with STOS, you're not actually linking in the true sense of the word. Real linking is used by assemblers or C compilers to make other routines accessible to a program when it's compiled or assembled. With STOS, you load a pre-assembled piece of code into

a STOS Memory Bank, and execute it when needed. Since you can do that in either Interpreted or Compiled mode, it's not linking. I don't think it's possible to do this with compiled C routines, but I'd love someone to prove me wrong!

WHERE IS...

Q Whatever happened to Francois Lionet, the author of STOS? Do you think he'll ever update STOS to work properly on the Falcon030, and write some new commands for it?

Mark Ross, East Dulwich

A The last I heard, Francois was in the Army, doing the French equivalent of National Service. I haven't heard anything since, but it seems doubtful that we'll see anything STOS-related from Francois. The future of STOS lies with us - the users. Every major STOS development since STOS-3D has been independently written - just look at the Missing Link and Control 3 extensions.

GAME ON!

Q I've been learning STOS for about a year now, and I'm starting to feel confident enough to tackle a game idea I have, which I want to release as shareware. I'm beginning to lose confidence though, as a number of people have told me that STOS isn't good enough for anything other than simple PD



HERO, a commercial game written in STOS? Shurely shome mishtake?

games. Is this true? Should I bother trying?

Dan Kirk, Portsmouth

A In a word - go for it. Oh, that's three words. Nevertheless, you shouldn't let other people put you off something you want to do.

STOS has been used numerous times for commercial and commercial-quality games. Just look at the wonderful platformer, HERO. It had very good reviews when it was released, and only afterwards was it discovered that it was a STOS program! Written by our own Tony Greenwood, HERO had so much hard work behind it that it didn't shout 'STOS!' like so many PD games.

If you followed Tony's recent tutorial series (STF 71-72) you'll have picked up some tips on game writing. Don't let anyone get you down, just get into it, and let us know how you get on.

You can write to the indomitable Frank Charlton at: STOS Corner, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail him at: frank@tachyon.demon.co.uk, or Frank.Charlton@adlib.centron.com.



Mac Marsden looks once more into his crystal ball, finds out how to manipulate text, and creates a simple address book program in *HiSoft C*.

HiSoft C Centre

Let's get straight into some code this month. Examine the function in Panel one, which enables you to input a single character from the keyboard and then display it on your monitor. The sign `%c` indicates to both the `scanf` & `printf` statement that 'a' is a character variable. Strangely, if you alter `char a`; to `int a`; you get the same result. The character is stored in 'a' as an integer number and only converted into a character by the `printf` statement `%c`.

The code in Panel two takes it one step further, enabling you to enter a whole word. You are reserving 80 memory locations with `char b[80]`, so the word could be

up to 80 letters in length.

Try entering two words separated by a space and see what happens. The `scanf` statement only picks up the first word, because it sees the space as white noise and ignores anything after it.

You could alter the command to look something like `scanf("%s %s %s", &b[0], &c[0], &d[0])`, where `c` and `d` are character variables, but what you really need is a command that allows a line of text to be input. In Panel three I have removed the `scanf` statement replaced it with the `gets()` statement. This allows a single line of text to be entered. Any keyboard character is accepted using this method.

Now we can look at the

basics of an address book program where personal details

are input and then printed out to the screen (Panel four). *stf*

FOUR

```
main()
{
    char c[7][20];
    printf("\nAddress book v0.1\nPlease enter the following
        personal details");
    /* In the above lines we are declaring the character array
    'c' as having eight locations with 20 spaces to each location.
    The printf function prints on screen the title of the
    program and asks us to input some personal details. */
    printf("\nChristian Name(s): ");
    gets(c[0]);
    printf("\nSurname: ");
    gets(c[1]);
    printf("\nAddress\nStreet: ");
    gets(c[2]);
    printf("\nTown: ");
    gets(c[3]);
    printf("\nCounty: ");
    gets(c[4]);
    printf("\nPost Code: ");
    gets(c[5]);
    printf("\nTel: ");
    gets(c[6]);
    printf("\nRemarks: ");
    gets(c[7]);
    /* The printf statements
    are printing to screen what
    the program is expecting to have entered and the gets(c[0 -
    7]) statements are being used to get your response. */
    printf("\n\nAddress No. 1");
    printf("\n\nName : %s %s", c[0], c[1]);
    printf("\nAddress:\t%s", c[2]);
    printf("\n\t\t%s\n\t\t%s\n\t\t\t%s", c[3], c[4], c[5]);
    printf("\nTelephone No. %s", c[6]);
    printf("\nRemarks\n%s", c[7]);
    /* The printf statements print the data on the screen. The
    %s within the statement is expecting a string of characters.
    In the line: printf("\n\t\t%s\n\t\t\t%s\n\t\t\t\t%s", c[3], c[4],
    c[5]); the first %s will take its data from c[3], the second
    from c[4] and the third from c[5]. The '\n' says print on a
    new line and the '\t' says tab in x spaces. */
}
```

The address book program in action.

```
Street: 38 Monmouth
Town: Bath
County: Avon
Post Code:BA1 2BW
Tel: 01225 442244
Remarks: ST FORMAT - A GREAT COMPUTER MAG.

Address No. 1
Name: Mac Marsden Monmouth
Address: Bath
Post Code: BA1 2BW
Telephone No. 01225 442244
Remarks: ST FORMAT - A GREAT COMPUTER MAG.■
```

The three paragraph's marked with `/* */` can be omitted from the code, they are only there to explain what the program is doing. Do not forget to make a lot of notes when writing your own programs.

ONE

```
main()
{
    char a; /* initialise a as a character variable */
    printf("\nPlease enter a letter, then press
        return\n.....: ");
    scanf("%c",&a); /* wait for letter to be input (%c)
        and place it in location &a */
    printf("\n\nThe letter you selected was [ %c ]",a);
    evt_keybd();
}
```

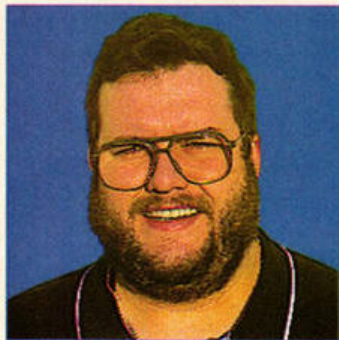
TWO

```
main()
{
    char b[80]; /* class b as a character variable */
    printf("\nPlease enter a word, then press
        return\n.....: ");
    scanf("%s",&b[0]); /* we must show the first location
        of b[], i.e. &b[0] */
    printf("\n\nThe word you selected was [ %s ]",b);
    evt_keybd();
}
```

THREE

```
main()
{
    char c[80]; /* class c as a character variable */
    printf("\nPlease enter a sentence, then press
        return\n.....: ");
    gets(c);
    printf("\n\nThe sentence you typed in was:\n
        [ %s ]",c);
    evt_keybd();
}
```

If you have any questions, or would like to see a particular subject covered, please write to Mac at: **HiSoft C Centre, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW** or e-mail him at mac@mentor.demon.co.uk.



The Score

Free the twiddly bits, eh? Andy Curtis liberates a new range of MIDI samples, busts a bit more jargon and rounds up the latest music news. Stay tuned...

Logical upgrade

EMAGIC IS ABOUT TO bring out a new version of its flagship sequencer, *Logic*.



Version 2.5 will represent a major upgrade from *Logic 2*, but details are not yet available. You can expect to see it shipping in three to four months. Sound Technology is the sole UK distributors of *Logic* - call ☎ 01462 480000 for more information about *Logic 2* and its successor.

Logic 2 (left) will be succeeded by version 2.5 in about three months time.

GM Falcon synth

SYSTEM SOLUTIONS IS developing a General MIDI synth that will run as software on the Falcon. There is still some work to be done, but it should be released by the end of the summer if all goes well. The sample engine copes with the required 24-note polyphony while managing a replay

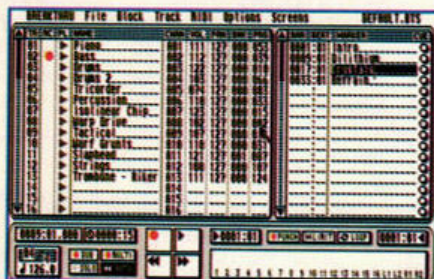
frequency of 33KHz. There are even facilities to customise the available samples, or replace them with your own, for any number of weird and wonderful effects. The package is provisionally set to ship at £49.95, making it superb value. You can contact System Solutions on ☎ 0181 6931919.

No breakthrough

BREAKTHRU 2 OWNERS hoping for a new version of this excellent program will have to wait for quite some time yet, according to Software Technology in Manchester, which produces the program. *Breakthru 2* is still selling well, so there are no plans to release a major update in the near future.

That said, Software Technology is looking for ways to improve the program, but nothing has been finalised as yet. However, it is still marketing its range of sequencers

for the ST, from *Sequencer One Plus* upwards, so if you're interested in a cost-effective ST sequencing package, give Software Technology a call on ☎ 0161 2362515. *Breakthru 2* currently costs £129.95.

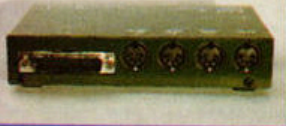


Despite its healthy sales, there are no plans for a new version of *Breakthru* in the near future.

MO4 MIDI EXPANDER

£149, System Solutions
☎ 0181 693 1919

The MO4 is the cheapest way to get 80 MIDI channels from Cubase.



If you'd like to add extra MIDI ports to your system, but have been put off by the cost, take a look at Soundpool's MO4. It provides *Cubase* users with four extra MIDI outputs, giving a total of 80 MIDI channels. This should be enough to satisfy even the

most demanding musician.

The unit comes complete with a 7.5V DC power adaptor and plugs into the printer port on your ST, TT or Falcon. You need *MROS 3* or above to use the supplied *Cubase* driver (there is no output driver for *Logic* at present). Simply drop the file into your *MROS* folder and the MO4 is ready to go. Next time you load *Cubase* you will notice there are four extra output options in the Output column.

This piece of hardware is simplicity itself to use and adds considerably to the sequencing power of *Cubase*.

STF RATING: 89%

MIDI JARGON ULTRA-BUSTER PART FOUR

Our fourth delve into the murky world of MIDI jargon reveals the following:

Out

The socket on a piece of MIDI equipment which provides outgoing MIDI information from that piece of equipment. This is different from Thru which just duplicates the incoming MIDI data.

Overdub

To add a new part to an existing recording. Many musicians like to work this way. Start with the drums and then add the bass, keyboards, guitar and vocals. All these additional parts are called overdubs.

Pan

Often confused with balance. Pan controls the stereo destination of a mono input. A microphone input can, therefore be panned to the left, right or centre of the stereo image despite being a mono sound source. Balance changes the emphasis of the entire stereo image from left to right.

Patch

Often refers to an individual sound on a synth. It can also mean the setup of a bank of sounds. More literally, it means the connecting of one item to another. An audio patchbay, for example, controls the destination of a sound being fed into it. The use of an audio patchbay is to be able to change that destination easily.

Polyphony

Two or more sounds sounding at the same time on one synth can be said to be polyphonic. The polyphony of a synth is the number of notes it can sound simultaneously. The common values are 16, 32 and 64. Do not confuse this with multitimbrality, which is the number of MIDI channels addressable simultaneously.

Program change

The mechanism by which sounds can be switched on a synth via MIDI from an external source. Commonly you would use the program change number on your sequencer to select the sound you wished to record with. Whenever you access that sequence it will send the program change number out to select the correct sound.

IT DON'T WORK!

Q I was recently given a program by a friend of mine, which he said would run any MIDI file at all. I ran the program on my 2MByte STe and loaded a MIDI file, but when I played it it didn't work! It didn't crash or anything but nothing came out of the speaker (except for a slight buzz).

As this program is PD, it is probably rubbish. What program do I need to get to play back MIDI files properly? I have no difficulty playing MOD files.

James Tarrant, Derby

A It may be, James, that you have misunderstood the concept of MIDI files. They are not self-contained tunes like MOD files. Instead, they contain sequencer data which can control external synthesizers.

At present, there is no software to enable the playing of MIDI files on the ST, although there may well be some for the Falcon out shortly. The way to achieve this is to make the Falcon into a kind of synthesizer as well as a MOD player. Unfortunately the ST's sound capabilities do not stretch to this.

As for PD being rubbish, I

disagree strongly. There are a great many excellent programs in the public domain.

HEAVY METAL

Q Whatever music I play on my ST comes out like heavy metal distortion. I have tried turning the volume down on my monitor, but that has no effect.

I took my computer downstairs to my Dad's hi-fi and plugged it in with the leads from the cassette deck. The sound was good, but still distorted on the monitor. Is this because the monitor is

broken, or is the sound through the monitor plug wrong? What should I do?
Peter Friend, Gloucester

A If the sound is OK when taken from the phono sockets on the back of your STe, the problem is probably your monitor. If you can, try another monitor to make sure that it is just your monitor causing the problems. It may be that the speaker itself is damaged or completely blown.

If it is your monitor, you'll probably find that replacing it is almost as cheap as getting it repaired, and easier to organise.

TWIDDLY BITS

£19.95 each, Keyfax Software,
☎ 01734 471382

Twiddly Bits: two fantastic disks of superb guitar and drum effects.



MIDI files aren't just fun to listen to, they can teach you a lot about sequencing, too. This is where the Twiddly Bits series comes in: it condenses all the tricks of the trade on to a number of specialised disks, providing you with the sequence bites that you need to beef up your own music.

We looked at the disks covering drums fills and guitar effects. The latter covers every guitar style from rock through blues to folk, and even Spanish Flamenco. It contains individual MIDI files for each category, plus a big Cubase arrangement file containing every category.

The tracks each feature ten to twenty segments with individual licks and variations. Examples of strumming, picking and solo breaks are included. Almost without exception these are effects which would be impossible to create by using a conventional MIDI keyboard - they were created by professional guitarists using the Roland MIDI guitar pick-up.

The results are spectacular. Using the Korg X3R in GM mode, many of them are indistinguishable from the real thing. The only weak point was the strumming effects, which are a little chopped and lack depth. Because strumming relies heavily on the strings ringing together, MIDI instruments find it difficult.

All the other segments are eminently usable. One thing to note when changing notes to fit with your own music is that you must make sure that they are possible on a guitar. The more 'impossible' your sequences become, the less believable your music will be. Overall, the guitar effects were a delight to play with, and they do provide access to

specialist effects that would otherwise be impossible.

The drums and percussion disk is likewise filled with MIDI files in different styles. There is one long MIDI demo file with many segments joined together to give you an idea of the range available, as well as individual tracks in each of the styles. The tracks include patterns suitable for looping as well as fills and drum breaks which you can spread liberally through your music.

All the drum patterns are very well played, and they sound convincing when used in original pieces. They are, if anything, easier to work with than the guitar effects as there are no pitched notes to contend with. Whatever style of music you specialise in, there will be something here for you to make use of. Definitely recommended.

All of the files on these disks include embedded program change numbers designed to work with GM MIDI synths. If you do not wish to use the GM MIDI sounds, you will need to remove them using your sequencer's edit page

or a MIDI program change filter.

The Twiddly Bits disks are polished, professional and very affordable. They are in standard PC format, so your ST will read them with no problem, and they offer powerful MIDI tools for those wishing to improve their compositions. As such, they represent an interesting way forward for the MIDI file market. We were very impressed.

STF RATING: 92% (Guitar)

STF RATING: 81% (Drums)

BENDS	DOWN	UP	UP	UP	2	BINDLOCK1
BENDLICKS	BL/LICK1	BL/LICK2	BL/LICK3	BL/LICK4	BL/LICK5	
BENDRIFTS	BL/RIFT1	BL/RIFT2	BL/RIFT3	BL/RIFT4	BL/RIFT5	
BROKEN CH	BROKEN 1	BROKEN 2	BROKEN 3	BROKEN 4	BROKEN 5	
CHORDS 1	C (6)H	C (6)M	C (6)S	C (6)T	C (6)B	
C RIFFS	C/PATT 1	C/PATT 2	C/PATT 3	C/PATT 4	C/PATT 5	
C STRINGS	C/STRUM1	C/STRUM2	C/STRUM3	C/STRUM4	C/STRUM5	
DRUM	DRUM 1	DRUM 2	DRUM 3	DRUM 4	DRUM 5	
FINGERPICK	F/PK 1	F/PK 2	F/PK 3	F/PK 4	F/PK 5	
FOLK STRUM	FOLK 1	FOLK 2	FOLK 3	FOLK 4	FOLK 5	
FLOORBASS	CFMFL 1	CFMFL 2	CFMFL 3	CFMFL 4	CFMFL 5	
GUITAR RIFTS	G/RIFT 1	G/RIFT 2	G/RIFT 3	G/RIFT 4	G/RIFT 5	
HIZZ LICKS	H/LICK1	H/LICK2	H/LICK3	H/LICK4	H/LICK5	
HIZZ RIFTS	H/RIFT1	H/RIFT2	H/RIFT3	H/RIFT4	H/RIFT5	
HIZZ STRUM	H/STRUM1	H/STRUM2	H/STRUM3	H/STRUM4	H/STRUM5	
LINKS	LNK 1	LNK 2	LNK 3	LNK 4	LNK 5	
LININ	L/STRUM1	L/STRUM2	L/STRUM3	L/STRUM4	L/STRUM5	
MISC	BL/INT 1	BL/INT 2	INTRO	INTRO 2	INTRO 3	
ROCK LICKS	R/LICK 1	R/LICK 2	R/LICK 3	R/LICK 4	R/LICK 5	
ROCK RIFTS	R/RIFT 1	R/RIFT 2	R/RIFT 3	R/RIFT 4	R/RIFT 5	
ROCK STRUM	R/STRUM1	R/STRUM2	R/STRUM3	R/STRUM4	R/STRUM5	
SOLOS	SOLV 1	SOLV 2	SOLV 3	SOLV 4	SOLV 5	

Take a look at the wide range of styles available on the guitar effects disk.

Punch

A means of activating and deactivating the record function whilst playback is taking place. Often operated from a footswitch or automated by computer, punch in and out enable you to record a precise section of music into a sequence or multi-track tape.

Quantize

Corrects sequenced recordings by moving the notes to the nearest predetermined beat. If the quantize

A typical range of quantize values on a software sequencer.

	OFF		
64T	64	64.	
32T	32	32.	
16T	16	16.	
8T	8	8.	
4T	4	4.	
2T	2	2.	
1T	1	1.	

value is set to eight (quaver) then all notes played in will be moved to the nearest quaver in the sequence. This can make your music sound mechanical, so use it with care.

Quit

Something you should never do. Keep at it.

Real-time entry

The process of recording MIDI events by playing them 'live' on a keyboard or other MIDI input device. The opposite of step entry.

Recording

The process of storing sound on any sort of medium. This can mean both MIDI, standard analogue audio and digital audio data.

THE SCORE

Each month The Score brings you the latest ST-related MIDI news and reviews, and answers your MIDI and music queries. However, we need your comments and suggestions to make The Score even better. Is there something you'd like to see a tutorial on, for example? Tell us what you'd like to see, and we'll do our best to provide it. Write to: The Score, ST FORMAT, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail Andy at: andy@adlib.co.uk.

GET YOURSELF

connected...

FutureNet

Over the last few months, **ST FORMAT** has been expounding the virtues of the Internet. Proud boasts have been made about the impact this electronic media will have on all our lives. Now that future has arrived! **ST FORMAT** has stepped on to the Net with its very own page on the World Wide Web.

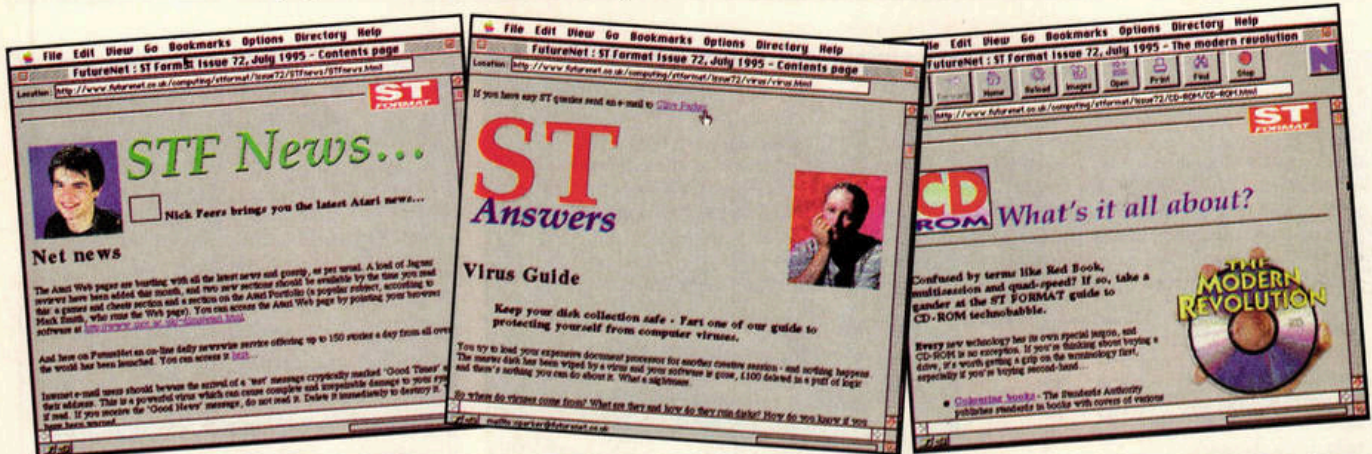
The **ST FORMAT** home page enables you to check out next month's features, e-mail the team, search for back issues, pick up the latest news, buy mail order products, take out a subscription or even read reviews of the latest PD.

As well as **ST FORMAT**, FutureNet also carries snippets and features from other Future Publishing magazines, including **.net**, **Edge**, **Ultimate Future Games**, **Future Music**, **Total Guitar**, **Classic CD**, **Cycling Plus**, and **MBUK**. So why not pay us a visit soon?

Karen Hewell.



The ST
FORMAT Web pages (as
seen from an Apple Mac).



http://www.futurenet.co.uk

Get offline

It's good to talk, but it's better to keep your phone bills down. We explain how the offline reader KIVI can help you do just that.

The Internet may be the hottest thing since the last hot thing, but Bulletin Board Systems still have a lot to offer. There are plenty of files to download, and the message bases are an excellent way of staying in touch with the Atari community.

However, reading and replying to messages online is guaranteed to triple your phone bill. Using an offline reader is a far more sensible option, so last month we put *KiviQWK* on the Cover Disk.

To use it, you'll need a couple of other bits and bobs as well. Mail packets are compressed to save download time, so you'll need an archiver. *Kivi* supports ZIP, LZH and ARC formats, but you should choose LZH or ZIP – ARC is old and slow now, with very poor compression. There's little to choose from between ZIP and LZH, but most people seem to prefer ZIP. The latest versions are 3.10 for *LHarc* (LZH) and 2.6 for *STZip* (ZIP).

Next, you'll need a text editor capable of saving raw

ASCII files. *Everest* and *Edith* are good choices – both are shareware, and available from any BBS.

Get set up

To set up *Kivi*, go to the Options menu and choose Work paths. *Kivi* automatically sets itself up to use two folders called WORK and REPLY, which it creates for you. If you have a hard drive you can leave these. If you're running from floppies, you might want to point these at a RAMdisk, to speed things up. The default QWK-packet and Reply-packet folders should be the ones you've set your comms program up to use, so *Kivi* can find mail packets.

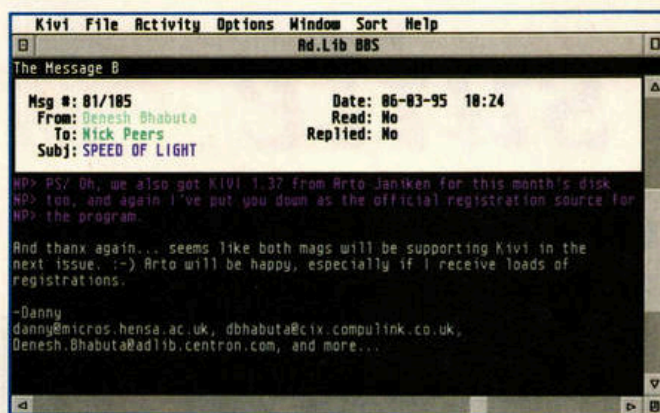
Next, choose Packers from the Options Menu. *Kivi* knows the commands needed to

extract and compile archives, so just tell it where your archivers are – double-click on the line to bring up a file selector. Use the box to the left of the archiver entries to tell *Kivi* which archiver you want to use for packing replies. Make sure it's the one you specified while online to your BBS (see the Getting online panel on the right).

Finally, nip back to the Options menu, choose Editor and double-click the line to show *Kivi* where your favourite text editor is. Select Save options, and you're done.

Get your mail

Once you're set up, nip online and grab yourself a mail packet. In *Kivi*, selecting Unpack from the File menu will make a file selector pop up.



Kivi makes message reading easy, thanks to its full use of GEM windows.

Choose your mail packet, and *Kivi* will then automatically call the archiver and decrunch the packet.

Once that's done, *Kivi* opens a window showing the available Message areas, and a status line tells you how many unread messages there are. Choose an area, and double-click on it. *Kivi* then opens a window with the message headers in, showing who the

messages are to and from and a subject line.

Double-clicking on the first message will open a window with the message in.

Use the left and right arrow keys to move to the previous and next messages, and press [Escape] or close the window to return to the Message list window. The same keys apply to all windows with one exception – you'll need to click the Close box to close the original Area list window.

To reply to a message, select Reply from the Activity menu, or hit [Alternate][R]. *Kivi* calls your text editor, with the body of the original message quoted using the > character. Once you've finished your reply, save and quit the editor. *Kivi* gives you the option of editing again, sending or aborting.

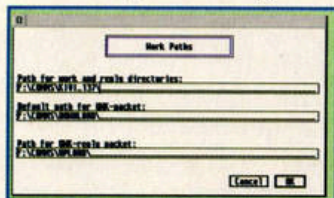
To send a new message, select Write from the Activity menu. *Kivi* will then open a dialog box with fields to fill in

for subject and the person to whom the message is addressed. Clicking on the To: box opens a pop-up dialog containing names you often send messages to – these are stored in a file called KIVI.NAM which you can edit with any text editor. After that, it's the same procedure as replying to a message.

Get packing

When you're finally ready to send your messages back to the BBS, click on Pack replies in the File menu. *Kivi* calls your archiver and compresses everything into a special REP packet. If you're calling Ad.Lib, the file would be called AD_LIB.REP, for example. This is the file to upload back to the mail system on the BBS. The BBS will decompress it and place your messages in the right areas, ready for everyone else to read.

If you want to get in touch with us, try any BBS which supports the NeST or FishNet mail networks, and look for the special *ST FORMAT* area – messages written in here are distributed to every other BBS in the network, so you can stay in touch. Fire up *Kivi*, and let's see you online! *stf*



Setting *Kivi* up is a piece of cake – just click to choose a new directory.

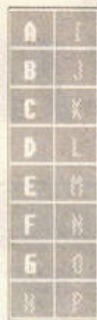


Kivi is fully mouse-controlled, so navigating Message windows is a doddle.

GET ONLINE

We don't have the space here to explain how to set yourself up on a BBS to use the QWK mail system. The three main BBS systems for the *ST* – *RATSoft*, *QBBS* and *Octopus* – all have very similar systems. Most SysOps will have a help file you can read or download, and if they haven't, they should be willing to help you set up for the first time.

Sweet suite



Get to grips with the powerful *Disk Opus* from Cover Disk 71. Nick Peers shows you how to take control of your disks and reorganise your files.

Disk Opus combines several useful utilities in one program. It enables you to view text and pictures or play music files (including MODs). You can find out about your system (for example, it can tell you how much memory you have), check the current state of your drives, and print out files and directories for reference.

When you first load *Disk Opus* you'll be told that the configuration file hasn't been found. Don't worry, the program works perfectly well without one. However, accessing Setup from the main screen enables you to configure *Disk Opus* to meet your particular requirements. You can alter the colours to make the text more readable, or alter

the display frequency from 50 to 60Hz, making the image larger and steadier.

You can also set *Disk Opus* to install a virus protector boot sector when formatting disks.

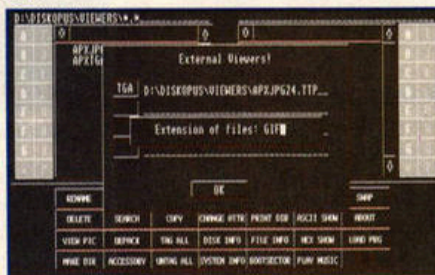
Playing tag

Most of *Disk Opus's* functions are self-explanatory – the annotated screen grab shows you which function does what. It's worth noting that certain functions – such as Tag all, Untag all and Disk info – can be used on either the source or destination directory by clicking on the relevant option with the left or right mouse button respectively.

Other options, including move and copy, can only be



The configuration screen for *Disk Opus* in an attractive shade of blue.



You can view GIF, TIFF and any other pictures from within *Disk Opus* if you have the software.

performed from the source directory to the destination directory. To save time you can swap them around by clicking on the Swap button.

Playing T-Rex

Use the cursor keys to move around the document when viewing files. The left and right cursor keys move a page forward and back respectively. Press [Esc] to return to the main screen.

Disk Opus also supports a variety of musical formats, but it's important that you specify the right file type – otherwise the program may crash.

Although *Disk Opus* only supports six different picture formats internally, you can link it to other programs in order to view up to four different file formats. Just click on the 'View pic' icon with the right mouse button and specify the file path to the required image viewer (don't forget to save your selections as part of your set-up though).

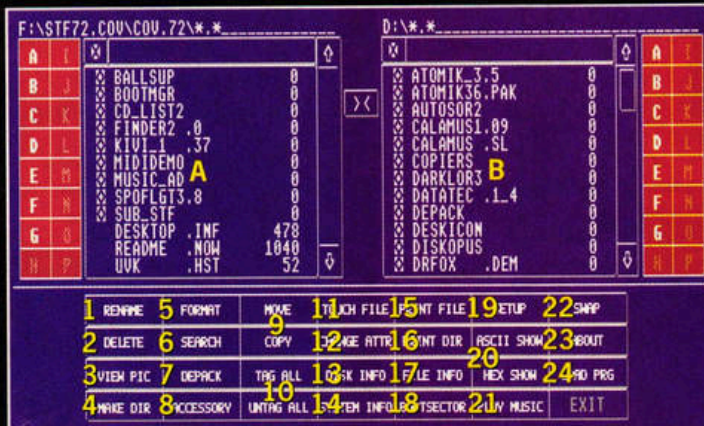
If you're serious about delving deep into *Disk Opus*, load the accompanying text file into its ASCII viewer and read through at your leisure. *Disk Opus* is a fantastic program, and high resolution users should note that the author is willing to create a monochrome version if the demand is there. *stf*

FORMATS

Pictures: SPU, NEO, PI1/PI2, PC1/PC2, CA1/CA2, IFF
Music: Mad Max/Lap, Count Zero, TAO, David Whittaker, Lap (Old LAP), Jedi, Blipp Blopp, MODs
Packers: Atomik, Ice.

THOSE DISK OPUS FUNCTIONS IN FULL:

- A Source directory.
- B Destination directory.
- 1 Rename file: enables you to use certain characters not usually supported in filenames (such as '+').
- 2 Delete selected file(s).
- 3 View pic: *Disk Opus* supports various low and medium resolution pictures.
- 4 Make Dir: create folder in the currently selected directory.
- 5 Format: format a disk (single or double sided, drive A or B).
- 6 Search: search a directory or drive for file(s).
- 7 Unpack packed files (Ice/Atomik).
- 8 Access GEM to use accessories.
- 9 Move or copy selected files between the directories.
- 10 Select or de-select all the files in the current directory.
- 11 Stamp all selected files with the current system date and time.
- 12 Change a file's attributes.
- 13 Gives information on the currently selected drive.
- 14 Gives system info about your Atari (TOS, memory, etc).
- 15 Print the currently selected file.
- 16 Print out the contents of either the source or destination directory.
- 17 Gives information on the currently selected file.
- 18 Bootsector: enables you to test, view and alter boot sectors.
- 19 Configure *Disk Opus* to your individual preferences. See the main text for more details.
- 20 Enables you to view files as ASCII or hex: useful for displaying text files.
- 21 You can play a variety of music files from here, including MODs.
- 22 Swap the directories around.
- 23 Gives you information about *Disk Opus*, plus details about some of the commands.
- 24 Load and run highlighted program.



WARNING: do not use the bootsector option as a virus killer, and don't use it to mess around with commercial programs, such as Cannon Fodder. ST FORMAT cannot be held responsible for damage to your disks through misuse of this function.

To get to grips with the PC



...read through
all these

weighty tomes

...and you'd be talking in
computer gibberish
for ever more

...or you
could just

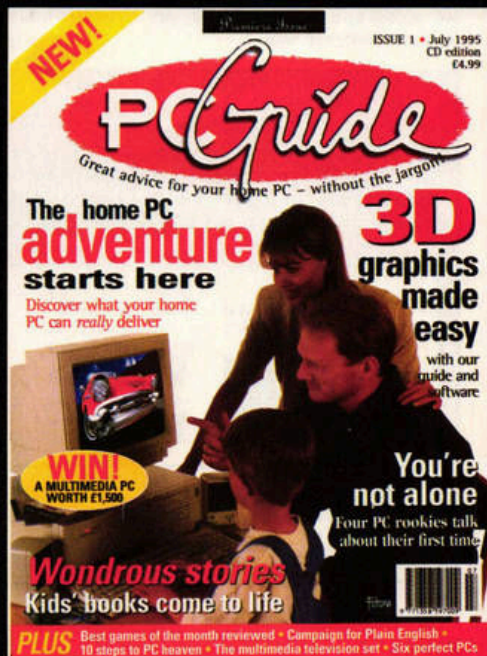
read *PC Guide*

...and your arm muscles
might waste away

Let's get a few facts straight. Nowadays everyone knows you don't have to be a boffin to use a PC. Everyone also knows that PCs are the biggest thing to hit the home since the video cassette recorder. So the big question is why do all computer magazines talk to readers as if they're experts? Answer – they don't. Not anymore. *PC Guide* talks to you like real people and we talk about the things that you're interested in – we don't get bogged down with databases and we don't fill over 50% of the magazine with dull reviews. Instead, we'll introduce you to new PC applications, show you how to get more out of your PC and solve any problems that come up. In short, we'll make your PC a dream to use.

Don't miss *PC Guide*,
OUT NOW

PC Guide



A whole new image

Alienate all your friends with *Speed of Light*, the highly-regarded image editing package from Cover Disk 72. Frank Charlton shows you how.



You too can turn friends and relatives into swollen-headed aliens with *Speed of Light*.

Speed of Light works on all Atari machines, in all resolutions. On an ST or STE, launch it in low res for the best results. On a Falcon030, you can run it in any of the Falcon's video modes except for TrueColour. You can still load TrueColour images when *SoL* is running in 256-colour mode, but they will be dithered to 256 colours. *SoL*

will even run well on high-res mono monitors.

A lot of the snazzier functions are semi-disabled in the unregistered version – all the more reason to stump up the cash (send a cheque for £20 to CyberStrider, 203 Parr Lane, Unsworth, Bury BL9 8JW).

Displaying images

On a 16-colour ST, *SoL* examines the colourmap of the image, and adjusts it to display more efficiently. If you've ever used *GEMView* in 16-colour mode, you'll notice how much better *SoL* is at displaying colourful pics.

SoL uses a flicker technique to fool the ST into displaying more than 16 colours. You can adjust the flicker level from the main menu, using the Flicker Contrast slider.

Occasionally you'll see a warning that colour reduction has taken place because of palette limitations, in which

case you'll often get a better view of your image by switching to Greyscale mode, especially on an STE. From the main menu, click on the Display button, and switch from Color to Grey.

Transformations

SoL can perform some complex image processing functions on your pictures. You can adjust brightness levels, tweak the contrast, and even apply some odd effects.

The Transforms section of the Main menu has a set of three sliders, plus a button marked Complex. Click on it and you'll see three mini-histograms – one for each RGB channel. Clicking on one of them brings up the full version in a dialog.

It all looks frighteningly difficult to start with, but there are a number of filters provid-

ed on disk. Click the Load button – you'll find the filters inside the HISTOGRM folder. The filenames – BRIGHTEN, DARKEN, and so on – are fairly self-explanatory.

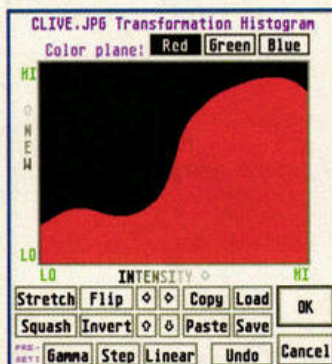
Once you've loaded a filter, you need to copy it to the other two colour channels. Click the Copy button, then use the Red, Green and Blue buttons to switch channels. Click Paste to dump the loaded histogram, then nip to the main screen and display the image to see the effects. To get the original balance back, open the dialog again and click on the Linear button, followed by Generate, for each channel.

Slideshows

To create a slideshow, click on the button marked with a double-arrow. *SoL* will remember which images you load, and add them to the slideshow. Simply click Stop recording to produce a script file, which *SoL* can use to play your slideshow. You can also determine how long images are displayed on the screen.

Saving your work

SoL can save your manipulated image in a number of formats. If you select a 16-colour format, such as *Degas*, you will be prompted to choose between saving either the main or alternate screen. The alternate one is often brightest and produces better results. Remember you can save both under different names, and compare them later. *sff*



SoL can tidy up a grotty image easily with the Colour histogram tools.

WARP FACTOR 9

One of *SoL*'s more amusing tools is the Warp function. Once you've loaded an image, click on the Warp button on the main Options screen. You'll be presented with a dialog box like the one below.

Clicking on the button at bottom left brings up a pop-up menu offering a choice of Warping methods. All produce different results – experiment to find the one you like best. We chose the Plateau method for our piccie of Clive (top right).

Next, click the 'Repeat' button, and switch it from Off to Periodic. You can adjust the individual Warping parameters in the dialog, but for now, just stick with the defaults. Click OK to go back to the main screen, and Display to display the image. Now you can see just how fast *SoL* is at these complex calculations, as your Warped image is drawn.

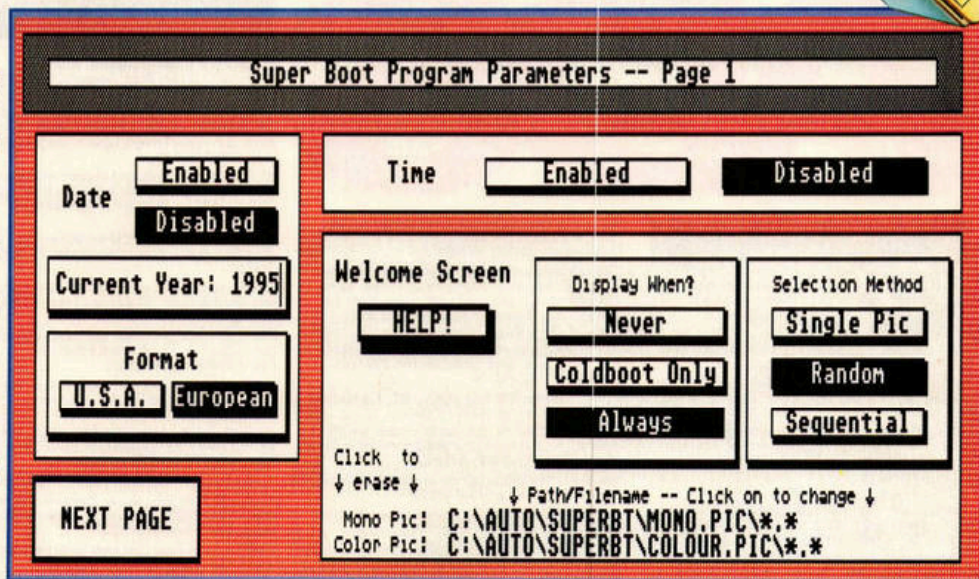
You'll notice that every now and then there's a blank line in your image. You haven't done anything wrong, it's merely Stuart's way of encouraging you to register. You can see how powerful Warping is, and with the full version you can save your twisted masterpiece to disk.

Boot disks

Turn to page 42 for our feature on hard drives. A hard drive helps you use your ST to its full potential.



Configuring your Atari for different applications couldn't be easier. Nick Peers begins a tour of the programs and accessories you'll need for a neat start-up routine.



This series is going to show you which accessories and utilities are useful for different applications, such as desktop publishing, art and MIDI. This month we'll start by examining the programs that make the whole configuration process easier, plus some utilities you'll need whatever use you make of your Atari.

Judging from our latest survey, about half of you own a hard drive. Apart from speed, the main advantage of a hard drive is the volume of data you can store on it. However, although you can

Boot manager programs like the shareware title *Superboot* are absolutely essential if you have a hard drive. As the name suggests, it enables you to store boot-up configurations for a wide variety of applications.

store all the programs and accessories you need, you probably won't have enough memory to have them all loaded in at once. This is where the humble boot manager comes to the rescue.

Boot programs

Boot managers enable you to choose which programs and accessories you want loaded when you first boot up. Others programs are renamed to prevent them executing.

Two boot managers stand out: *Superboot 8.1* and *XBoot 3*. Both can store your favourite configurations and load them at the press of a key - saving you time and effort.

Superboot 8.1 is shareware. Despite extras such as the ability to play a sample and display a picture on boot-up, it

has the annoying habit of refusing to load accessories the first time you start up, forcing you to re-boot.

The commercial offering, *XBoot 3* (£29.95, from HiSoft ☐ 01525 718181) is far more versatile. You can easily change the running order of your programs and even load in different DESKTOP.INF

configurations - excellent for getting to the program you want quickly and easily. Also in its favour is its compatibility with pro-

Chameleon makes it possible to load and unload accessories after boot-up

grams like *MagiC*, *Ease* and *SpeedoGDOS*.

Utilities

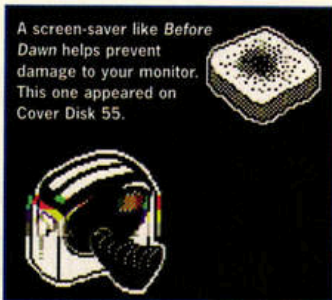
Certain utilities come in handy regardless of the application you're running. Unless stated otherwise, all the programs mentioned can be found in any good PD library.

For those of you without a clock, there are many programs which enable you to set your Atari's date and time manually on boot-up. One of the easiest to use is *Set Date* (Cover Disk 66).

Another useful application is a screen-saver. This enables you to leave your ST switched on for long periods of time without damaging your monitor. The best are *Before Dawn* and *Darklord 3*, although a commercial option, *Twilight*, is about to be released (see News for more details).

Another good upgrade, especially if you own an early ST, is a new file selector. *Selectric* and *Freedom* are by far the best, offering many useful extras (see STF 69 and 70, respectively).

Finally, two useful accessories (if you have the memory) are *Pull Down*, which stops your menus from popping up whenever the mouse goes remotely near the menu bar, and *Chameleon*, which makes it possible to load and unload accessories after boot-up. This helps you get round the six accessories-only problem.



A screen-saver like *Before Dawn* helps prevent damage to your monitor. This one appeared on Cover Disk 55.

THE SPACE AND RAM PROBLEM

There are two things to consider when constructing your boot disk (or drive): disk space and memory.

If you've only got a floppy disk drive, your boot disks will be restricted to around 720-800K in size, and you'll have to wait a long time for everything to be loaded into memory. However, if you have a separate boot disk for each application, there's no need for a boot manager.

As far as memory is concerned, every utility and accessory loaded in demands space. It's important to realise that while many programs run with 1MByte, if you start loading in entire 720-800K boot disks you'll have no memory left for the application itself. There are two options: either limit yourself to a few small utilities, or upgrade your machine to 2MByte or more.

Next month

We'll kick off this column properly next month with a look at boot programs that can help you with desktop publishing. *stf*

Reader ADS

SALES

520 STE 1MByte, manuals, box, all leads (excellent condition), real-time clock cartridge, Mastersound 2 and Quartet games, PD. All for £100. Tel Mark on 01733 555777 ext 2248.

Large collection of ST games for sale. If you know what you want, call Derek on 01494 438541.

1MByte STFM with WP sequencer, £99. Poor RF display bilingual 520STFM £40. Many games, new/old, TWRITE3 £65. Many others, ring for list. Tel 01788 578256.

ATARI 520 STFM upgraded 1MByte with external disk drive, ATARI SM125 high res, mono monitor, mouse, joystick, software with computer desk £230 ono. Tel 01752 671173.

FALCON 030: 85MByte external hard drive, NVDI and screen blaster, VGA monitor, Tabby graphics tablet, plus £100s free software – personal call recommended! Tel David 0121 7771802 anytime.

Jaguar for sale. Two pads, S-VHS/stereo lead, 5 games including Doom, T2000, Theme Park, Cannon Fodder, £200, buyer collects. Tel Paul 01733 266366.

1MByte upgrade with software, ring Peter on 01420 84615 anytime.

ATARI 520 STFM (1MByte RAM), discovery pack, colour telly, printer, games, PD software mags, mouse/joystick £375 ono. Tel 01923 835775.

ATARI 1040STF, 50MByte hard disk, SCI1435 (NEW) STAR LC10 colour printer, mouse, joystick and loads of software £375 ono. Tel Dave 01473 710854.

CUBASE LITE with manual, boxed, offers? Tel 01202 876488.

Software for sale! Gunship £5, Gronter Elite 2 £9, ST Pasic £3, 3D Construction Kit £8. Call Paul after 4pm on 01736 63384.

ATARI 520 STFM, 1 MByte upgrade, colour monitor, second disk drive, Canon PW-1080A printer, mice, joystick, over 180 games, half are top games. 45 ST User and 48 ST FORMAT magazines with disks. All this for £450. Phone 01734 699186.

ATARI SLM 804 laser printer with controller and new drum, needs toner cartridge £200 ono. Phone Lee on 0151 2840363.

ATARI STE 4MByte, second floppy, high res and colour monitors. 40 MByte HDD Epson 9-pin printer, hand scanner, video master, Software and mags £600, call Ark on 0181 6413142.

FOR SALE: ATARI STE 4MByte hard disk 20MByte (ATARI SH204) lots of software on HD. External extra drive and ATARI SC1224 colour monitor. PRICE: £450, phone 01606 835296.

ST FORMAT 15-69 inc, offers. External disk drive £25, joysticks, books, many games, Reach for Skies, Timeworks, Monkey Island etc. Tel 0181 6989138.

Selling ST games eg Gremlins 2, not boxed £2, Dark Fusion, not boxed £3, Karate Champ £5. THE LOT FOR £8, all original, tel 0181 8029607.

STAR LC10 mono printer with magenta, cyan and yellow ribbons with flexi dump allowing colour printing. Approx 470 sheets tractor paper and printer stand. Buyer collects £70 ono. Phone Graeme on 01883 622665.

1MByte 520 STE, Philips CM8833 colour monitor, Star LC10 printer, second disk drive, Tabby graphics tablet dust covers, desk, some games and utis £300 ono. Phone Kari 01529 414638.

MEGA ST 4MByte, 804 laser printer, SM124 Hi res monitor will split, offers, tel 01234 708845.

1040 STFM, TOS 2.06, with manual, mouse, joystick. External 3.5inch disk drive. Original boxed games. Phone Peter 01494 461729 after 5.30pm.

Crescent Galaxy for the Jag, has no instructions! Boxed £18 ono. Phone Jamie 01603 630231.

Philips CM8833 high res colour monitor, boxed as new £150. Tel 01494 436339.

1040 STE, TOS 1.62 colour monitor, lots of software, mouse, joystick £200 ono. Phone Graham 01522 534054.

Software (1MByte mini): MultiTos, Zeros, Cricket Captain, Frontier Elite II and six other games £15 THE LOT will split, also plug in 20MByte hard disk £75. Phone Kenneth on 01865 371942.

ATARI Jaguar with Cybermorph, Tempest 2000, Ralden. Quick sale, £150 ono. Phone Tommy 01236 769083.

4MByte STE, ICN Link and 270MByte Datapulse HD, second 3.5inch drive, software and loads of games. £350 ono. Write for details: John Price, 2 Farrington House, Cardwell Road, Woolwich, London, SE18 5RB.

Falcon 030 16MByte RAM, 127MByte IDE HD, 540MByte Datapulse HD, 21MByte Floptical drive and 10 x 21MByte disks. Microvitec 14inch multisync monitor. Lots of software! £1300 ono. Write for details: John Price, 2 Farrington House, Cardwell Road, Woolwich, London, SE18 5RB.

ATARI 4MByte memory board for the Falcon £70. Outside virtual memory program, invaluable, but £30 to you! Phone Gary 01293 534415.

CASE and PSU, ideal for building hard disk, tape streamer or CD-ROM. Holds two devices £15 inc post. Phone John 01705 832145 6-9pm (Portsmouth).

ATARI 1040 STF, Sony Trinitron colour monitor, Epson 9-pin printer, joystick, mouse and loads of games, utilities and ST FORMAT magazines £375, no offers/splits. Tel 01734 267852 evenings.

ATARI 520 STFM, good condition, but with no games, hence the price £55, or swap for a mountain bike with 15 gears. Phone Tom 01535 681051.

4MByte STE (TOS 1.62/2.06) – £250, SM14 Mono Monitor £60, ICN Link with cable and software £60, £290 for computer and monitor, £320 for all three. Phone James 016884 569392.

HP LaserJet 4P, 600dpi, 4ppm. 45 internal fonts. Very low copy count. Little home use. Boxed with manual, disks £585. Tel/fax: 01524 381581.

Software clearout! Many games (serious titles). Large collections of clip-art and fonts – will split. Atari mags with cover disks. Send SAE for list: K Hornby, 33 Ingleton Drive, Lancaster, LA1 4RA.

520 STFM 4MByte with P720B external disk drive, two mice, two joysticks, hi res SM124 monitor. Some games and some software, good condition £150 ono. Phone Owen on 01656 652675 (eves/weekends).

WANTED

ST contacts in Britain or overseas, write to: Paul Anderson, 12 Rodney Road, Greensted, Ongar, Essex, CM5 9HN. Enclose lists, 100 per cent reply.

Ultimate Ripper cartridge wanted – must be latest version and include manual. £10 paid. Contact: Bryan Jones, Bryn Golau, Cynwyd, Corwen, Clwyd, LL21 0NX or tel 01490 412515.

Hi res monitor, also hand-held scanner, also Timworks II and Calamus 1.09. Contact: Jim Bakas, 8 Bee Ashford Crescent, Ashford, Middlesex, TW15 3ED or tel 0585 482702.

Activision's Bomber Flight SIM and Mission disks, buy or swap. Also wanted, Flight of the Intruder. Tel 01252 314110.

The RPG Bards Tale 1, 2 and 3 for the ST, can anybody help. Top dollar paid. Call Paul on 01455 823164 after 6pm.

ATARI high resolution monitor, also memory upgrade – cash waiting, can collect. Contact Allan on 01884 257487/05891 95071.

I NEED World Class Rugby Five Nations Cup preferably with manual. Phone Adrian after 3:45pm on 01548 580002.

Jaguar Games: Bored or finished it? I will pay up to 50 per cent current RRP depending on the condition and funds. Phone Darren 01524 831662.

Tactical Manager – Scottish. Phone 01993 840019.

Solution TD Activisions, Hacker, Cannon Fodder hint Book, STOS Maestro sampling cart. Please write: Steve Hislop, MNY Britannia, BFPO239.

WANTED: Poolswinner Gold pools prediction program and manual for Atari. Tel 01902 722180.

Software to execute a system-exclusive sample dump from AKAX X7000 sampler to my ST. Contact: Neil Dave, 39 Trenoweth est, North Country, Redruth, Cornwall, TR10 4AQ.

For ATARI STE, Fighter Bomber, Volfied and disk. Phone John 01784 483255 anytime.

Sheet music and/or midi files (GM) of Country and Western and MOR songs. Anything considered. Tel Chris on 01639 633715.

Software to run Blitz Atari on my PC 720K drive. Will pay reasonable price. Tel 01206 868428 evenings.

Hyperpaint II. Write to: Bill Jackson, 68 Martin St, Buckhaven, Leven, Fife, KY8 1EP or phone 01957 716176.

Multiface ST wanted. Contact Chris on 0181 6989138.

Would anybody out there kindly give me a copy of Sensible Soccer v.1.1 disk 2 for FREE! I will be so happy. Contact Murat 0181 8029607.

Contact wanted to swap ATARI 520 STE games. I have got Streetfighter, Zool, Altered Beast, Gods, SpeedB etc. Tel 0181 8029607.

ST book, Stacey or Portfolio needed urgently. Please help! Reasonable price paid. Tel 0191 5269138.

Railroad Tycoon wanted desperately. Call Mat on 01530 270558.

Does anyone out there have any tips, cheats or maps for the game Towers? If you do, call and ask for Ian on 01625 426186.

Supremacy for ATARI 520 STFM with instructions. Contact Ian on 01773 603029.

ST Replay cartridge wanted desperately, contact Andy on 01902 865901. Not stereo, please.

Deuteros with manual, also Space Shuttle, willing to buy or swap. Phone Dave on 01522 536478.

Copy manual or instructions for Sequencer One Plus. Willing to pay a nominal fee. Phone Colin on 01253 782797/0850 991002 (mobile).

Printer driver to run my Seikosha SL96 colour 24-pin printer from my 2MByte STE. Also want colour monitor to suit same. Phone Chris 01797 223388.

Has anyone completed Hook, Elvira, Cruise For A Corpse? Contact John 01333 450867.

Magic, Ease, Korgoi Voices, ATARI Works, HP DeskJet black/triple cartridges (NEW). No copies, originals only. Tel Robin 01522 752458 (eves).

URGENT! Copy of Sim City sought. Will pay upto £10. Phone Clive 01865 200067.

Wanted: North and South. Call 01905 767749 and ask for William.

Falcon Mission Disks 1 and 2 (original only) desperately wanted. Call Nick on 01457 834120 after 4pm.

SWAPS

Secret Monkey Island, AV88 Harrier Assault and Lemmings 2. Swap for any of the following: Shuttle, Cannon Fodder or Robocop 3. Call James 01332 882217.

Jamo CD Power 100, Speakers swap for STE anysize. Must's Trailer Park, Station Road, Stanforth, Doncaster, South Yorks, DN7 5HR.

Rotring 777 Air compressor with three air brushes (boxed). Jars/masks/books/spare needles etc. For M101 File Player (ie Yamaha MDF2). Phone Chris 01639 633715.

Will swap Life and Death or Lemmings 2 for any good art package or other. Write to: Paul Brothers, 18 Cherry Orchard Crescent, Bally Lermot, Dublin 10, Ireland.

Anyone wishing to swap ATARI ST to Super Nintendo software send SAE to M I Hussain, 165 Ash Road, Salfrey, Birmingham, BS 1DR.

Around 15 original rare games in perfect condition together with last 15 ST FORMATS with all cover disks, for any working ATARI STE. STFM internal PSU wanted. Tel 0151 5239966.

ST contacts wanted for swapping PD games and utilities. Send lists to: Matt Smith, 6 Clarence Place, Gravesend, Kent, DA12 1LD.

I will swap my SNES (boxed) with two controllers and Mario Kart, a Gameboy, carrycase, DC car adaptor and two games for an ATARI STE (1MByte) with games. Phone Mark 01376 562934.

I need an STE. I have got a 1MByte STFM and I will swap. Needed for programming reasons. Phone Gordon on 0161 6880158.

Elite the Microprose version for swap of Campaign. Phone Gary on 01325 307362.

Willing to swap F19 Stealth Fighter, Super Monaco or Golden Axe (all boxed with manuals) for Microprose FIGB (boxed with manual). Phone Martin on 01308 421103 after 4.00pm.

Western gun and gun belt only fires blanks. I want an STE and will pay postage. Also good for American Civil War. Thanks. Write to: Mr Cadogan, 33 Holyrood Walk, Corby, Northants.

Kenwood double cassette deck (system) for ATARI disk drive and power supply or games (Flight sim/sports etc) or what have you. Or swap 1040 for above and 520STFM. Answer phone message for Danny on 0181 8592746.

ATARI 520 for a colour inkjet printer or 24-pin printer with single sheet feed. Also my Ultimate Ripper cartridge and Robinsom Requiem (original) for a modern. Contact Rob Birks, 10 Ings Close, South Kirby, Pontefract, West Yorks.

Does anybody have a Microprose Formula One Grand Prix disk one and a save disk? Please send me a copy and I'll send you £4. Contact: Lloyd Hannes, 15 Darwin Close, Walsgrave, Coventry, CV2 2BZ.

Does anyone want a Jaguar with Doom, Alien vs Predator and Cybermorph for £190 or to swap for a Philips CM8833MKII colour monitor (good condition) if so, write to Lloyd Hannes, 15 Darwin Close, Walsgrave, Coventry, CV2 2BZ.

MESSAGES

Articles wanted for new PD disk magazine allied Energy. Write about what you want to write about. Send ASCII on disk (returned) to: Derek, 89 Wolverhampton Road, Codsall, Wolverhampton, WV9 1PL.

Who could help me in choosing CAD spreadsheet and database programmes for my MEGA STE, 4 and 48 HD2. Write to: M Horak, Boleslarska 384, 29401 Bakov nad Jirou, Czech Republic.

Gandal... many thanks for the map... may the light of your staff never falter... to Mordor 190. David.

PD disks only 60p each – for a limited time only. Send disk and SAE to: AGPD, c/o A Green, 6 Middlebere Drive, Wareham, Dorset, BH20 4SD for catalogue.

New! The World's First STE-only disk mag, includes all things STE-oriented and more! "EA's got it!" First issue £1.50. David Seaman, 49 Sauntagon, Harington, Hayes, Middlesex, UB3 5HG.

10-16 September 1995: ATARI fair in the Landenbergshaus in the village of Greifensee near Zurich (Switzerland) organised by the ATARI Club, Zurich Oberland. For more information: C Kirsch, Am Pfisterholzli 54, CH-8606 Greifensee, Switzerland.

Could someone please tell me the correct combination for the missing 16-key clipboards for Moon Phoenix in Captive Ring/write or whatever in utmost urgency: Stuart Short, 18 Kent Street, Jarrow, Tyne and Wear, NE32 5AW or 0191 4301245.

Classified ADS Issue One, ATARI items to sell or buy. Send disk of mixed PD plus 25p (stamp) to 2 Avon Croft, Ossett, Wakefield, WF5 8QX.

Easy life disk for all ST's (beat the fruit machine, easy money and more). Send £5 P/O to L Parkin, 1 Watson Avenue, Brinsington, Bristol, BS4 3SG.

Stellar Diskzine is the ultimate read for your ST. (83% STF 69) send £1 for issue 15 to: Mark Nobes, Newholme, Aston Road, Chipping Campden, Glos, GL55 6HR.

For your FREE copy of SCI FI Issue 2 send blank disk and SAE to: Alastair Donaldson, 2 Chapelton Avenue, Bearsden, Glasgow, G61 2RE.

Any ST owners! Contacts wanted to swap games, PD, music etc. Especially RPGs (LS LARRY etc). Contact: Gordon, 425 Broadway, Chadderton, Oldham, OL9 8AP. FREE games to responders!

Rave music – produced on ATARI STE. Send £3 blank tape and 50p in stamps for demo tape to: Charles Wyvil, 5 Minish Loch, Maddy, North Uist, HS6 5AP.

Ø! Buy DA Word now coz it's da best. Available on ST and AMIGA. The rest suck. Phone 0161 4377474 and ask for S!

USER GROUPS

Anyone interested in starting an ST user group in St Ives/Huntingdon (Cambs) area? We could meet regularly to exchange ideas, help, software etc. Phone Sue Chappell 01480 464642 after 4pm.

New PD called PAJ Software is now open. Send disk and SAE for a disk catalogue to: PAJ Software, PAJ House, Shaftesbury Avenue, Cheadle Hulme, Stockport, SK8 7DB.

Would anyone be interested in joining a free ATARI user group in the Warks area. Please write to: J Dwyer, 68 Westfield Road, Rugby, Warks, CV22 6AT.

Ivan Michel Jarré – for all the latest info on the ST-using French maestro read Revolution – write to Tony Dines, 122 Moor Lane, Cranham, Upton, Essex, RM14 1ET for details.

3D Construction Kit User Group disk mag only £1. 19 Kipling Close, Lockwood, Huddersfield, HD4 5HA or tel Tony on 01484 460888. Full of datafiles, utilities, helpfiles and more!

CHC: The very best ATARI user group: newsletters, help advice, contacts, PD, BBS, Internet and more. SAE for full details to CCC, Box 121, Gerrards Cross, Bucks.

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Reader offers



STARDUST

DAZE MARKETING

Reviewed in issue 68, where it scored 94%, Stardust is one of the best arcade shoot-'em-ups you'll see on an STE or Falcon. With unrivalled gameplay and great graphics, it is an essential addition to your collection.



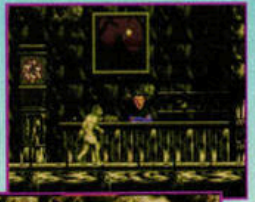
Description: *Stardust*
RRP: £24.99
STF price: £19.99
Order no: STFSTAR

£19.99
SAVE £5

SHADOW OF THE BEAST 2

PSYGNOSIS

Atmospheric and good-looking, *Shadow of the Beast 2* (STF 69, 80%) is a platformer with graphic adventure overtones. You control a morphing maniac as he wanders around a 2D landscape killing people. The action is set in a time when real men used chains, clubs and axes, so there are plenty of opportunities to relieve your frustration with mindless violence. At this price, how can you resist?



Description: *Shadow of the Beast 2*
RRP: £12.99
STF price: £7.99
Order no: STFSHAD

£7.99
SAVE £5

512K required

GFA BASIC COLLECTION

GFA DATABECKER

GFA Interpreter, GFA Compiler and GFA Shell, all in one package for a mere £59.95 – £20 off the RRP. It's the complete *Basic* solution for both first-time programmers and established coders. To learn more about *GFA Basic*, see issues 65–67.



Description: *GFA Basic* collection
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OBSESSION

UNIQUE DEVELOPMENTS

Obsession is a technically brilliant re-creation of pin-ball on the ST that scored a massive 94% in issue 67. There are four wildly different tables, featuring magnets, kickbacks, overhead runs, combination targets and comments on how badly you played. Our reviewer described it as "one of the greatest ST games ever," so how come you haven't got a copy? Send your order in today!



Description: *Obsession*
RRP: £24.95
STF price: £21.95
Order no: STFOBS

£21.95
SAVE £3

1MByte STEs/
Falcons only

LEMMINGS & LEMMINGS 2

PSYGNOSIS

Lemmings is one of the most famous games in the history of computing – this pair caused such a stir when they were released that we gave each of them an *ST FORMAT* Gold award. *Lemmings* runs on any ST; *Lemmings 2* needs 1MByte of RAM. Both are Falcon-compatible.



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Tutorials: *Pablo Paint, STOS*



JUNE 1995
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Reviewed: *Outside, NVDI 3.0, ExtenDOS Pro, Ping 2000, Tessera*
Tutorials: *C, Pablo Paint, STOS*



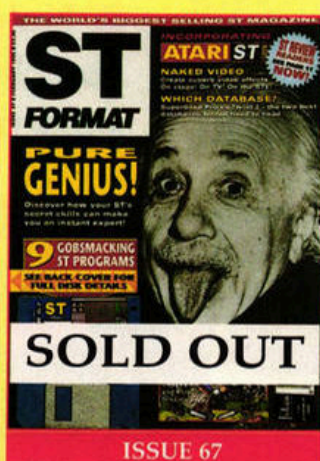
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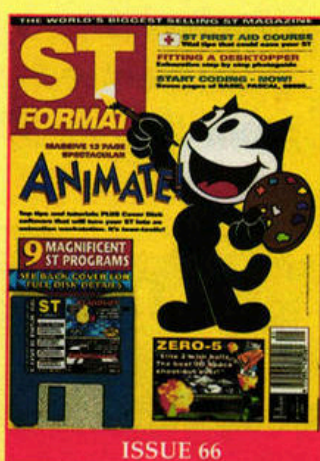
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Simon Forrester takes the games you love to play and ruins them by making everything incredibly easy. He's got the best of intentions, of course.

Gamesbusters

Helter Skelter

Here's a game that everyone has, especially if they ignored the date mix-up on the offer. Now it's time to spoil everything for you, with the following indispensable guide to beating *Helter Skelter*.

First, a few general tips:

- The higher you're bouncing, the faster you can travel.
- Bounce height decreases at the same rate it increases – to keep bouncing at the same height (invaluable for many of the levels), you should hit [Fire] once to gain height, ignore it on the next bounce, then hit it again.
- When in doubt, speed up – you can break the sequence by hammering any creature you please, and all you'll lose is the bonus.
- You can get infinite lives in



Green shrimps are scary – they're sold in brine, and you definitely shouldn't eat them. We prefer those little pink prawns, or a nice vegeburger.

the two-player mode by waiting until you collect the 'extra' bonus, after which you should let the time run out until a player loses all of his or her lives. You'll now be able to keep playing endlessly.

And finally, a few level codes, just in case you really can't get any further: spin, flip, ball, goal, left, twin, and play. Happy now?

Doom

Okay, so we said we wouldn't cover Jaguar stuff, but this is only a

quickness, which enables you to skip through the levels with relative ease. Why you'd even want to skip a level of *Doom* is beyond me, though. Still, David Newland has done well here, as this means we can all see the final levels, and even the secret one.

There are 24 levels available to you. Think of the level you want to go to as a two-digit number, such as 13, 22, or 07. The tens are represented by letters, and the single units by numbers, though you don't have to bother with the zeros. For instance, level 13 would

be A3, 22 would be B2, and 07 would be 7. Hold down these buttons and press pause, and you'll go straight to that level.

Cannon Fodder

This cheat is probably one of the most complex and technical we've come across in the dastardly world of ST gaming.

Use

Cannon

Fodder

to

freshly format

a save

game disk, and

save your mission

one stats as the first file on

that disk. It's vitally important

that the disk is fresh and that

your game file is the first one

on it, so that you know where

to find it with a disk editor.

In case the last sentence

didn't give the game away,

let's spell it out: you'll need a

disk editor. *Knife ST* is probably

the best one, and we gave

it away on the front of issue 42

(alternatively, contact HiSoft

on ☎ 01525 718181). Boot up

your sector editor and point it

at side 0, track 1, sector 1 of

the save disk. Make sure it's

the save disk, don't go any-

where near the original

Cannon Fodder disk with *Knife*

ST (if you mess this up, on

your own head be it).

You should be looking at a

sector containing \$200 (512)

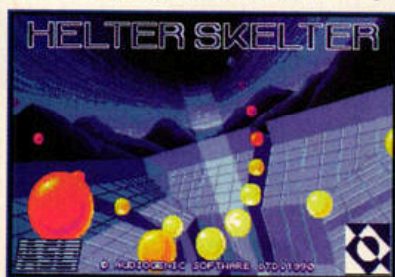
bytes. You'll find the follow-

ing bytes at the following

addresses:

\$01ab	Mission/phase reference	0 - \$47
\$01b7	Mission number (just for show)	0 - \$18
\$01bd	Men available	0 - \$ff

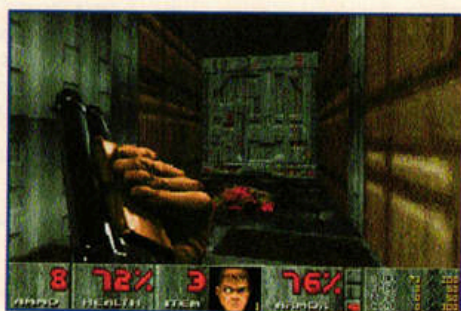
When you've changed the values you want to, save the



After the bloopers of issue 71, we redeem ourselves with some handy *Helter Skelter* tips.



Doom – a great excuse to show gratuitously violent pictures in the pages of this nice, sweet magazine.



The most satisfying part of the game is firing a shot at someone, then reloading with a satisfying click.



The serene landscape on which the death and mutilation of Cannon Fodder takes place.

sector back on to the disk and load the file into *Cannon Fodder*, then save it on to your normal save game disk.

Thanks to Justin Ward of Sutton Surrey for that one – £25 is currently crawling towards you through our startlingly inefficient – but not yet privatised – postal service.

Ishar 3

Though he's currently working on a full solution to Silmaril's excellent conclusion to the *Ishar* trilogy, Jens Flunkert has sent us a cheat that will help out anyone having problems with it.

To boost your party's hit points back up to 100 per cent, move your pointer to the very left of the action screen, and hold down [Control], [Alternate], [V] and the left mouse button.

Similarly, [Control], [Alternate], [A] and the left mouse button will spool time



And, when you're tired of playing *Ishar*, you can take a break at the stargazer's house. Pure Genius.

forward if you wanted to wait for daybreak, nightfall, the evening showing of *Neighbours*, or whatever.

Mysteriously, [Control], [Alternate], [W] and the left mouse button will call up a screen full of technical statistics about the game. They won't help you in the slightest, but there you are.

Pro Tennis Tour 2

Sean Kelly of Lincolnshire has come up with a really sneaky way to get the better of the tennis game that causes so



There's no need to die in *Ishar*'s back streets again, thanks to Jens Flunkert. Use his clever key combinations to boost your party's hit points, or spool time forward.

much angst. It's used for skipping rounds in tournaments to get straight to the final.

Call up the screen you use to go to the next round, but before you click on the court icon, take the disk out of the drive. When you click the icon now, you'll get a 'fatal error' message. At this point, re-insert the disk and press [Fire] on your joystick. Your drive will chunter for a while, and you'll be taken back to the menu screen, from which you can get to the tour screen. Now the icon for the next round will work. Don't skip the final, though, or you won't get any money.

Borodino

Benjamin Cook of Horsham in West Sussex has spent a bit of time learning how to cheat *Borodino*'s game data, and decided to share this with us:

- Back-up both disks. This is a cheat that requires you to make changes to certain files on the data disk, and neither *ST FORMAT* nor Ben Cook will take any responsibility for you damaging your copy of the game. These back-ups won't work, but they contain the files you're likely to mess up – which can be copied back on to the original disks to sort out any problems that arise.
- Copy the files FRENCH.GEN and RUSSIAN.GEN on to another disk. These are the information files for the two sides.
- Find a word processor that uses ASCII files. Just about anything from a simple text editor to

Protext will do the trick. Load up the army you want to edit.

- You'll see that the file consists of a

header and a list of names. As you scroll through the file, you'll come across entries that look a little like this:

1, Pernety, 2, 3, 11, 4, 2, 4, 8, 8, 8, 9,

The first number in the reference is the general to whom the division belongs to, and the name that follows is the name of the commander in charge. The rest of the

numbers on that line should be ignored but left intact.

The next line contains the information that can be changed and re-saved to the file. This starts with the number of regiments in the division, and the numbers following this are the types of regiments. If the first number is four, it must be followed by four regiment numbers. You can add regiments by adding numbers to the list, but you have to increase the first number to account for the addition. The regiment numbers are as follows:

- 1 – Light infantry
- 2 – Line infantry
- 3 – Guard infantry
- 4 – Cossacks
- 5 – Light cavalry
- 6 – Heavy cavalry
- 7 – Guard cavalry
- 8 – Line/foot artillery
- 9 – Horse artillery

- Write-enable the original data disk, and rename the GEN files you copied to GEX, to keep them safe but out of the way. Now, you can copy your new GEN files across to the disk without overwriting the old files. When you run the game now, you'll be able to play with your new armies.
- Any problems will come in the form of 'Data Error: 0 8'. This means that the program's come across an error in your data file, so load it up and check that the numbers correspond. If you can't find any problems there, reduce the number of regiments in each division, and re-save.

Ben also asks what a

The Cossacks preferred it cold, dangerous and hand-to-hand

Cossack actually is. If memory serves me correctly, they were incredibly hard soldiers from Russia who didn't bother

with uniforms, helmets or even much ammo. They preferred things to be cold, dangerous, and hand-to-hand.

Well, folks, that's all. If you've got any tips or cheats, send them to Gamebusters, *ST FORMAT*, 30 Monmouth St, Bath, Avon, BA1 2BW. *stf*

AND THERE'S MORE

Here are a few tips for getting your work published:

- Pick a game that's topical, or new.
- Draw a map – we don't get enough of them.
- Don't send in any more *Leisure Suit Larry* tips (we get hundreds, for some completely unexplained reason).



Feedback

Karen is feeling particularly generous this month, so you'll find lots of winners in Feedback...

Recount



Well done, *ST FORMAT* – not! I refer to your decision to stop covering the Jaguar. Up until now you have been my only source of information regarding new releases and reviews. Why then, like Atari, are you ignoring it? Your own survey states that more people own a Jaguar than a Falcon – so why don't you stop covering that?

Okay, eight per cent more people in your wonderful survey said they'd prefer no Jaguar coverage, but how many people who enjoy reading about the Jag didn't send in your survey? And let's face it, eight percent is hardly a majority vote, is it?

Darren Emmett, Morecambe

stf: What are you on about? Of course eight percent is a majority. Governments have been elected on less than that, and the 'nays' were as vehement as you in their defence of ST-only pages.

There will be another survey in six months, and if at that time the vote is for Jag coverage, then that's what we'll do.

The cost of ethics



I read with great interest the letter published in the June issue of *ST FORMAT* from a group of PD libraries complaining about compilations that did not include all of the original documentation. As I have a large number of compilations, I decided to weed out those that did not include the proper documentation. While doing this, I noticed the phrase, "This program may not be sold for a profit," or a similar one, in most of the documents.

Surely this makes the PD libraries hypocrites? I know that Goodman's is a profit-making organisation and so, possibly, are the others. How can they can run down PD compilations which are

MARPET MEGABYTES

Back in issue 71 we ran a competition in conjunction with Marpet Developments for ten 512K Xtra-RAM upgrade boards. Well, now we can announce the names of the ten lucky winners: Neil Cartner from Carlisle, Tim Simpson from Gastard, Eric Ward

from Washington (Tyne and Wear), David Bloomfield from Ipswich, NJ Carter from Enfield, David Barszczak from Holmewood, Mark Dainty from Brecon, A White from Luton, Sandy Rogers from Dalry, and Clive Howell from Bournemouth.

offered free of charge?

I also feel that calling the disk compilers, "people who lack the talent to write programs themselves," is a sad and petty insult to the people who are trying to boost the quality of PD software.

Paul Womar, Bristol

stf: Questions like these deserve answers. Mike Goodman will speak for the defence...

Mike Goodman: I feel Paul Womar may have missed the point of the original letter. If the compilers of these disks have taken the trouble to contact the original authors for permission to include the program, there's no complaint, it's all above board. It's when programs are included without any such contact taking place that we object.

Many of the programmers

that we are in contact with prefer their work to be promoted under their own name, and not someone else's. They also insist that all associated documentation stays with the program, so that the potential for registrations is not diminished. In fact, there are now many authors, especially in the PC world, that will not even allow their programs on to CD compilations (but actively encourage distribution through vendors such as ourselves).

I too have read many of the 'read me' files that Paul mentions, and besides stating, "not to be sold for profit," they usually add, "except to cover distribution and other costs." If we are unsure, we contact the programmer before including the program in our catalogue.

As to his point on profit making, as far as I am aware, all PD libraries that advertise make



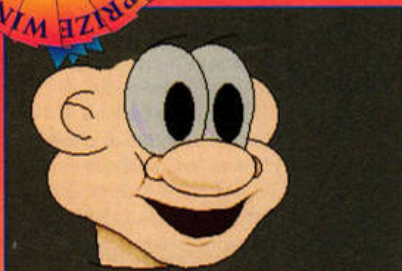
You can tell when you've made a truly democratic decision – nobody's happy with the outcome, but no-one knows who to blame.



PIXEL PAINTING

This month's winner was dug out of the wreckage left by The Hairy after his move to the editorship of *Commodore Format*. It's a well-drawn cartoon face

from Andrew Axton in Cheltenham, Gloucestershire. Andrew used that old classic *NeoChrome* to produce this sparkling piece, and here's what he had to say about it. Over to you, Andrew.



1 I started off by using the ellipse function for the eyes, nose and ear. Having filled in the face (the palette scheme used was temporary at this point), I gave 'Bloke' some cheeks with the ellipse before outlining the face (with line draw), and adding the mouth and neck.



2 Again using the ellipse, I introduced some shoulders and made a palette change to incorporate the hair. The hair was experimental and I just scribbled it in, tidying it up afterwards. I also shaded the eyes in, suggesting a light in front of the face. Bloke is starting to look quite human...



3 I mixed light and dark colours for contrast and effect. Loads more shading and highlights were added, plus some teeth. The thing in front of his face is meant to be a monitor, by the way.
If only I could channel some lightning into him, my creation could actually live. Ha ha ha haaaaa...!

CINEMATOGRAPHY

And, finally, we've got the winner of the Cinematographic Contributionalsationals competition. Chris Barnes of Islington created this excellent sequence, featuring an enormous manga-style assault-suited warrior smashing his

way out of a building before stomping off to right wrongs elsewhere. £25 is making its way to him (Chris) as you read this, delivered by the several tonnes of grinding metal that is ST FORMAT's own battle suit. Nice work, Chris.



a profit – they need to in order to cover their overheads (and I'm not just talking about basics such as disks and postage). Over the years, many have failed to make enough money to cover their expenditure and have ceased to exist. Organisations such as Goodman's do not necessarily deal with PD and shareware alone, and may have other business interests and sources of income that are not reflected in the ads you see in magazines.

As long as users make use of the service we provide, we will attempt to continue to support the Atari market.

On paper



I find it incredible that you cite paper prices as the catalyst for the price increase to £4.25. If it's as simple as that, why does *Practical Photography* cost £2.20 for 170 pages? Are you milking the faithful? I find it sad also, that in your price rise notice, you couldn't find room for even a token apology to those who have remained supportive all these years – who, let's face it, have helped pay your wages.

Dave Marsh, Portsmouth

stf: As we've said before the price of ST FORMAT is influenced by several factors. One, the number of readers. Two, the number and relative wealth of the advertisers. Three, the production costs, including the cost of paper.

ST FORMAT costs more than *Practical Photography* because we are catering for a very specialised audience, and therefore have fewer readers and fewer

advertisers. However, the reason for the jump from £3.99 to £4.25 and the paper size dropping to A4 is entirely due to the 40 per cent increase in the price of paper stocks. This is hitting publications right across the board. So, the answer is no, publishers are not milking the faithful.

Fix it for me



I've been looking for the latest version of the STOSFix program.

I did find version 2.7 at ftp.uni-kl.de, but on doing a search of the Web, I came up with a table of contents for issue 67 of ST FORMAT, listing among the disk contents STOSFix 3.6. Can you tell me where I can get a copy, or failing that, an archive site that carries the latest version.

Roger Brotherhood, USA

stf: Aha, so you found our page on Futurenet, eh? Well, as you probably found out while you were browsing around, issue 67 has sold out. But all is not lost, our very own Ad.Lib BBS, run by the capable, and very tall Messers Curtis and Charlton, has a copy of the program. To access their board call ☎ 0191 3702659 or 0191 3702885.

Send your letters to the editor, Karen Levell, at: Feedback, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon, BA1 2BW or e-mail: klevell@futurenet.co.uk. Letters may be edited for length and grammar.

NEXT MONTH

Well, the chances are we'll be putting together another magazine, with some words, some piccies and a fair smattering of Cover Disk programs. We'll also be covering cunning printer tricks, including how to get colour printouts from a mono printer.



The long-awaited multimedia feature might finally make an appearance, and we may be able to show you how to author a multimedia masterpiece...

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ON THE CARDS

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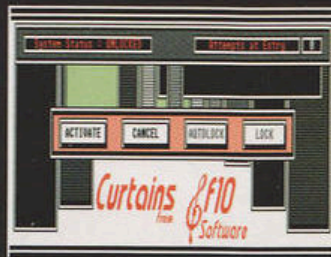
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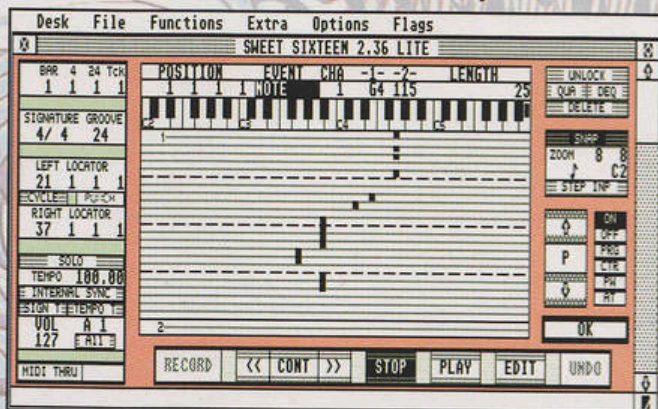
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