

ATARI

ST

REVIEW

ISSUE 27

JUNE 1994

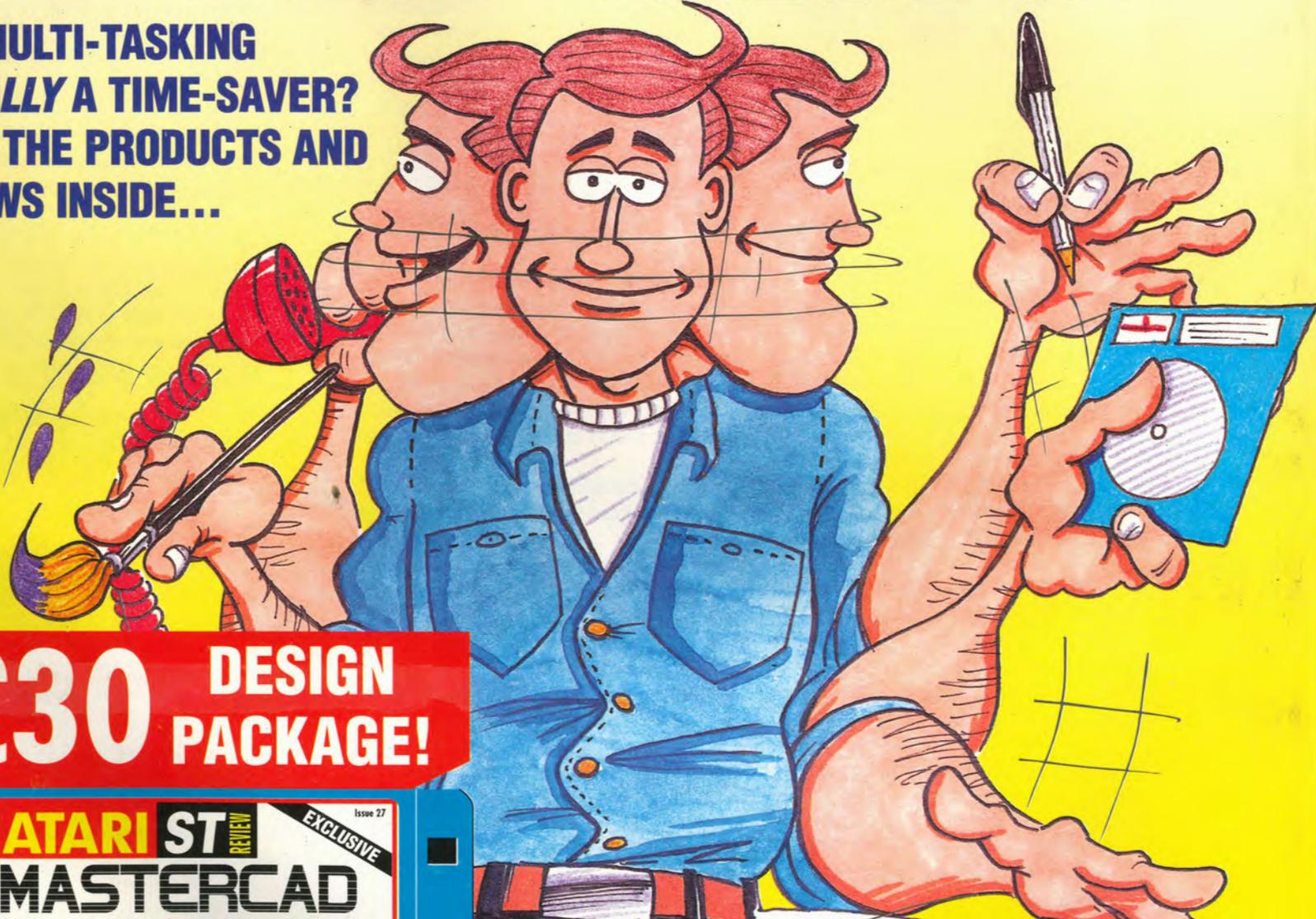
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SPEED KING

IS MULTI-TASKING
REALLY A TIME-SAVER?
ALL THE PRODUCTS AND
VIEWS INSIDE...



£30 DESIGN PACKAGE!

ATARI ST REVIEW EXCLUSIVE Issue 27

MASTERCAD

Master CAD is a full, commercial 3-D design package that lets you:

- Produce 2-D and 3-D objects in a friendly GEM environment
- Move, copy, rotate and flip objects
- View scenes from different viewpoints
- Output to a 9-pin printer (included) or any other via your GDOS set-up
- Save as a Degas file for painting

Mono or colour; 1MB of RAM required.

KOBOLD

An exclusive, usable demo of the brand-new file management system for MagIX World. You'll be amazed at just how fast Kobold copies your files!

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2001 Newsletter - including programming/submitting guide and 12 of the best games!

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THE MAN BEHIND TORVILL & DEAN'S MUSIC TELLS ALL



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INSIDE: DA's Vector Pro • Mag!X • SMS2 • OMEEn Preview • Mag!X World Preview • MultiTOS & Geneva Revisited • What Is Multi-Tasking? • DeskJet 520 • Tower System • Goal! • Ten Games Reviewed • Lots Of Tutorials...

CGS ComputerBild are pleased to announce the arrival of *DA's Vector Pro*.

They're



DA's Vector Pro has all the features of *DA's Vector*, plus many new ones that take full advantage of the Atari computer capabilities for the first time.

Gradient fills. Now you can create custom shading for your vector designs. Both linear and radial shading is possible, and takes up very little memory as the gradients are part of the object, not multi-copies.

Blends. This innovative feature enables you to combine several objects and automatically creates shading between them. It can also "morph" between two different shapes.

Combine pixel and vector graphics. Many enhancements have been made to the program's picture fill section. Any white area can be defined as transparent. Picture fills may be rotated. Monochrome pictures can be used as fills, and re-coloured.

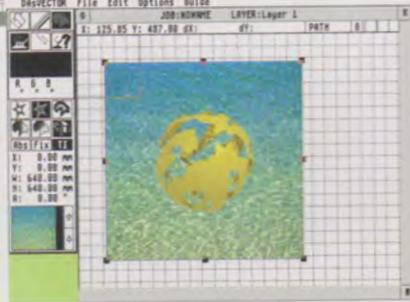
Multi-copier. As well as importing pictures, whole animation sequences can be loaded into the animator and mixed with vector graphics. The animation can be rendered with *InShape* or digitised from video using *DA's Picture* (Matrix version).

Camera. Another major addition to the animator is the ability to set up camera paths, zoom, and distortions. Each layer of an animation can have it's own camera.

Filters. The filters can be used in many ways; fades, tints, wipes, ghosting. Any object or picture can be used as a filter. Each layer can have a different filter. Filters can be used as masks for video gatelocking.

Animation editing. *DA's Vector Pro* can cut, copy, move and loop any section of an animation.

Movie compiler. This compiler program is



included with the main Program and can be used to add soundtracks to your films. Samples in the AVR format can be loaded and synchronised to film segments. All frequencies are supported, including that of the Falcon. As well as adding sounds you can also load single frames to create presentations and slide-shows, and mix single frames with animated sequences.

DA's Picture

DA's Picture has many features not seen in any other art/ image processing packages. All the tools, modules and palettes can be moved to where they suit you, so there's no menu permanently taking up space. Virtual memory management means large pictures can be edited without massive quantities of RAM.

Dual mouse control. Each mouse button can be assigned a different tool or colour.

Tools. Pencil, marker, airbrush, water-colour, smear, dither, stamp (create & save custom brushes)

Filters. Erode, blur, sharpen, invert, contour, to name but a few. *DA's Picture* allows user defined filters to be loaded and saved.

Masks. Both 1 bit and 8 bit masks can be used. It is also possible to import greyscale pictures as masks.

Palette. User palettes may be defined and saved. The "colour pick" tool makes grabbing colours from pictures easy.

Clipboard. Cut up your images and paste them in numerous ways. The clipboard menu allows you to define many parameters before pasting an image e.g. any degree of transparency, colour saturation, negative, tinted, scaled.

Zoom. The magnify tool allows super fast zooming in and out. Simply aim the mouse

and click until you reach the required zoom level, (13 levels). Zoom out to one 17th of original size.

Vector Module. This module is used to import or draw vector graphics. You can use various tools on vector paths, for example airbrush, marker, stamp.

Gradient creator. Design gradient fills for use as backgrounds, masks etc. Gradients can be dithered to obtain many different effects.

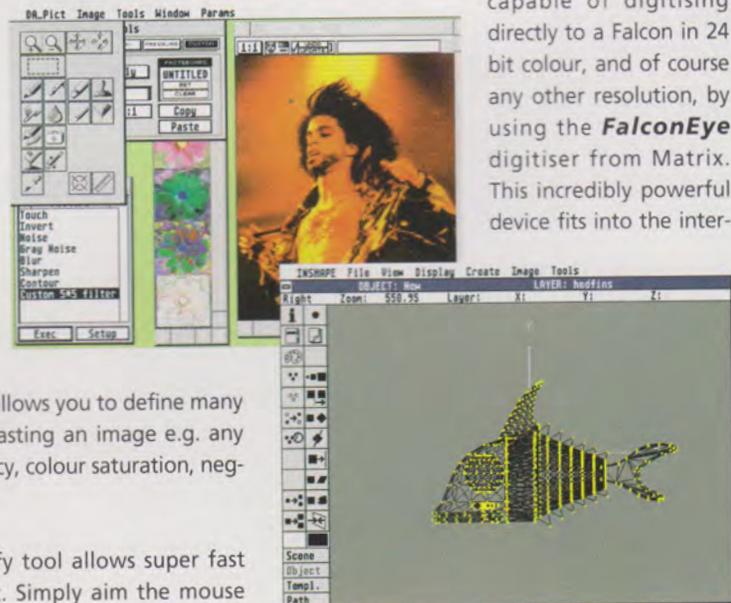
Colour gradation. This module allows images to be re-coloured by adjusting the amount of each colour present in an image. For instance change greys to sepia, or correct the colours in a scanned or digitised picture. These settings can be saved for further use.

Print. *DA's Picture* can output directly to HP 550/LaserJet II, III, IV, Atari SLM, Canon CLC, Star NL-10 and NEC P6/7. You may also print to disk as IMG or TIFF/TIC/TIH.

Import/Export. The TIFF formats supported by all of Digital Arts' software can be loaded and saved directly. It is also possible to save compressed Tiffs, and in the Intel (P.C.) format. Many other image formats can be converted with *DA's Converter*, included with the software.

Options. *DA's Picture* is a modular program, this means peripherals such as scanners and Digitisers can be used without leaving the program. The first module (available now) is

capable of digitising directly to a Falcon in 24 bit colour, and of course any other resolution, by using the *FalconEye* digitiser from Matrix. This incredibly powerful device fits into the inter-



here...

nal expansion slot and can be connected to a video recorder or camcorder. It can grab in real-time (true colour), and can also produce high quality full screens in mere seconds. Grabbed sequences can be loaded directly into **DA's Vector Pro**, and mixed with stills and vector graphics. Call us for full details of the Matrix technical specifications.

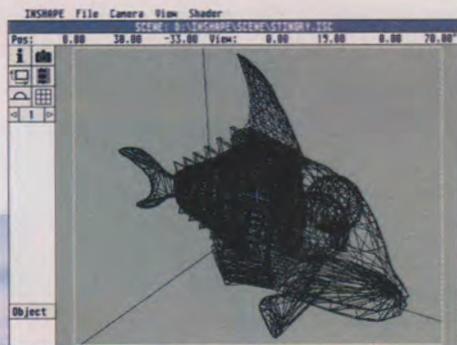
InShape

InShape is a fully integrated 3D modelling and ray-tracing package that allows you to construct objects, put them into scenes and render single frames and animations. **InShape** requires either a TT or Falcon with maths co-processor.

Modeller. The Modeller is the core of **InShape** and allows highly accurate positioning and scaling of objects (.0001mm). Complex objects can be built from components over 16 layers, or objects can be imported from *.3D2 files.

Objects can be built from the large range of materials included, you may also define and save your own materials. Materials can be a wide range of surface patterns e.g. marble, wood, spots, stripes, tiles, random, turbulent. Image mapping can be used to wrap graphics around 3D models in several different ways. Bump maps are available for extra surface detail. Choose from bumps, dents, waves, tiles, pyramids, wrinkles.

The scene editor is used to illuminate and position objects ready for rendering. Scenes can be made



to scale and illuminated in many different ways. Position the camera anywhere in the 3D world and record single frames or animations at any size between 80*80 and 1046*1046.



Formerly **Didot Professional**, this program is available in two versions; black and white, and colour design. **DA's Layout CD** is a full colour DTP system for the Atari. It is easy to learn yet immensely powerful. The interface has been fine tuned for speed and integration between text and graphics.

Text. **DA's Layout** has a built in text editor, so you don't have to continually swap programs, and search for files.

Zoom. A unique zoom method means no more endless redraws as you scroll a page. Just set two zoom levels and switch between them.

Fonts. Both Calamus and Postscript Type 1 fonts may be imported. The font management system allows fonts to be grouped and saved in libraries. The font editor enables you to make your own fonts and change existing ones.

Vector Graphics.

DA's Vector owners can import objects that incorporate pictures and gradient fills. Other formats supported are CVG, and GEM Metafile. Once imported, objects can be edit-

ed with the vector editor, you can also make objects from scratch. Also included is a bezier tracer for converting pixel graphics. Objects may be saved in libraries that are automatically loaded with your document.

Graphic text. Text can be manipulated like an object: squash, stretch, 3D distort, and then exported.

Pictures. These can be in the TIFF or IMG format. Halftone pictures can be re-coloured. For image editing **DA's Repro** is included.

Print. All contemporary printers are supported. For exporting to Imagesetters several different formats may be used, including different Postscript types. There are even fax drivers.

Style and format Macros are stored in libraries and can easily be edited and assigned keyboard shortcuts.

Epson Scanners. We are approved agents for the Epson GT range of scanners, and can supply **GT Look II** driver software with each scanner purchase. **GT Look II** allows you to define size, magnification, dithering, screening method, colour adjustment, brightness and sharpness. For extra high resolution images **GT Look II** can scan direct to disk. **GT Look II** saves files in the formats used by all of the Digital Arts software. We can supply full technical specifications for the Epson scanners and provide demonstrations upon request.

Tabby Graphics Tablet. **Tabby** makes drawing freehand directly to the screen an easy task. Simply plug the hardware into the serial port,

install **Tabby** program and it's ready for use. Ask for details on the forthcoming

Quill, a super fast hand writing capture program or accessory that translate every flick of your pen into flawless curves, with a choice of nibs. **Quill** is ideal for signatures, hand lettering, calligraphy, tracing, cartoons and sketches.



Price List

DA's Vector	£149.00
DA's Vector Pro	£249.00
Dream Team B/W	£299.00
Dream Team CD	£499.00
DA's Picture	£149.00
InShape Intro	£149.00
InShape Intro With FPU	£199.00
Tabby Graphics Tablet	£49.95
Quill	£29.99

All prices quoted are inclusive of VAT. Please allow £5.00 for postage within the UK. For further information and to place your order, please phone us on: 081 679 7307,



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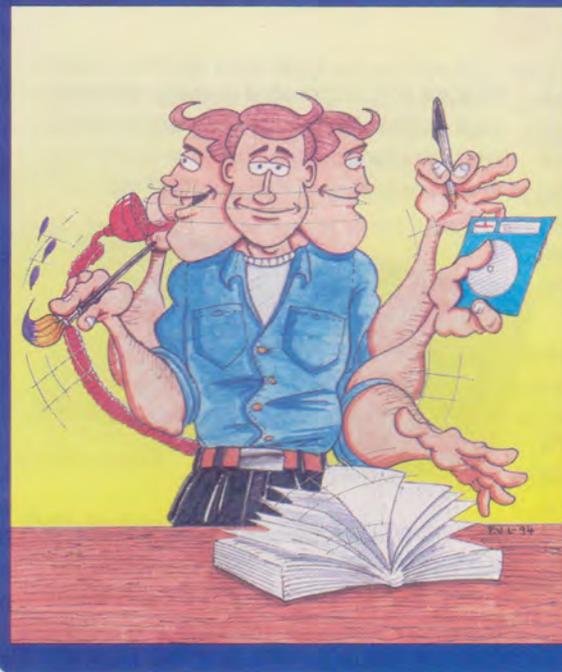
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COVER FEATURE SPEED KING

PAGE 24



Multi-tasking: what is it, what can it do for you and what's available for Atari computers?

This issue will answer all of these questions for you. You'll find reviews of all of the current products (*Mag!X*, *MultiTOS*, *Geneva* and *SMS2*) plus previews of *OMEn*, *Mag!X World* and *Geneva's* desktop, *NeoDesk 4*.

To get multi-tasking into perspective, we've also included an article to help you understand how a program behaves when multi-tasking. Plus there's a look at *Windows* on the PC and *System 7* on the Mac. How do these compare with the ST's offerings?

Finally, our three columnists debate the issue, each giving a different point of view...

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JUNE 13**



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**CALAMUS
OFFER EXCLUSIVE!
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INFORMAL

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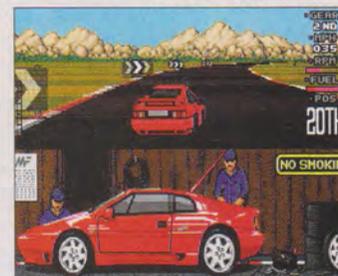
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He runs, he dummies, he... trips!
Read all about Goal! on page 48.

Three in one - read our Lotus Trilogy review on page 51.



ON THIS MONTH'S COVERDISK MASTERCAD

... a full, easy to use, computer-aided design package. This classic program works in mono or colour, lets you design 2-D and 3-D objects and view the finished scene from various viewpoints. Pictures can be saved in Degas format for further work or output to a 9-pin Epson-compatible printer (driver supplied) or to any other through your GDOS set-up.

Our first tutorial starts on page 12...

Plus
See page 14 for...

Kobold - a usable demo of this excellent file management utility
ZX81 Emulator - including 12 games!



THERE'S LIFE IN ATARI YET...

I heard the news about the demise of Commodore International just as we went to press, and it set me thinking along the track of "there but for fortune goes Atari." But is such a thought accurate – or fair? There is little doubt that Atari's cost-cutting exercises over the past couple of years has prevented the company from disappearing into oblivion and it is now in the enviable position of having a world-beating product with no competition in the foreseeable future. Neither Nintendo's Project Reality nor Sony's PS-X are likely to be seen as finished products for at least a year, by which time Jaguar will be readily available world-wide – and with a substantial games base. While the success of a games console is of little use to those of you who use your STs, Falcons and TTs for more serious ventures, the fact that Atari hasn't exited off planet Earth still holds some promise for the future.



My recent trip to the opening of the Silica retail outlet in Debenhams, London, brought home another interesting point. Nestled among the PCs and Amigas was a Falcon and an STFM "Music Master" pack, the former up and running with MultiTOS installed. Why is this interesting? Because we are being led to believe that this is the end of the road for Atari computers and I for one do not believe this. Atari has not manufactured its own computers for some time, choosing to sub-contract out to various companies in the Far East. Consequently, whether or not to set the production line moving again is purely a financial decision: is there sufficient demand? If the answer is "yes" then more machines become available. The question is: what quantity of machines have to be advance-ordered before the wheels start turning again? I've been quoted figures of between 2,500 and 3,500, a relatively small quantity when you consider how good value for money a 1Mb STe is at sub-£200.

Multi-tasking is brought to the fore in this issue, including reviews of all the products and a couple of exclusive previews. One angle that recently came to light is that Mag!X may be the perfect TOS upgrade. It's faster than TOS on a standard ST, easy to use and completely replaces the operating system. The multi-tasking aspect could simply be viewed as a useful extra facility – now there's a thought...

I'd like to welcome Tina Hackett onto the Review team as Games Editor. She's been writing for us for some time and has now taken over the mantle from Tony Kaye. Even though he's moved on to pastures new, you're still likely to see him at the Atari shows and writing the occasional piece.

Keep writing in to us, even if it's to say that you preferred my previous photo! Love, peace, jelly babies – and ST Review!

Vic Lennard
Editor

COME UP

ART HAS NEVER BEEN SO EZ!

EZ-Art Professional is the culmination of three years' research and development into graphics packages on the Atari ST and Commodore Amiga. The aim was to create an innovative product that encompassed the features considered to be most desirable to users, while retaining ease of use.

The program, on any ST and offers up to ten workscreens on larger memory machines. The STE's extended colour palette can be accessed and you can even edit a picture with an STE palette on an STFM! A powerful fill editor supports both two and 16-colour fill patterns, which can be created and edited with ease. Fonts may be loaded and used at a variety of different point sizes; a number of fonts and fills will be supplied with the package.

Over 20 different effects can be applied to blocks including resize, scale, remap, shatter, skew, pixelate and soften. In addition, 21 different types of shapes are available and the Range editor allows pseudo ray-traced effects to be applied to these. EZ-Art Professional incorporates 18 drawing tools and modes and has extensive file support including the ability to load Degas, Neochrome, Crack Art, Tiny, Spectrum 512, IFF and HAM graphics files. It also features an in-built Help system which displays each icon's function as you hover over it with the mouse. EZ-Art Professional will be available in June, price to be announced. For more information, call Floppystore on 0224 586208.



Arty party – EZ-Art Professional offers a wealth of features allied with ease of use.

COMMODORE DEMISE

Commodore International Ltd., a pioneer in the personal computer industry, announced on April 29 that it was going out of business.

The company plans to transfer its assets to unidentified trustees "for the benefit of its creditors" and has placed its major subsidiary, Commodore Electronics Ltd., into voluntary liquidation. "This is the initial phase of an orderly voluntary liquidation of both companies," Commodore said in a brief statement.

The company last month reported an \$8.2 million loss for the quarter ending December 31 on sales of \$70.1 million. A year earlier, Commodore lost \$77.2 million on sales of \$237.7 million in the same period. In the latest report, Commodore said that financial limits had thwarted its ability to supply products, leading to weakened sales. One of its new products, the Amiga CD32, had sold poorly in Europe, where the company did most of its business.

Commodore started 40 years ago as a typewriter repair company. Its extension to the adding machine business paved the way for it to make calculators and then personal computers by the mid-1970s. Commodore competed with Radio Shack for the first computers sold to homes and co-founder Jack Tramiel became a highly-regarded figure in the fledgling PC industry. By the early 1980s, it was overshadowed in the PC business by Apple Computer Inc. and IBM. Software manufacturers didn't create as much software for Commodore's Amiga line as it did for Apple and IBM-compatible machines.

In recent years, most of Commodore's business was in Europe. An announcement from Commodore Business Machines (UK) Ltd on May 3 stated that its parent had "sought the protection of the Bahamian Courts whilst active discussions regarding investment and re-organisation are finalised. Commodore Business Machines (UK) Ltd will continue to trade as usual."

A further announcement is expected shortly.

AND BUY ME!

High Street retail chain to stock Atari computers...

The Atari ST is set to make a welcome return to the High Street thanks to Silica Systems who are in the process of setting up a chain of stores across the country. These will carry the entire Atari range of hardware and software, including the STFM, STe, Falcon and Jaguar, the latter of which is expected towards the end of May. There will be twenty "Silica Stores", most of which will be based within existing branches of Debenhams. Each will be easily identifiable to the public, and specially trained staff will be on hand to offer expert advice to customers. Ken Browning, Silica's Retail Controller, said: "This is designed with a new market in mind. Customers still need a full service environment, help and assistance. Our staff are well trained and knowledgeable about the products they specialise in. People won't be blitzed by techno-babble or left dangling by shop assistants who only know how to work the

cash register". The stores will feature futuristic decor, large screen displays and "demo pods" where customers can test out the latest games. The main aim is service; on-site engineers will carry out memory upgrades and all on-site service will be free of charge. Taking the service theme even further, the staff will carry equipment to customers' cars or offer a next-day home or business installation service. In addition to the retail side, Silica Stores will offer introductory and



Just for you - the inaugural selection of software even included the ubiquitous 1st Word Plus...

specialised training courses as well as on-the-spot technical assistance. All stores will be connected to the Sidcup headquarters via a real-time computer link for the fast ordering of stock and quick access to product information.

The chain was officially launched on April 28 at the flagship store in Debenhams, Oxford Street, London with both Falcons and STs on view. Software on the shelves included most of the HiSoft programming range along with such products as 1st Word Plus and Studio Photo. The games side was also well covered - Sensible Soccer, Elite 2, Goal! and Lemmings 2 were all on display. Piled up in the stock room could be found both the MusicMaster and Discovery packs.

Other Silica Stores are already up and running in London, Glasgow, Sidcup, Croydon, Manchester, Southend-on-Sea, Chelmsford and Ipswich. New branches will be opening up at the rate of one a week over



Piled high - Discovery and Music Master packs embellish the stock room...

the next couple of months, located in Bristol, Guildford, Southampton, Sheffield, Luton, Plymouth and Hull. For more information, call Silica on 081-309 1111.

INSIDE MEDUSA

ST Review was recently given the chance to look inside a Medusa, the machine that boasts a Motorola 68040 processor with a 64MHz clock speed, offering about fifteen times the power of a standard TT.

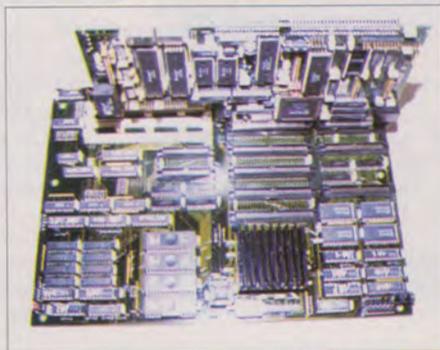
To the front of the bottom board lies the 68040 processor, hidden by huge heatsink fins, while to the left lies the four EPROMs that hold the slightly modified, Atari-licensed, TOS 3.06 operating system. Behind the processor are various 32 and 16-bit slots, one of which currently holds what is effectively a full ST. The

four white slots to the left rear are for 72-pin SIMMs giving a total possible on-board RAM of 128Mb.

Being modular in design, various add-on boards can be incorporated including a VME Bus multiple bus board, numerous graphics cards and hard drives.

While performance figures have yet to be released, suffice to say that at the recent CeBit show Calamus SL on the Medusa ran the Windows NT version on a DEC Alpha computer very close - and at a small fraction of the cost.

We'll keep you posted...



SEEING THE LIGHT

Ladbroke Computing's latest addition to its Datapulse range of hard drives is a 230Mb optical drive with a Fujitsu mechanism. The unit costs £840, including one optical disk with further disks costing £69.99 each. In addition, it requires an ICD Link (£79.99) for the ST or a SCSI II cable for the TT or Falcon (£39.99). It is fully compatible with Ladbroke's 128Mb model. Users have the choice of two cases: the standard one which can be used as a monitor stand, and a low footprint case if desk space is a problem. A customised model, which allows the SCSI device to be easily plugged in or out of the case, is available for an additional £40.

Also new from Ladbroke is the Microvitec 1438 multi-sync monitor at £289.99, which allows low, medium and high resolution on the ST by use of a switch box (£19.99). It can also be connected to a Falcon with the necessary adaptor (£9.99). Ladbroke's high resolution mono monitor has recently been reduced to £109.99 and their Voyager 2400 baud modem is now down to £69.99.

A new product on the horizon is a single-speed CD-ROM drive for £180. It is compatible with the ST, TT and Falcon but requires the ICD Link for the ST or a SCSI II cable for the TT and Falcon. The latter two also require the ICD Pro Utilities (£39.99). The final new product from Ladbroke is a top-of-the-range 14,400 baud

Fax modem at £159.99.

Finally, Ladbroke has been able to source a supply of new STEs, both Music Master and Family Curriculum Packs. The machines have 1Mb of

memory but Ladbroke can upgrade them to two or four megabytes with a full one year guarantee, if required. Contact Ladbroke Computing on 0772 203166.

IN THE SPOTLIGHT

Following on from last year's Spotlight show, which attracted 1,800 people to an Amiga-only show, Gasteiner and Europress Enterprise are putting on a two-day show for Amiga and Atari products.

Among the top companies exhibiting will be HiSoft with a wide range of products, including its Voicemail system for the Falcon, and GE Soft Systems with its Falcon accelerator and a novel "clone" STE. Digital Village will be demonstrating the latest music products while 16/32 Systems will have its huge PD library on-site.

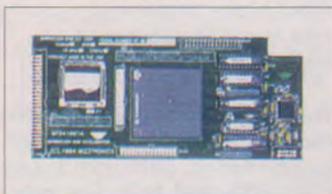
Doors open at 10am and close at 6pm on both days. Entrance to the show will be £5 at the door or £3.50 for advanced bookings. Contact Gasteiner on 081-345 6573.

NEWS ST Review Newsdesk

Two Atari-specific shows took place in Newcastle and Glasgow recently. These followed the success of the two that took place in Birmingham and Manchester at the end of last year. Staged over one weekend, the exhibitions were organised by Neal O'nions (Compo Software), David Encill (Titan Designs) and Ray Cross (CGS) and were attended by enthusiasts from all over the North of England and Scotland.

The events were the first to take place in the areas since the Atari Whistle Stop tour four years ago. You could buy anything from a back issue of *ST Review* to a new computer or even a CD-ROM drive, but you didn't have to buy anything to make the most of the day as advice was on hand from all of the exhibitors.

The Eldon Square Leisure Exhibition Centre in Newcastle Upon Tyne was the location for the first show and although attendance was a lot less than expected, visitors were treated to the opportunity to talk to other enthusiasts and shop for their



All aboard – the first UK showing of the Wizztronics 68040 Falcon accelerator...

ST or Falcon in a relaxed atmosphere.

One of the stars of the show was Dan Wilga, programmer of the now legendary *NeoDesk* replacement desktop (amongst other classics from Gribnif Software). The quiet American was showing the latest incarnation (see our exclusive preview on page 34) due for release very soon.

Dan wasn't the only American who made the trip over the pond for the shows. Bradley Koda from Best

GO NORTH!

As the Atari shows headed North, Tony Kaye followed with camera in hand...



Roll up – System Solutions had various new products, including Apple CD300 CD-ROM drives...

Electronics came across to offer a full range of Atari spares. His stand offered everything from joystick repair kits, Atari badges, sew-on patches and belt buckles to an exclusive first showing of the Wizztronics 68040 board for the Falcon.

The whole exhibition travelled North of the Border to Glasgow to present the Scots with the same facilities the following day and visitors came from as far afield as Ayr and Aberdeen. The setting was the Glasgow Central Hotel, right in the centre of the city.

One of the star attractions here was the appearance of Douglas Little and members of the Black Scorpion team. Douglas is the programmer of the *ChromaStudio* art package that also nears completion.

Possibly the furthest travelled visitor in Glasgow was Tom Thomason from Gothenburg, Sweden. Tom is a distributor and Managing Director of the Falcon Pro Centre, a mail order company. He said: "It's great to have

a show where so many enthusiasts can get together to discuss their computers and see the latest products".

Unfortunately, no exhibitor was able to offer the Jaguar yet and it was up to one owner from the Newcastle

area to bring his in for everyone to see...

Two more Atari shows, in Bristol (Saturday July 30) and in London (Sunday July 31), have just been announced. More information next issue.

MUSIC AND MIDI

The recent MEMS '94 show played host to many of the music products previously unseen in the UK. Various of the Atari-based companies showed off their products including Harman Audio, HiSoft, System Solutions, Gasteiner, Software Technology and Take Control...

Sittin' on top – Atari Workshop's new Desktopper converts your Falcon into a "mini" tower.



On edge – guest of honour on the HiSoft stand was Bob Luneski (second left), the man behind Diamond Edge and Diamond Back.

EXCLUSIVE OFFER FOR ST REVIEW READERS!

Until June 30, JCA (Europe) are offering *ST Review* readers the chance of owning either *Calamus SL* or *Calamus 1.09N* at absolutely knock-down prices! Each version comes complete with a wide range of printer drivers, fonts and a printed manual.

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Minimum requirements: 1Mb RAM, double-sided disk drive and mono monitor.
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520 STFM - 1Mb	£199
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520 STFM - 4Mb	£299
TT 030 - 32Mhz	£Call
MegaSTE 2Mb/16Mhz	£399

Special Purchase - Limited stock.

MiniS Special Offer

A complete HDD system for all STFM/E and Mega ST computer. We have managed to secure a limited quantity of low capacity Hard Drives which come supplied in our award winning MiniS casing. This offer is valid while stocks last.

40Mb MiniS inc. Translator	£199
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All drives carry a 1 Year Warranty
Coming Soon: MagIX - Multitasking for all STs.

Falcon Add-ons

Falcon Wing 0Mb	£49.95
Falcon Wing 4Mb	£179.00
Falcon Wing 14Mb	£Call

BlowUP 030 - Software	£15.00
BlowUP 030 - Hard 1	£49.95
BlowUP 030 - Hard 2	£69.95

14" Monitors	from £99.95
Clarity 16	£99.95
Cubase Audio	In Stock
FDI - Falcon Digital Interface	In Stock

Communications

Comms Software	
Stalker	£39.95
CoNnect v2.4x	£29.95

Includes printed manual and registration

Fax Software (requires Fax Modem)	
Straight Fax v2.10	£79.95
Straight Fax upgrade to v2.1	£26.00

CD-Rom Systems	
Complete with interface for STFM/E	
	from £299.00

Atari Software

Atari Works	£99.95
Works with SpeedoGDOS	£129.00
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SpeedoGDOS	£39.95
Photo Show	£29.95
Photo Show Pro	£49.95
Diamond Edge	£49.95
Diamond Back II	£39.95
ICD Pro Utils	£39.95
Audio Calc	£39.95
DA Vector	£149.00
Calamus v1.09N	£89.00

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All prices include VAT
For small items under £50 please add £2.95 P&P

Monochrome Monitors

The award winning SM14 is a perfect replacement for the Atari SM124/5 monochrome monitors: it exceeds Atari's original specifications. The 14" high resolution, paperwhite FST (Flatter, Squarer Tube), gives a perfectly centred, crisp, sharp image without blurring at the edges.

The SM14 comes without, and the SM14s with, a speaker. The SM14f is for the Falcon. A Tilt and Swivel stand comes as standard.

The special version for STfm/Mega ST installed with Overscan, the screen enhancer, gives a 40% bigger display.

All monitors come as a plug-in-and-go unit, complete with Atari plug, and no adaptors are necessary.

"Essential Buy, 90%"
ST Review, May 93

without audio	SM14/f	£129.95
with audio	SM14s	£149.95
OverScan ST		£39.95



MiniS - Hard Drive System

The MiniS Hard Drive System comes with drive capacities ranging from 170Mb up to 1800Mb. This full SCSI system is hardware compatible with all Atari computers, Amiga, Mac, PC etc. They are unrivalled in size, noise, speed, and style and come with a thru port for expansion.

It is the only Hard drive awarded an Essential Buy of 92% (Atari ST Review Christmas '93) and a Gold Award of 93% (ST Format Feb. '94).

- ★ Quiet fan
- ★ Dual SCSI port
- ★ Device Number Switch
- ★ Internal Power Supply
- ★ Small (2.5x6x8.5in) (WxHxD)
- ★ Smart and tough plastic case
- ★ 2 Year Warranty on all drives

	TT/Falcon	ST(FM/e)
170Mb	£279	£319
270Mb	£359	£399
340Mb	£459	£499
540Mb	£659	£699
1080Mb AV	£999	£1049
1800Mb	£1499	£1549

Please add £20 to ST(FM/e) if the ICD Link is required.
Heavy Duty professional cases with 60W Power Supply, add £50.
All Prices include VAT



Falcon 030 Systems - 32Mhz

The Falcon is fast becoming the preferred choice for 8 track digital recording, with powerful programs such as Cubase Audio using it to its full potential. The DSP chip opens up a whole new world of Sound and Graphics. System Solutions now supply 32Mhz Falcon 030 computers from stock.

PowerUp2 is a brand new 32Mhz accelerator for the Falcon, available now. PowerUp2 doubles the CPU

clock speed and does not take up the internal expansion slot.

We supply systems for Music, Desk Top Publishing, Image Manipulation, Animation, Desk Top Video, fax & modem use etc. Please phone for your personal quotation of a tailor-made Falcon 030 System.

PowerUp2 kit	£59.95
PowerUp2 fitted	£99.95
PowerUp2 fitted, when bought with a Falcon 030 System	£59.95



MagIX - Multitasking Operating System

Definitely the most exciting product this year is MagIX - Multitasking Operating System. Written by the same programmers that brought you NVDI and the replacement desktop EOS, MagIX is likely to become the standard by which all other Atari operating systems are judged.

MagIX runs on all Atari ST/STe/Mega and TT computers with 512Kb, but 2Mb Ram is recommended for a useful working system. Not only

does this system run several programs at the same time, but it has been so highly optimised that running one application under MagIX is actually faster than under normal TOS. The Falcon version is promised for later in the year.

Also available is the lightning fast file manager Kobold.

MagIX	£59.95
MagIX and NVDI	£89.95
Kobold 2.5	£59.95



Tower Systems

We stock Lighthouse Towers to suit the whole range of Atari computers, including the Falcon 030. If you are planning to add hardware to your machine you will find ample space inside the tower, giving you more room on your desktop. With the ST/STe and Falcon, the keyboard is removed from the body of the machine and re-cased, giving you a separate free standing keyboard. A complete tower can contain:

- ★ Atari ST/STe/Mega or Falcon
 - ★ Hard Drives, 40Mb-2Gb
 - ★ Up to 3 Floppy Drives
 - ★ Tape Streamers
 - ★ Memory Upgrades
 - ★ Hardware Accelerators
 - ★ PC and Macintosh Emulators
 - ★ Extra Printer and Monitor ports
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NEWS UPDATE

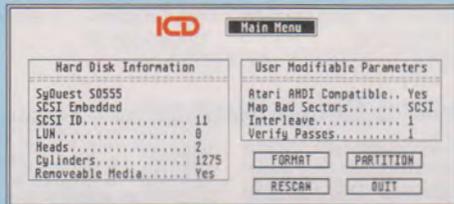
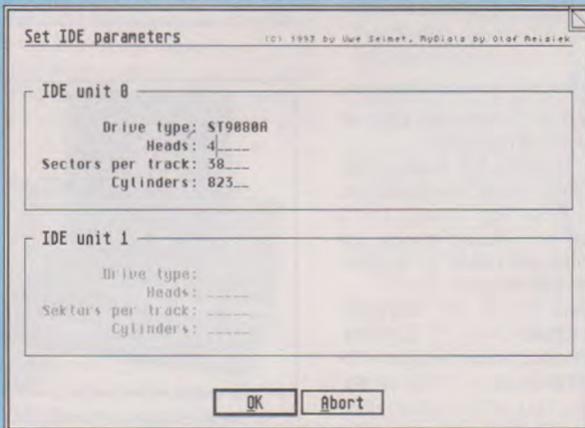
News of all the latest commercial, shareware and public domain upgrades...

COMMERCIAL

Report by Ofir Gal

System Solutions (081-693 3355) has a couple of important updates. *HD Driver* is now at v3.07 and includes a new utility called *IDE Init* that allows you to manually enter the IDE drive geometry for some IDE drives that pass this information incorrectly. Other new features include a slower mode for Falcon SCSI for better compatibility with slow SCSI drives. *ICD* disk

Good IDEa – HD Driver now offers better IDE compatibility for the Falcon.



Making ROM – the latest version of ICD hard disk utilities supports CD-ROM drives on TTs and Falcons.

utilities have been updated to v6.5.1 for both The Link and the *Pro Utils* versions. New features include the ability to load AUTO programs and desk accessories from any boot partition. CD-ROM support has been improved with a new *MinT* driver, and various bugs have been fixed.

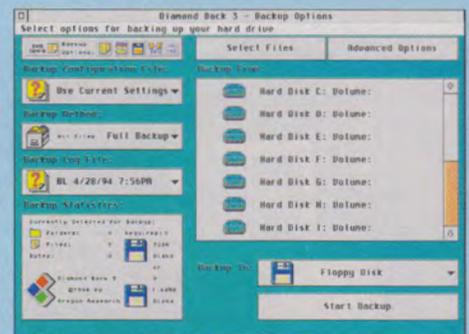
Clarity Falcon from HiSoft AVR (0525 718181) has been upgraded to v1.01 and includes a new manual. This is free to registered users and includes *MIDI Play*, which allows you to use your Falcon as a MIDI sampler, controlled by an external keyboard or a MIDI sequencer. Samples can be assigned to different MIDI notes and triggered in real-time. *Diamond Back* has had a major upgrade to v3.01 with a brand-new user interface. The program is now multi-tasking friendly and supports a large variety of SCSI

and SCSI 2 devices including tape back-up units and SyQuest removable. Priced at £24.95, this also includes a new manual.

The Protar hard disk manager from Analogic (081-546 9575) has been upgraded to v4.19. Minor bugs have been fixed and the program is now compatible with *MagIX*.

DA's *Picture* now sports a Wacom Graphics Tablet driver: current owners should contact CGS (081-679 7307) for more information if they use this top-end pressure-sensitive device.

Finally, v3.2 of *SharpScore* features a new metronome marker, tuplet recognition, a new window menu system and can print pages in reverse order. Contact Take Control on 021-415 4155.



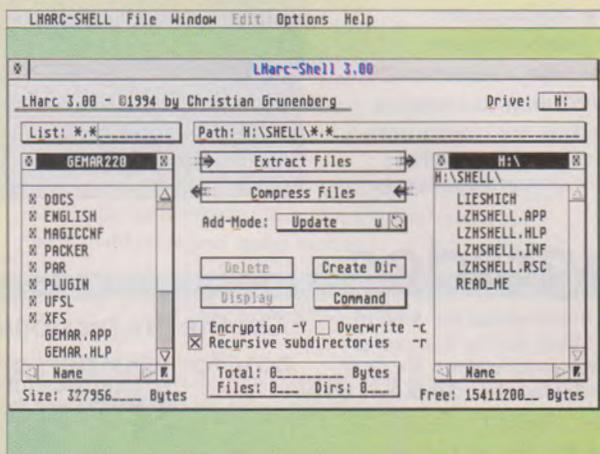
Back on top – Diamond Back 3 is now multi-tasking friendly and offers tape back-up support.

PD AND SHAREWARE

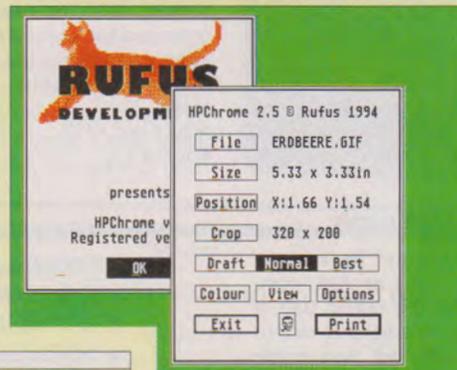
Report by Nial Grimes

At one time, archivers held the dubious honour of "most boring utilities known to mankind", but then along came *ST Zip* and *LZH-Shell* and the world was generally a much more interesting place to live in. Both of these landmark packages have received an upgrade this month. *ST Zip 2.5* gets a few tweaks in the speed department and

Packed to perfection – LZH-Shell 3 looks a little simpler, but performs as well as it ever did.

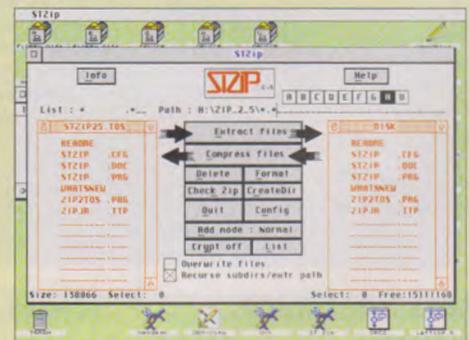


Colour classic – HP-Chrome 2.5 takes on board new picture formats and support for external picture viewers.



has also been treated to 3-D buttons under *MultiTOS* given sufficient colours. As usual, some of the file utilities are not 100% reliable, but having said that I've never lost a file to *ST Zip*.

As for *LZH-Shell*, the main changes are visual. The author seems to have learnt a lesson from *ST Zip* and has simplified the interface somewhat. All the power is still there in some form or another, but the archive dialogue box is much more approachable. The information screen now carries a "fairware" notice and it looks as though you'll



Squashed with style – the standard ST archiver stays one step ahead.

have to find \$15 to continue using it.

Deskjet owners rejoice – *HP-Chrome* has leapt up to version 2.5! This is a complete rewrite in *Lattice C* and in addition to providing full colour output on any Deskjet, the latest version has taken on a number of new features.

External picture viewers such as *GEMView 3* can be called from within the program and a whole host of new file formats are supported which conveniently busts the limitation to screen-size images. Registration remains at a very reasonable £5, especially considering how much the printer costs in the first place!

And finally, some rather sad news. *WinRec* has been pepped up to version 1.371, but this is to be the last shareware release. *WinRec Pro* takes over from here and should be available in Germany "real soon now"...

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All Data Pulse Plus Drives now come configured with industry standard 50 way SCSI Centronics sockets which allows connection of the ICD LINK (no clock) for use on the ST or a SCSI II cable for use on the Falcon etc.

To ensure the highest possible reliability, the drives are tested at every stage of assembly by skilled technicians.

All drives are ready to 'Plug in and Go' when you receive them. When you first boot up your hard drive you will find a wealth of Public Domain Utilities which have been selected by our support staff.

All Data Pulse Plus Drives include 12 months warranty and free phone advice and support by genuine Data Pulse Plus users.

The low power consumption of these Autoparking Autobooting mechanisms means that they can operate well within their safe operational temperature ranges without the need for fan cooling. This coupled with the design of the case results in probably the quietest Hard Drive range available for the ST.

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ST Switch Box £19.99
FALCON VGA adaptor £9.99

The Microvitec 1438 is a multisync monitor compatible with both the Atari ST and the Falcon. Utilising the ST switch box it is possible to display all three ST resolutions on the same monitor. Also compatible with screen blaster for the FALCON.

"Microvitec 1440... Highly recommended" - Atari ST User

Dataview .28 SVGA £239.99
This high quality SVGA colour monitor comes complete with Falcon adaptor. The .28 dot pitch gives the highest quality picture (Falcon will only display 256 colours in high resolutions).

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Marpet upgrades for the ST are "plug in" and require no soldering. They are compatible with most motherboard layouts and come with full fitting instructions. These boards accept SIMM boards and are upgradeable at a later date. Please check that MMU and Shifter are "socketed" before ordering.

Unpopulated Marpet Board £24.00
See SIMM prices below
Forget Me Clock II £13.99
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2MB SIMM'S £54.99
4MB SIMM'S £109.99

Midistudio Master

240 PPQ Midi Standard file format compatible. 100 tracks. Phrase arrangement. Very easy to use.

£9.99

"Data Pulse is astonishingly fast" - Andrew Wright, ST User

Re-writeable Optical Drives offer staggering density with hard drive speed. Each 3.5" optical disk stores 128Mb with access time of 30ms and a data transfer rate of 600K per second.

Data Pulse +170Mb	£270
Data Pulse +270Mb	£360
D/P + 128Mb Optical	£670
D/P + 230Mb R/W Optical	£890
CD ROM Drive	£180
<i>Phone for further details on CD ROM. Please note all prices quoted are for main drive unit only. Add ICD LINK for use with ST or SCSI cable for use with FALCON</i>	
ICD LINK (ST)	£79.99
SCSI Cable (Falcon)	£39.99
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We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

Please note: The minimum charge covers labour, any extra parts are chargeable.

Minimum repair charge	£35.25
Same day service	£15.00
STFM(E) PSU	£34.99
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TOS 2.06 + Switch STFM	£65.00
Courier Pickup	£11.00
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PC Emulators

- Check configuration before ordering
- PC Speed STFM or STE (XT) £49.99**
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Star SJ144 £369.99
The Star SJ144 is a Colour/Mono thermal wax transfer printer which gives glossy colour output on normal paper.

- 360 dpi resolution
- Emulates Epson LQ 860, IBM Proprinter & NEC graphics

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Star LC100 Colour £119.99
Star LC24/30 Colour £209.99
Starjet SJ48 Bubblejet £210
SJ48 Ink Cartridge £19

Citizen
Citizen Swift 240 Colour £260
Citizen ABC 24 pin Colour £179.99

Hewlett Packard
HP Deskjet 520 £279.99
HP Deskjet 310 £239
HP Deskjet portable £199
HP Deskjet 550 Colour £429.99
HP DJ500 Colour ink cart £26

Lasers
Ricoh LP1200 £599
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Add £3 for cable. Add £7 for delivery

CAD MASTERCLASS

Adding the third dimension brings drawings to life. Using MasterCAD, it's child's play to create strange new structures and alien monsters. Joe Connor starts the MasterCAD series with a more down to earth project...

Computer Aided Design – or CAD for short – is the stuff of which dreams are made. You can draw a variety of simple shapes on your screen, select various 3-D effects, put them into operation and see the results in a way that you could never draw!

MasterCAD drawings consist of vector objects constructed using the

drawing tools provided. Objects can be manipulated using a range of options in the **Process** drop-down menu and turned into 3-D objects using one of two functions: **Extrude** and **Spin**.

Extrude works just like an icing bag. You select a nozzle, squeeze the bag and the shape squirts out of the end. With MasterCAD, you can design

the shape of the nozzle, which MasterCAD calls the *profile*, and decide on the length of the object using two **Cut planes**.

Spin rotates any profile around a centre point and its path creates a 3-D object. This is similar to using a Potter's wheel except in this case you design the profile using MasterCAD instead of your hands.

GETTING STARTED

Use **STRBAKUP.TOS** to make a working copy of your Cover disk and delete the **THE REST** folder from the copy. Reboot from the copy; this installs GDOS and displays the desktop. Double-click on **DESIGN.PRG** to start MasterCAD. If you want to keep your working disk write-protected, then format a second disk to save your drawing data on.

Hard disk owners need to copy the **DESIGN.PRG** in the Auto folder to their Auto folder, the **ASSIGN.SYS** in the **H_DISK** folder and the various other **.SYS** files to partition C, the **COLOUR.RSC** and **MONOCHRM.RSC** folders to partition C, and the rest of the files into any folder on partition C.

BEFORE YOU START...

A few quick hints. When drawing a basic shape, you can **Snap to Grid** to make drawing a little easier. Holding down the <Shift> key toggles this on and off.

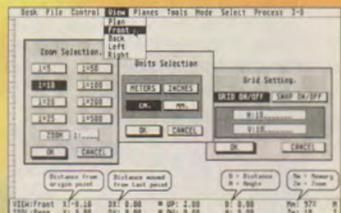
Also, using the <Control> key with a mouse click passes control over to **Keyboard Input** – useful for certain tools and functions.

Finally, you can interrupt any redraw (or screen saving) by clicking on the right mouse button.

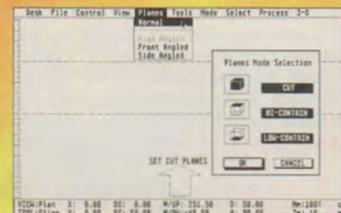
STEP BY STEP GUIDE

THE LIVING IS EASY...

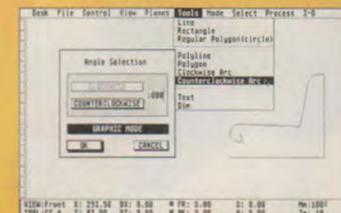
Sooner or later we all reorganise our living space and having tried all the approaches ranging from "suck it and see" through the little pieces of cardboard and graph paper method to calling in the local kitchen designer, I was impressed with the results using MasterCAD, so let's give it a try...



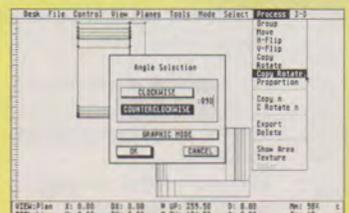
1 From the MasterCAD drawing, screen change the View to Front then select each of the dialogue boxes in turn from the Control drop-down menu and set the Zoom, Unit and Grid settings as shown.



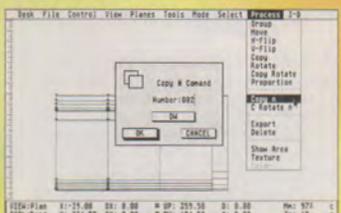
2 Select Normal to move to the Plan view and set the seat width to 50cm by left mouse-clicking two cutting planes 50cm apart. Turn on the "Hi/Low contain" options for top/bottom fill in the "Planes Mode" dialogue box.



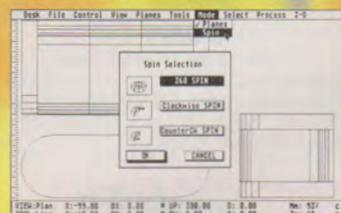
3 Draw the seat using the Polygon tool switching to other tools as required to complete the profile. Angles can either be entered into the Angle dialogue box or constructed visually using the Graphic mode.



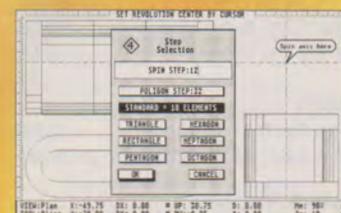
8 Change to Plan view and use the "Copy Rotate" option set to 90 degrees counterclockwise. Follow the prompts to create a duplicate seat. Use the "Move" option to re-position it as necessary.



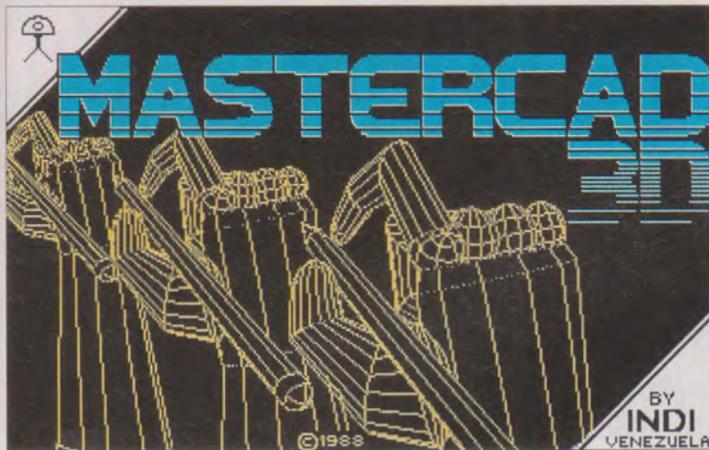
9 Select the leftmost seat followed by the "Copy n" option. Enter "2" into the dialogue box then fix the "initial" and "final" base-points 50cm apart anywhere along the X axis.



10 Create the other armrests using the "Copy" option and design your own coffee table using the techniques already described. Select "Spin" from the Mode drop-down menu and we're ready to create our first spin object.



11 A spin object revolves a profile around a "Revolution centre". Set the options shown in the "Step" dialogue box from the Control drop-down menu then specify the "Revolution centre" using the cursor.



GETTING INTO THE JARGON

There's a sprinkling of jargon to contend with, which I'll explain as we go along. Let's first clarify the three dimensions on which all *MasterCAD* creations are based - X, Y and Z are used to represent the width, height and depth respectively of objects in millimetres, centimetres, metres or inches.

3-D objects can be created with precision by moving between 2-D Views labelled: Front, Rear, Plan, Bottom, Left and Right. We all manage to cope with road maps and

house plans drawn in Plan format but a single 2-D Elevation is never complete and can be open to misinterpretation. *MasterCAD* overcomes this by combining the information from several 2-D views to build up a complete 3-D model which can be viewed from any point, including inside an object. If you've ever wondered what the view of your room looks like from inside your sofa, now's your chance!

Next time we'll cover dimensioning and take a look at some of the more advanced Process functions...

Boot up in medium resolution and this is what you see...

USING STRBAKUP.TOS

Always back up your cover disk and keep the original in a safe place. Run *STRBAKUP.TOS* and follow the on-screen instructions; the program even formats the disk for you. *STRBAKUP.TOS* is only for backing up your cover disk; it is not recommended for any other use.

GENERAL DISK PROBLEMS

In the unlikely event that your cover disk won't load or gives you any other problems, disconnect any peripherals, switch your computer off for at least 20 seconds and try again. If this doesn't solve the problem, return your disk, with a stamped addressed envelope, to:

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PC Wise will test your disk and send a replacement as quickly as possible. You can contact the *PC Wise Helpline* with any urgent problems concerning faulty disks on 0685 350505 between 10.30 am and 12.30pm, weekdays.

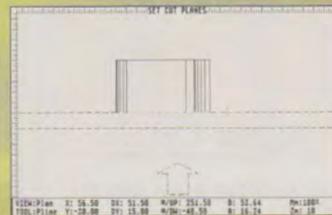
Should you require technical help, call the *ST Review Helpline* on Friday afternoon between 2pm and 5pm on 0625 859766.



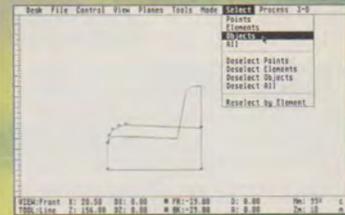
4 Return to the starting point and click the right mouse button to complete the polygon then select the Open option from the "3-D" drop-down menu to view the seat as a 3-D wireframe.



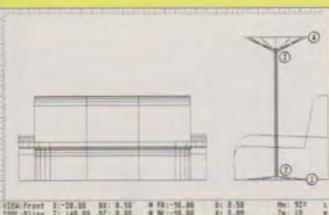
5 Experiment with the options in the Viewpoint drop-down menu to view the seat from any desired viewpoint. After a bit of practice it's easy to predict the result using the combined option.



6 Return to 2D mode and select Normal from the Planes drop-down menu which moves to Plan view. As before, set the width of the armrests by left mouse-clicking two cutting planes 15cm apart.



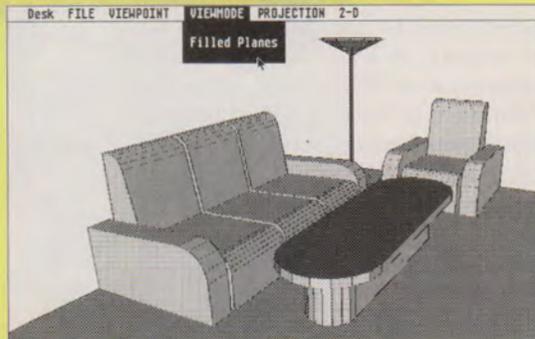
7 Draw the armrest using the Polygon tool as before. Using the "Objects" option from the Select drop-down menu, left mouse-click on the profile of the armrest to select it (denoted by triangular markers).



8 The view automatically changes to "Front" where we draw the lamp profile. Using the Polyline tool, left mouse-click on points 1-4 followed by a right mouse click to complete the profile and generate the object.



9 Select "3D" mode and adjust the wireframe until the desired view is displayed. In addition to moving the viewpoints using the "Combined" option, the "Lens" option can be used to select the angle of view.



10 Select the "Filled Planes" option to texture the surfaces and remove the hidden lines. The screen can be saved at any time in Degas or MasterCAD printer file formats.



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Maurice Collins and Keith Berry get their hands on what has to be the most exciting graphics package around...

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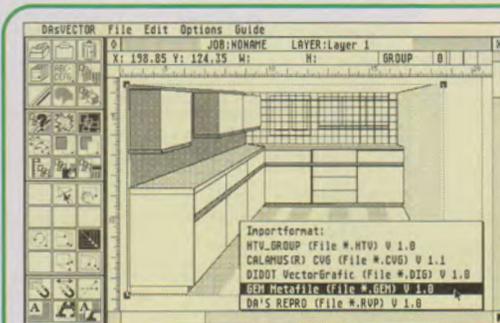
Few graphics programs can have stirred the imagination of Atari owners as much as DA's Vector has done over the last year or so. With its powerful vector graphics engine for creating illustrations from scratch, the flexible, internal 24-bit colour handling (even if you work in mono) and the extras such as charting, autotracing and even vector animation, it has been top of many people's wish lists since it was introduced. Even the price tag was right for a change – £149.95 isn't too much to pay for the only vector graphics program you're ever likely to need.

Now Digital Arts have released a new version. DA's Vector Pro builds on the rock solid foundations of the original with a much improved animation mode and a few enhancements in the area of image and texture handling. Not everyone will want the Pro version, of course, and it remains as an extra option rather than an upgrade.

NEW FEATURES

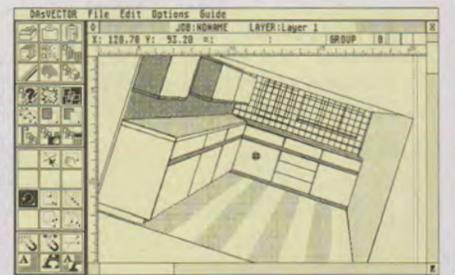
There are three areas in which Vector has been significantly upgraded: on-line help now features guidance whenever the mouse pointer is over an icon, the object fills are much improved and the animation features have been updated to include cameras, filters and tracks.

One of DA's Vector's greatest strengths is the way in which vector



Five vector file types are supported for importing. Apart from some minor pattern errors, this Easy Draw .GEM file loaded readily.

The still-grouped picture was then rotated in just a few seconds though it's not easy to judge the angle. The moveable "blob" is the axis, the user-definable centre of rotation.



INSIDE INFO According to Digital Arts, Vector Pro is to be the core element in a new digital video production system. Professional studios need to produce video at the maximum PAL resolution of 768 by 576 pixels and 24-bit colour. Not even a TT could hope to pump out that kind of data at 25 frames a second – you get just over a minutes' worth of video on a 2 gigabyte hard disk! But the video sequences could certainly be compiled and enhanced on an ST in digital format, saved to disk and then recorded step-by-step to the more expensive home videos (with single step recording) or studio equipment.

Almost any kind of animation is possible as true colour images can be combined with vector graphics and text in Vector Pro. For the price of an ST, mono monitor and a copy of the program, you can be well on your way to producing studio-quality presentations. It does however boil down to the speed of the system. On an ST, replaying animations in the editor is painfully slow and it isn't exactly rapid even on a Falcon. For everyday use, a TT or accelerated Falcon will be a must. On the other hand, if you save the animations to disk, you can replay them at a much more acceptable speed using the dedicated player program, provided you don't get too ambitious.

KEY FACTS

Product:
DA's Vector Pro
Company:
CGS
Contact:
081-679 7307
Price:
£249
SYSTEM
Minimum Memory:
2Mb
Resolution:
640 by 400 pixels or greater
Computer:
ST/TT/Falcon

objects can be filled with colours and even images. The Pro version now offers blends and colour gradients to add to the appeal. Blends and colour gradients can, of course, be achieved with the time-space converter but this creates many small objects and so uses up a lot of memory. Colour gradients come in two forms, hard and soft, depending on the effect you need, and it is possible to specify a precise direction for the fill. Fills can also be rotated along with objects.

ON THE DRAWING BOARD

Vector Pro has a modified GEM interface that relies heavily on icons and

dialogue boxes rather than drop-down menus. There are five main modes, each of which can be accessed very quickly using function keys or from the Edit menu.

AUTOTRACING: The autotracing module is extremely fast and very accurate despite the lack of configurable settings such as those you would find in programs like Convector. It will trace greyscale and colour images with user-definable thresholds and, unlike the earlier version of the program, monochrome images in the .TIM format (a variety of monochrome TIFF) are now supported. Images can also be turned into vector objects with a click of the button which generates vector

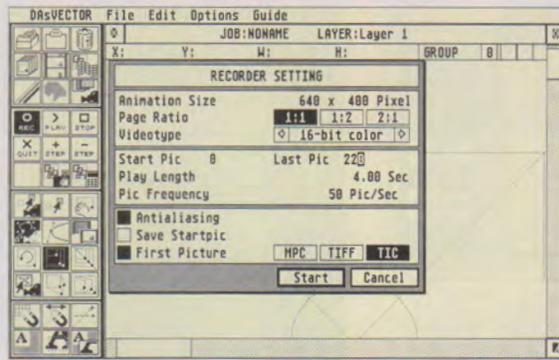


Filters can be added to animations just as with real cameras.

objects with the image as a fill pattern.

VECTOR PATHS: Vector paths are the building blocks on which objects and graphics are built up. The editor has a wide range of functions for converting lines to Bézier curves and back, adding, moving and deleting points and combining paths. There is also a ready-made library offering the more common shapes.

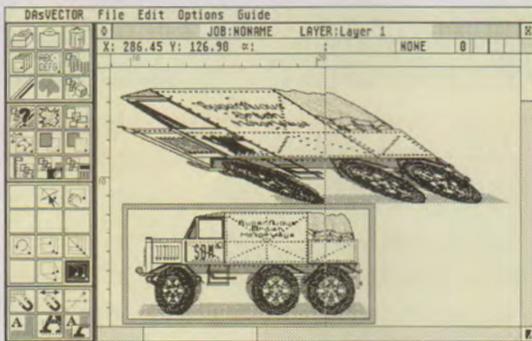
VECTOR GRAPHICS: The third part of *DA's Vector* is the vector graphic editor, the main module where the bulk of the design and manipulation is carried out. Graphics can be made up of dozens of different layers to aid editing and adjusting complex illustrations. Other facilities, represented by the icons in the top section, include text objects (using Calamus-format fonts or the proprietary .DFN type fonts which can be converted from PostScript using the utility supplied), grid distortion, perspective, area fill and line fill. The



Animations can be simple or complex and designed for any output resolution.

second section includes the time-space converter, multicopy option and the calculator for custom transformations. Graphics can be imported and exported in .EPS, .GEM or .CVG formats. Output can be direct to various printers, including the H-P LaserJet 2 and the colour DeskJet (but not including Epson printers), or to a mono or colour image at almost any resolution. This

The most complex .GEM file we could find (in the inset) was subjected to the Distort function. The result appeared in just a couple of minutes.



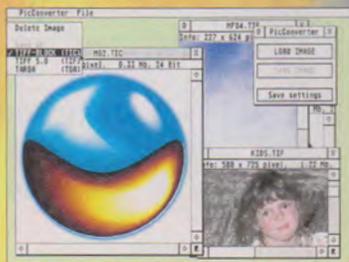
A variety of graphic charts can be produced as a result of typing in three columns of data...

... and some excellent results are possible when you work in colour and modify them with some of the effects.

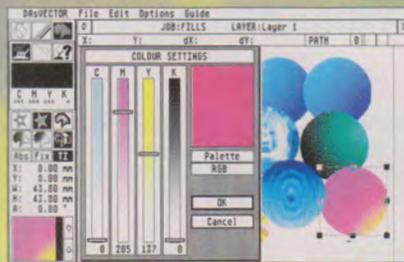
STEP BY STEP GUIDE

GETTING YOUR FILL

Being a dedicated vector graphics package, *DA's Vector Pro* is capable of some stunning results...



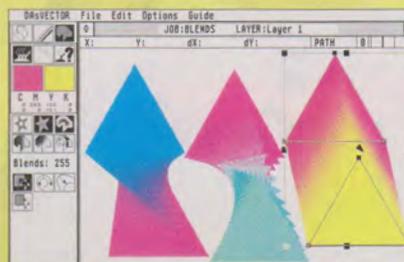
To be used in *DA's Vector*, all bitmaps have to be converted to the program's non-standard, but nonetheless effective, TIFF format.



You then have the option of filling the vector objects in dozens of ways...



... manipulating them in hundreds of ways...



... or simply blending together two or more objects with spectacular results!

means you can even save your designs as images and re-use them as fills for other objects!

GRAPHIC CHARTS: The charting module offers easy, rapid creation of charts ranging from lines, bars, filled lines and 3-D pie/bar charts, and while they aren't anywhere near as flexible as they could be, they can often be used as the basis for better, custom designs.

ANIMATION: *DA's Vector* was the first graphics package on any stand-alone computer platform to introduce vector animation. Instead of rapidly displaying image after image, as a normal animation program would do, *DA's Vector* asks you for a start and end frame, using the same graphic, and then extrapolates the ones in between. The *Pro* version has many additional features which make it the most exciting part of the program...

LET'S GET ANIMATED

The autotracer now supports monochrome .TIM files – as large as you like using virtual memory – which can now be used as fills and coloured using the 24-bit colour selector. Images are handled much better too with a custom selector, so you don't have to hunt round your hard disk for your favourite fills. The animation module will even use a series of >

Fill patterns can be modified in Red-Green-Blue (screen "colours") or Cyan-Magenta-Yellow-Black for printing. The "K" setting allows 256 grey shades in mono.

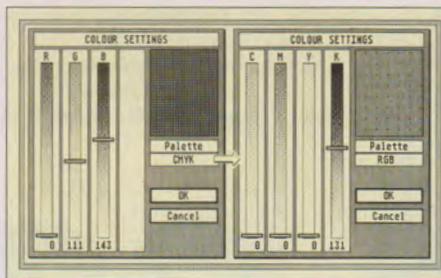
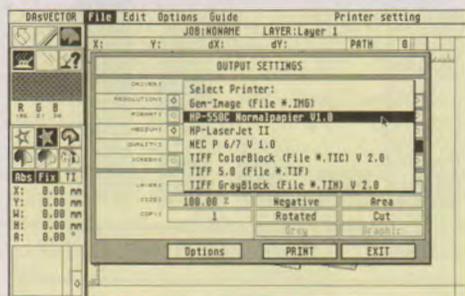


image fills and turn them into a slide show or use them as the basis for a 25 frame per second real time video. The raytracer *InShape* will output images in sequence in the right format and with the correct filenames so they can be loaded into *Vector Pro* and manipulated as animations.

The animation part of the program adds several new features. Firstly there is now a camera with a user-definable track for making motion effects easier. It can be resized to make the animated graphic grow or shrink, and moved along the path which is defined by Bézier curves or

from the German original and contains a series of tutorials which, despite being aimed at the original *DA's Vector*, make learning a little easier.

Vector Pro has a few minor problems too. For instance, creating group objects is pretty hit and miss, but it is still very stable and well-behaved. For an extra hundred pounds, the *Pro* version has some nice features which you won't get in the basic package but the promise of extra modules and hardware for sound support and video digitising makes it one of the most exciting programs around.



The range of printer and file types supported for output are impressive. The H-P DeskJet 550C driver produced impeccable images.

lines. Filters can be added to simulate those placed over camera lenses and almost any effect can be used – including colour gradients, colour images and various colour processing options such as saturation and luminance.

VERDICT

Vector Pro has a lot going for it but I'm conscious that only a fraction of the features can be covered in a three-page review. The animation features are particularly complex and while very, very powerful, they will take time to get used to. Thankfully the manual is a reasonable translation

SUMMARY

GOOD POINTS:

- Powerful colour and object tools
- Works in 24-bit colour internally
- Output in any resolution
- Unique animation feature
- Good import facilities

BAD POINTS:

- Animations need effort
- Slow redraws with complex objects

FINAL WORD:

"*DA's Vector Pro* is a real top-notch graphics package – you could say that the best just got better..."

THE TIME-SPACE CONVERTER

It might sound like something out of a *Dr Who* adventure but the time space converter is quite simple – and extraordinarily useful, especially for colour design. Essentially, you construct an animation from a simple graphic and apply a particular colour to the start and end frames. Clicking on the time-space converter produces an animation but leaves each subsequent frame on-screen so there is a smooth transition from one shape to another. It is very effective with letters and simple shapes.



The time-space converter can produce interesting special effects...

PERFORMANCE

OVERALL

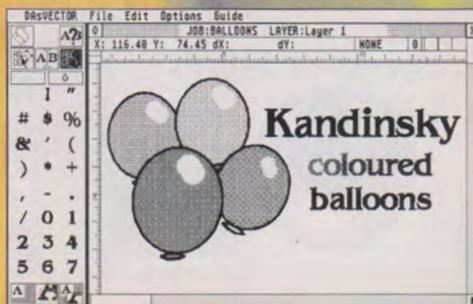
- EASE OF USE ✓✓✓✓✓✓✓✓
- DOCUMENTATION ✓✓✓✓✓✓✓✓
- EFFECTIVENESS ✓✓✓✓✓✓✓✓
- VALUE FOR MONEY ✓✓✓✓✓✓✓✓

78%

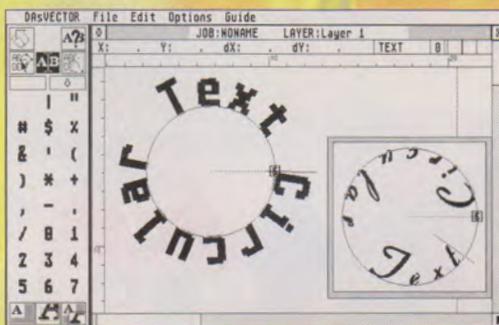
STEP BY STEP GUIDE

WORKING WITH TEXT

As outline fonts are supported, *DA's Vector Pro* can generate marvellous text effects – even on a standard STE...



Text is handled very well. Calamus fonts can be loaded, resized, and colour applied although the result in mono is subject to a little guesswork!



Circular text is remarkably simple to achieve whether inside or outside the circle and in your choice of Calamus font...



... and this is how. The Text Object menu controls most aspects of text presentation, including its colour fill. It's like having Outline Art built in!

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AMERICAN PIE

A new Link from ICD – and bye bye Commodore...



As summer approaches, the "calm before the storm" is upon us as we eagerly await the onslaught of new Jaguar titles as well as the CD-ROM drive add-on for the Jaguar. The first third-party titles are expected soon, with *Wolfenstein 3D* expected to lead the pack.

Jaguar commercials have started popping up on national Cable TV networks, such as MTV, ESPN and USA. Several different commercials have been produced by Atari, including one that features the Jaguar in general and others that feature specific games such as *Tempest 2000* and *Crescent Galaxy*.

Commodore International, co-founded by Jack Tramiel 40 years ago, announced in late April that it is going out of business. Commodore had been a long-time rival to Atari, competing for the non-Macintosh and non-PC Compatible user base. The company had posted successive quarterly losses for more than a year as its Amiga CD32 video games machine failed to captivate the European audience. At the time of its announcement, Commodore stock price had fallen to 87.5 cents a share.

On the Atari computer front, it's been a busy month with several third party announcements... It's All Relative's *Audio CD Master* lets you

play audio CDs from a CD-ROM drive connected via the SCSI port on a TT030/Falcon030 or via the SCSI port provided by an ICD AdSCSI Plus or Link host adapter. The handy desk accessory allows audio CDs to be played in the background and includes special support for the Falcon030 to allow piping of the audio signal into the audio input port for special DSP effects using the *Audio Fun Machine* program.

Oregon Research's *Diamond Back 3* is a major upgrade to its popular hard disk backup and restoral software. *Diamond Back 3* features a completely redesigned user interface, support for removable media such as SyQuest and Floptical drives, support for any SCSI tape drive connected via the SCSI port on a TT030/Falcon030 or SCSI-based SCSI host adapter and full background operation even without MultiTOS.

ICD's The Link 2 is a follow up to its innovative The Link external SCSI host adapter for Atari ST/TT computers. The Link 2 features a new indicator light which confirms that sufficient power is available from the target SCSI device, and parity support that eliminates the need to disable parity on the SCSI device. The Link 2 includes ICD's hard disk software drivers and utilities that support virtually all fixed and removable SCSI drives.

Finally, Spar Systems, well known for its on-line tutorials for *Calamus* and *Pagestream*, has released *Mastering AtariWorks*. This Hypertext Personal Training Guide is a must for any user of Atari's popular *AtariWorks* integrated word processor, spreadsheet and database program. *Mastering AtariWorks* provides detailed help for every *AtariWorks* command and provides tips on using both documented and undocumented functions.

Until next month...

Charles Smeton has been an ST owner since 1985 and a long-time Atari owner since the 8-bit days of the early 80s. He is also a past president of the Washington Area Atari Computer Enthusiasts (W.A.A.C.E.) and the owner of NewStar Technology Management, which develops the STRAIGHT FAX! software for Atari computers.

News from the latest German Atari shows...

A couple of weeks after the CeBit show I was up at Ulm, an old city in southern "Bavarian" Germany, for the ProTOS Atari show where some 55 companies displayed their products utilising all of the two halls' 2,300 square meters. One of them was used for workshops, child care and a restaurant, the other for the exhibitors.

Friday was reserved for dealers and commercial visitors, so it was not that crowded and everyone had enough time to demonstrate their wares and, of course, to discuss feelings about the future of Atari.

On Saturday and Sunday, both of the halls were full of people from all over Germany, Switzerland, Austria and France. Under the list of exhibitors were: Pam Software, Compo, OverScan, nol Software, ACS, Maxon, CRP, Blow Up, Crazy Bits, ComTex, Digital Arts, Lighthouse, Application Systems, Eickmann, Matrix, Akzente, Adequate Systems, Omikron, ROM, Trifolium, Team Computer, Galactic and many more – a "who's who" of Atari products.

Adequate Systems is the group of programmers who used to work for DMC, programming *Calamus*. They have now founded their own company and have started to create *Calamus* modules on their own, beginning with a merge module that allows smooth merging of objects and other effects. More modules will follow.

Compo had the Medusa on display, announcing an optional PCI-Bus and PCI-graphic card support. Then there was *TrakCom*, an amazing sample editor, sequencer and creator that uses the Falcon's DSP to convert the machine into an eight-track digital music machine. OverScan's Afterburner was not yet on display, but was announced for next week's FEZ-A-Bit Atari show in Berlin...

nol Software gave a first glimpse of *That's Write 4* with RTF, GEM Metafile, TIFF and many PC and Apple text/graphic import and export facilities, a powerful table editor and a new "beginner's" mode. *Arabesque 2* is also nearly finished and looks a lot like *Corel Draw* on the PC...

ComText showed their Atari to Novell network cards and adaptors, a 19" TT-compatible monochrome monitor and Skunk, offering 32 or 36MHz acceleration for the Falcon, the latter having a socket for an optional co-processor. Digital Arts displayed *DA's Movie*, a program for mixing, merging, titling and manipulation blending, with hundreds of effects for video and slide shows on a TV or monitor.

Team showed a complete video studio with a Falcon and Matrix Screen Eye –

TOP MARK



rendering software, morphing tools and more to create video shows on video, and animated, video-supported overlay shows on computer displays. Team and other companies also displayed different "Tower" options for the Falcon, some cheap, some high end.

Saturday night's party brought the Atari family together. Customers and exhibitors, beer, music, food and a lot

of fun made for a long night. Everybody seemed to like the show: "It gives us a good feeling to see the Atari supported so well by software and hardware through all the companies here" was a common comment. It was also a big success for the exhibitors – they'll be back next year!

One week later I was at the CSA computer show. CSA is the biggest Atari dealer in Germany at the moment and have a really large shop in Gelsenkirchen that is worth a visit for any Atari enthusiast coming to Germany. DTP, music, networks, CAD, business – everything is there to be seen. Steinberg gave a professional demonstration of their Falcon software – music studio tools, hard disk recording and real-time effects. A small company from Aachen introduced a high-end slide show controller with Falcon sound support for Kodak and other slide projectors – synchronized music and displays.

The conclusion after these two shows? Atari software and hardware is supported as well as ever – or even better. Only Atari itself is not that active but, there again, at least they're still in business!

Best regards...

Manfred Bäcker is 26 years old and works in a computer shop in Cologne. He's been programming Atari computers since 1985 for his private needs and is active on the various bulletin boards in Germany.

Andrew Wright takes a look at the newly-upgraded DeskJet, the 520, offering a staggering 600 dpi resolution...

JUMPING JET

Hewlett Packard might have sold five million inkjets last year but nobody could accuse them of resting on their laurels. The fifth – and arguably most significant upgrade – to the popular DeskJet series boosts the printer's resolution to 600 by 300 dpi, adds Resolution Enhancement technology (REt) to improve text quality still further and offers IBM Proprinter emulation into the bargain.

Nothing much has changed on the outside. The 6.6kg box, almost 18 inches (443mm) wide, 15 inches (389mm) deep and 8 inches (206mm) high, is the same neutral beige colour as the original, although the control panel and paper tray mechanisms have changed slightly. The feed tray holds up to 100 sheets of normal or transparency paper (60 to 135g) or 20 DL sized envelopes (up to 90g). An automatic sensor ensures optimal print quality on envelopes, though getting the address to print in the proper position wasn't that easy!

Print speeds are largely unchanged at 3 pages a minute or 167 characters per second in letter quality text mode (240 cps in draft mode). The expected workload for the new DeskJet is 1,000 sheets of A4 a month for five years and the printer comes with a no-quibble three year unit exchange warranty. Running costs are likely to be slightly lower than that of a budget laser.

The new DeskJet has four built-in bitmapped typefaces in varying point sizes including CG Times, Letter Gothic, Courier and Univers. Unfortunately, most ST programs can't use the proportionally-spaced internal fonts (Times and Univers) so users are forced to choose between Courier and Letter Gothic. *Protext 6.0*, with a DeskJet 510 driver, is a notable exception and hopefully Arnor will look at a dedicated DeskJet 520 driver before long.

The other problem for ST owners is that while existing DeskJet drivers, such as those for the Plus and 500, work perfectly with the new model, graphics output will always be at 300 by 300 dpi until new, specially-written drivers appear. Incidentally, the IBM Proprinter emulation will be handy for some of you as a lot of older Atari software contains only drivers for dot matrix printers.

This leaves Atari owners in a real Catch 22 situation – you can print in text mode at 600 dpi with REt and get amazing quality but limited fonts or you can opt for graphics



At a street price of around £200, the 520 has to be one of the best mono printers around...

KEY FACTS

Product:

DeskJet 520

Company:

Hewlett-Packard

Contact:

0344 369222

Price:

RRP – £259; Typical – £200

SYSTEM

Minimum Memory:

0.5Mb

Resolution:

Any

Computer:

Any



mode and use only half the available resolution. However this isn't quite as bad as it sounds because there are other improvements in the printer's mechanism, largely to do with timing and the new 51626A cartridge, that make both text and graphics noticeably sharper.

Perhaps the most important quality improvement is that of the much reduced ink splash. This has always been a problem with inkjets and is most obvious on rough paper. Special coated paper improves matters but the new model can print

with amazing clarity on almost any kind of paper, including Conqueror letterhead.

I have to admit that I'm utterly biased as my own, much-loved DeskJet 500 has given me some three years of sterling service but the new DeskJet offers such visibly superior print quality that I've forgotten any designs I might have had on a new laser. This has to be the best budget monochrome printer anyone can buy. Having seen it advertised already for under £200, I've only got one thing more to say. Anyone want to buy an old DeskJet...?

INSIDE INFO

Inkjet technology was first developed by Hewlett-Packard to

provide low cost, laser-quality printing on plain paper. Like laser printing, it is "non-impact printing" – drops of ink are heated by resistors inside the printhead to form vapour bubbles which expand rapidly to fire tiny droplets of liquid ink through the nozzles onto the paper at high speed.

As the droplets are ejected, the bubbles collapse and the process starts again. This cycle takes a fraction of a second, allowing the printer to print very quickly. The printhead contains the ink reservoir as well as the nozzles and resistors so that when the ink runs out, the entire printhead is replaced. This saves on maintenance costs and so helps to make the inkjet very reliable in long-term use.



Neat apple – the DeskJet 520 does a good job of printing this fruity bouncer...



PERFORMANCE

OVERALL

- EASE OF USE ✓✓✓✓✓✓✓✓✓✓
- DOCUMENTATION ✓✓✓✓✓✓✓✓✓✓
- EFFECTIVENESS ✓✓✓✓✓✓✓✓✓✓
- VALUE FOR MONEY ✓✓✓✓✓✓✓✓✓✓

90%



I want you to try an experiment. Stand up and take this magazine over to your computer. Look at your desk. If you have an STF, STFM, STe or Falcon, try to visualise the extra space on your desk if there were *only* a monitor and keyboard on it. Imagine the space saved by moving that external floppy or your hard disk underneath your desk out of harm's way.

I'm sure that would be pretty useful to you. Now, for one-piece computer owners only, try another experiment. Pick up your machine and *very gently* twist it. Feel that movement? That's pressure on your circuit board – the type of pressure exerted on it each day when you change monitor or mouse cables, hunt under it for that elusive pen or pound the keyboard.

A SYSTEMATIC SOLUTION

There is a solution for both of these problems, a *System Solution!* Those purveyors of quality products in Dulwich and Windsor have been

providing towers for some ears now. They use Lighthouse tower systems from a company in Germany, custom-made for the different Atari computers.

Each type – and there are four altogether – have different slots on the back to mate with the various input and output ports on your machines, and internal mountings designed to fit the different circuit boards.

In addition, each tower can take up to three floppy drives, and three or four hard disks. There are two slots to take fans – very useful if you've got a tower packed full of high power consumption equipment – and there's plenty of space left over for



WARNING!
Opening up your Atari computer invalidates your warranty. Unless you are certain of your own abilities, it is recommended that the following modification be carried out by a specialist.

IVORY TOWER

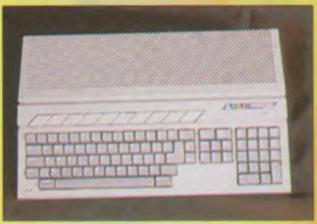
Do you use your ST daily? Then perhaps it's time to consider a tower system. Graeme Rutt checks out this interesting upgrade in the first part of a two-part series...



STEP BY STEP GUIDE

GETTING STARTED

Carrying out the right preparation is essential if your tower is to work properly. So here we go...



Disconnect the Falcon, prepare your tools and find a large workspace to operate in. It's important to have a clear idea of the whole operation, so read through the instructions a couple of times.



Disassembly time. Remove the small shield, then the keyboard, floppy drive, internal speaker, IDE drive (if installed) and your memory board. Finally remove the motherboard, noting the position of all items and connections.



Unpack the tower. You'll find two inner shells and outer cases – the top shell takes the peripherals while the bottom takes the motherboard. Separate the halves and insert the clipped nuts that hold the cover.



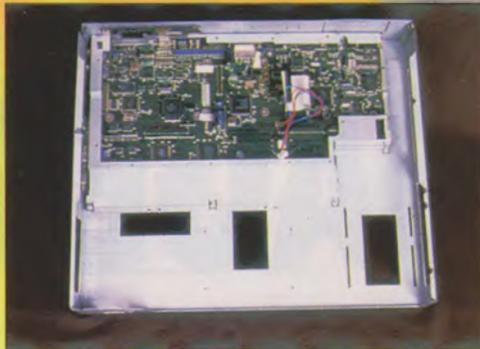
Carefully check that you have all of the accessories which include a pack of assorted fittings, a new power switch, reset button and cover, power supply extension cables, various blanking plates and four stick-on rubber feet!



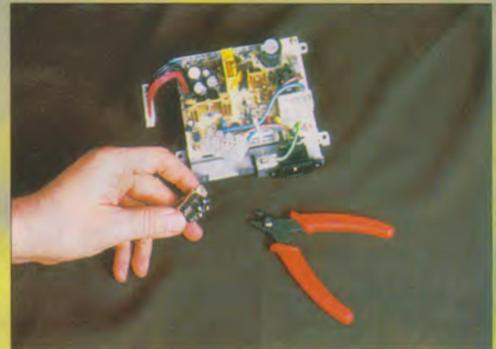
STEP BY STEP GUIDE

THE INSIDE STORY

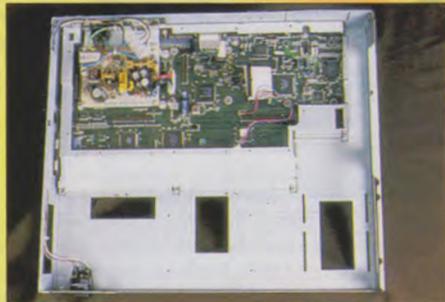
The main part of the work involves fixing the motherboard, power supply unit, memory and hard drive. Just follow our step by step...



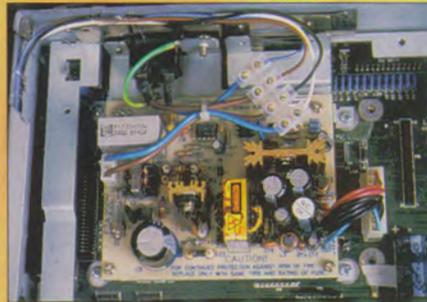
1 Put in the 5mm spacer bolts, screw the motherboard into the shell and the reset switch into the front panel. Connect the black clip to the diode next to the old reset button, on the leg furthest away from the back.



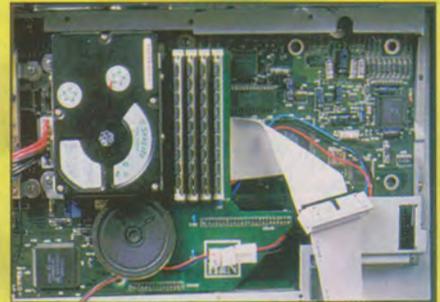
2 Remove the old power switch, cut the wires, strip them back 6mm and connect them to the 4-position block. Push the new switch into the front panel and run the wire back down to the motherboard – Karl uses glue for this.



3 Slip the power supply back onto the motherboard and screw it in. Use a 6mm screw (with washer) on the front left hole and 4mm screws on the other three. The screw with the washer provides an earth connection.



4 Wire the new power switch into the 4-position block. Take great care to wire this correctly: the blue and brown cables go to the mains socket while the black and white ones go to the brown and blue positions respectively on the power supply.



5 Mount the floppy drive into the top shell – hacksaw the original screws down to 10mm or damage will occur. Then plug the IDE drive, memory board and speaker back into the motherboard. Connect all wires to their original positions.

any third party add-ons like a graphics card.

MONEY MATTERS

The overall look of a carefully-assembled Lighthouse tower is very impressive indeed. This, coupled with the improvement to your working environment and sturdy protection it provides, makes for a very attractive proposition.

If you take a look at our pricing boxout you might, at first, think that it's a bit on the steep side. If you have a choice between buying your first hard disk or a tower then the former certainly wins, but for the Atari enthusiast who uses his machine on a daily, even hourly, basis, a tower is a smart move.

Many options are available to help ease the cash burden. If, for instance, you already have the correct cables and a separate power supply for your hard disk then you can forgo the SCSI kit altogether. If you're working on a really tight budget it's even possible to buy the keyboard kit on its own.

TO FIT OR NOT TO FIT

With the help of our two articles and the manual, you should be able to assemble the tower yourself and so save on the labour costs. I'll take you through the fitting of a Falcon into a tower system which means that our step-by-step guide is specific to the Falcon.

You only need three tools (small and medium crosshead screwdrivers, a pair of pliers and a hacksaw) along with a bit of manual dexterity. As I lack both of these, I asked System Solutions' Karl Brandt to show me how it was done. You will also need a little time – Karl took around three hours to fully assemble a tower but advises his buyers to take a lazy weekend.

The key to a fully working, professionally-finished tower is to take your time, be very careful and to follow each step in order.

So with this advice in mind, buy a tower, make some time, gather up the necessary tools and create a working environment second to none!

PRICING

Four different tower kits are available from System Solutions (081-693 3355 or 0753 818816), according to your computer type. Costs as follows, with the four computer prices including the keyboard kit:

STFM/STe: £199.95

MegaSTe/TT: £179.95

Mega ST: £179.95

Falcon: £179.95

General SCSI kit: £129.95

Keyboard kit only: £49.95

NEXT MONTH

I'll explain how to fit the keyboard and SCSI kits in the second part, as well as looking at how to finish your tower with flair and polish!

Roger Derry,
author of
NameNet, takes
a light-hearted
view at how
programs interact
in a multi-tasking
system...

RULES OF ENGAGEMENT



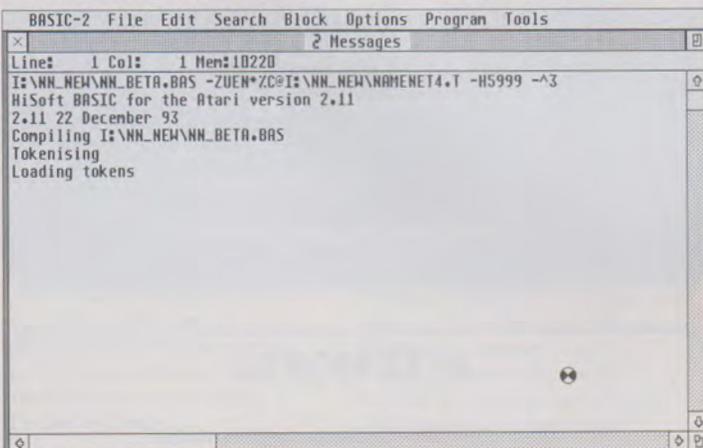
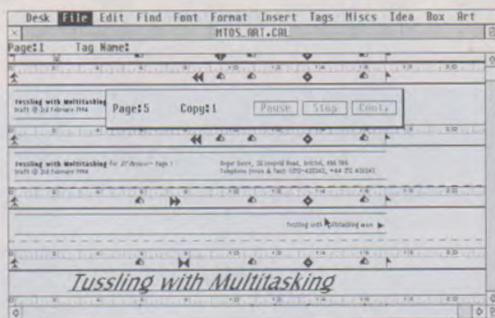
To state the obvious, the whole point of multi-tasking is that you can run more than one program at the same time. So a program that hogs the screen and refuses to give way is the last thing you need, no matter how desirable that might be with standard TOS.

Last year, I was setting about making NameNet multi-tasking friendly. After a couple of hours, I had a version that worked and that looked very convincing with the demonstration programs supplied with MultiTOS.

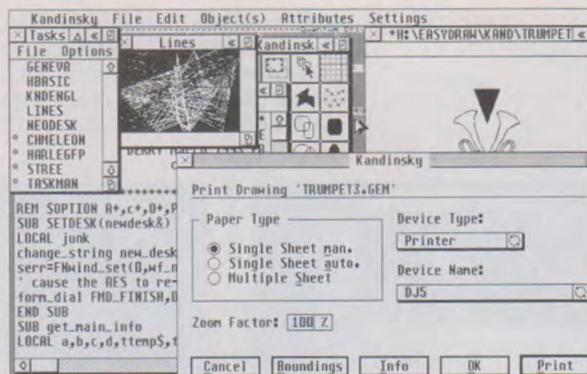
Then I ran NameNet a second time; there were now two NameNets running simultaneously! Could my brain cope with this? No! I decided that my version of DOS (Derry Operating System) was decidedly single-tasking as far as this aspect of the program was concerned. I could only cope with reviewing one file at a



Lockout
- Calligrapher's
printing alert
with all the
buttons
disabled...



I'm Important - HiSoft BASIC compiling to the exclusion of everything else!



Happily multi-tasking - a busy screen with several programs running under Geneva.

time. I then became very concerned about etiquette which may seem a strange word to use in this context but it is a very practical problem. The sharing of the screen and keyboard is solved by the use of windows although the on-screen cursor must be accessible from all programs. Take our friend the busy bee: with old-fashioned single TOS, this usefully shows that your ST is otherwise occupied. With multi-tasking, you may feel inclined to wander off to another program and use that while your main application is busily working.

Using a graphics drawing program with the cursors formed by a pair of busy bees rather than a cross-hair is not much fun - it becomes positively tedious if Geneva's animated egg timer is being used instead!

Now how obsessive should I be about this? NameNet has a review mode where it gently steps through each entry so that you can check the data. During the course of this, the



cursor flashes. Given the above problem, that had to go so I tried a message flashing in one of the windows. Two or three NameNets running simultaneously in review mode was certainly an entertaining sight - it got 1,000 points for cleverness and -10,000 for practicality! After all, the whole idea of the review mode is that you can eyeball the data yourself, not admire lots of overlapping windows! After some thought and a large back-of-an-envelope I actually started undoing much of my multi-tasking code.

In fact there are various levels of interaction depending on the circumstances. What follows is a look at some of the most common...

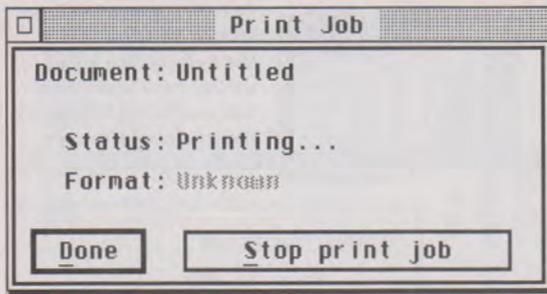
THE VERY URGENT

"I need you NOW! I will do NOTHING more until you answer this question..." In single TOS, virtually every dialogue box and alert comes under this heading. With multi-tasking, the programmer now has a choice! This is what the intellectuals call modal - I refer to it as "obsessive".

THE RELAXED

"When you have a moment, can you 'OK' this please. Personally, I won't do anything else but will generously allow the other programs to get on with doing their own thing..."

The intellectuals call this non-modal. While it is a rather polite manner, if you go off and make a cup of tea you could come back to find a screen full of non-modal dialogue



I'm Doing Fine – Papyrus takes a back seat while its printing.



boxes all politely waiting for your permission to continue – nothing is actually being done!

I KNOW MY PLACE

"I'll wait a while and then – if I am the top process – I'll carry on even if you do not respond..."

The "top" process is the currently active one. This is what I decided on for my NameNet review facility. It's useful as it saves your screen filling up with unnecessary dialogue boxes.

YOU ARE SUPERFLUOUS

"I'll wait a while and then – even if I am not the top process – I'll carry on even if you do not respond..."

Such a mode might be appropriate for a program gradually sending its output to a printer, perhaps a page at a time, and flashing up the occasional dialogue box to keep you informed of the process.

SULKING

"Boo Hoo – I'm not the top process. Until you make me the top process again I shall just sit down and cry, so don't expect me to be doing anything..."

This is the sort of multi-tasking we have been used to when we select a desk accessory. It should be referred to as "task switching" rather than a number of tasks carried out at the same time.

I'M DOING FINE

"I am working fine and I'll carry on

quite happily, but do interrupt me if you like. I am also letting other programs get a look in as well..."

This could be a background printing program.

Here you would be able to make its window active and click on an "abort" button.

I'M IMPORTANT

"Look dear, this involves an awful lot of sums and you did want a result before Christmas didn't you? I'm top process, I'm doing this as fast as possible and I have told the other programs to wait until I have finished. If you really have to, you can interrupt me..."

Compilers tend to behave like this and I have more than a sneaking sympathy for the attitude. After all, why wait ten minutes to compile a program when it could be done in five? On the other hand, you could argue that the ten minutes could be used to write up the documentation and so does not represent wasted time. I tend to use the ten minutes that NameNet requires for compiling to take a break and have a cup of tea!

GERROFF!

"Stuff you! I am going off to do what I wish and I don't want to be bothered until I get back..."

I have never liked this sort of program, even with normal TOS. Calligrapher does this when printing and while I appreciate the program, it is a real pig when you want to stop printing and Calligrapher has the bit between its teeth.

LOCKOUT

"I have sent the keyboard and mouse off on their holidays and I am taking a break and pottering around. Meanwhile, here is this very boring static screen..."

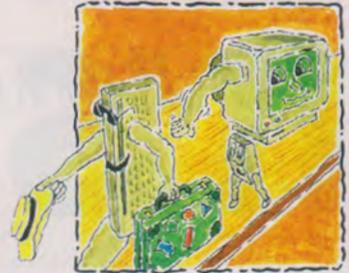
Don't you just hate it when this happens!

There are probably other modes, but I find it interesting to consider which of the above I want to use. Many programmers fail to make the distinction between multi-tasking and multi-user. For multi-user, everything has to have the same status and availability simultaneously. When you

are the only person using the system, you are usually quite happy for a program to be dormant when you are not actually using it.

Whatever you are doing, every program should be interruptible so that when the telephone rings and someone asks you a question, you can access your time manager, computerised address book or even a word processor to have an intelligent, computer-assisted conversation. Even if your compiler is left waiting, this is better than having to start the compilation again from the beginning.

Now what do I do about two programs both wanting to use the printer...?

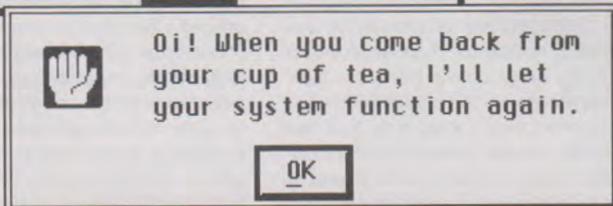
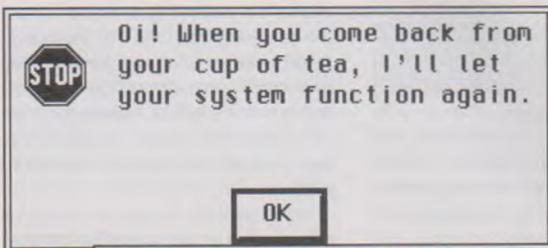


A (VERY) BRIEF HISTORY...

One of the revolutionary points about the Atari ST when it was launched in 1985 was that it had desk accessories, programs that could run at the same time as, and independently of, the main program. This inevitably led to the desire to be able to run more than one main program at the same time. You could be downloading some files with a modem and writing a letter to the taxman while a spreadsheet busily calculated which gas number to cook your books at!

The advent of faster machines made this possible. Windows on the PC only became possible with faster processors and the arrival of the Falcon has encouraged what is called "multi-tasking" on the Atari range. But even the humble ST can use the new systems although 4Mb of RAM is pretty well essential.

Various systems are currently jostling for attention. There is Atari's own MultiTOS and while Geneva from Gribnif is faster, it has problems satisfying the purists. Mag!X from Germany is also rising fast in the race for our affections. Check out all of these within the pages of this issue...



The Very Urgent – computer life stands still until you "OK" this alert box, shown as standard and with Let 'em Fly installed.

KEY FACTS

Product:

Mag!X 2

Company:

System Solutions

Contact:

081-693 3355

Price:

£59.95 (introductory)

SYSTEM

Minimum Memory:

2Mb

Resolution:

All

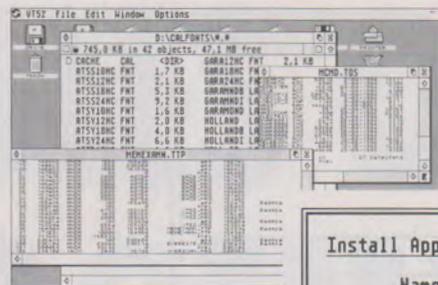
Computer:

Any ST and TT

Back in issue 23, we previewed *Mag!X 2* and have continued to use it for the past four months. With the release version now available, it's time to look at a program that has the potential to revolutionise the way you work.

WHAT YOU GET

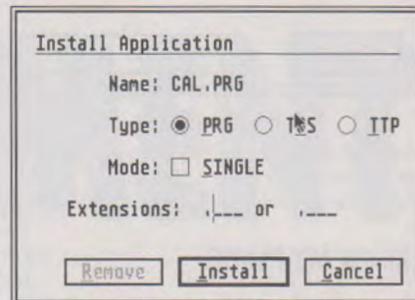
Mag!X arrives on a single floppy disk with a simple-to-use installation program and an 80-page manual. The disk contains the actual operating system along with various utilities such as a corner clock and a *Mag!X*-aware Command Line Interface. Unlike *MultiTOS* or *Geneva*, *Mag!X* replaces the Atari's standard operating system, *TOS*,



TOS/TTP programs are run in windows with the help of the VTS2 utility which provides full multi-tasking while the programs run in the background.



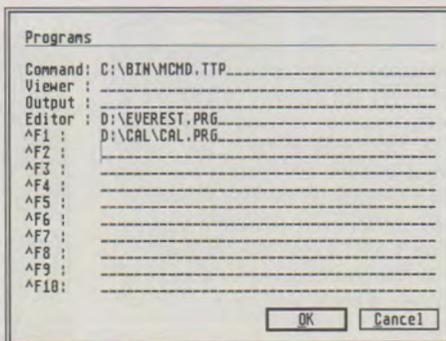
Applications can be installed to run in a single tasking mode.



IT'S A KIND OF

Having taken Germany by storm, *Mag!X* is now available in the UK. *Ofir Gal* is certainly under its spell...

A default command line interface, print utility and file viewer can be installed in *MagxDesk* for automatic loading.



handy feature for automatically loading several documents into a word processor for example.

A default file viewer and print utility can be installed and are then automatically available from the Show/Print dialogue box whenever you double-click on a file. Alternatively, you can use the built-in file viewer which displays a text file and even *1st Word Plus* documents in a scrollable window. Disk formatting is available from a separate program that *MagxDesk* calls automatically and includes background formatting and copying as well as a fast "clear disk" mode. Naturally, a replacement desktop can be used if you wish.

SUMMARY

GOOD POINTS:

Fast and reliable

Includes an in-built desktop

Provides both pre-emptive and co-operative multi-tasking

BAD POINTS:

Not as configurable as it could be

Some incompatibilities need to be ironed out

Lacks some features available in *MultiTOS* and *Geneva*

FINAL WORD:

"*Mag!X* is arguably the ultimate solution for ST owners who wish to multi-task or simply upgrade an old version of *TOS*."

completely which makes it an attractive solution to all of you with old *TOS* versions. While *MultiTOS* and *Geneva* need *TOS* 1.04 or later, there is no such requirement with *Mag!X* which is essentially a multi-tasking version of the Extended Operating System (*EOS*).

After a reset, *Mag!X* installs itself in a reset-proof manner and replaces *TOS* with a fully compatible system. Everything works as before, only a little faster thanks to some optimised code which means that disk access and GEM dialogue boxes are much faster than before. Although the system uses about 300Kb, including the desktop, 2Mb of RAM is recommended as a minimum.

A few of the enhancements are immediately obvious. Dialogue boxes

incorporate many *Let 'em Fly*-style features, the <Undo> key can be used to cancel a dialogue box and most text fields may be edited on-screen. A new gadget is added to all windows that lets you "backdrop" or "bottom" the window with a single click, greatly helping window management. Recent *TOS* features such as "Drag & Drop" and window iconifying are not yet implemented.

IN CONTROL

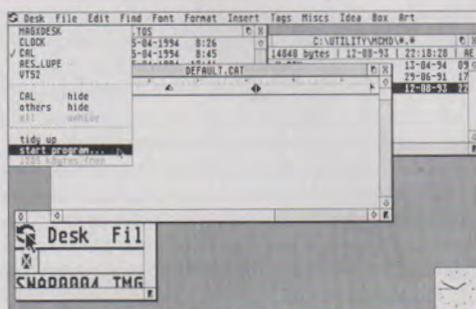
Mag!X includes *MagxDesk*, a straightforward replacement desktop that provides the basics without gobbling up too much memory. This is a far cry from *NeoDesk 4* or the forthcoming *Ease*, but is useful as it implements many of the new *Mag!X* features such as running applications in a single tasking mode.

The desktop is similar to the *MultiTOS* one function-wise and is loosely based on the shareware desktop, *KaosDesk*. It includes up-to-date icon handling - programs and files can be placed as icons on the desktop and parameters can be passed to a program by dragging and dropping files over its icon. Unlike the GEM desktop, *MagxDesk* lets you select and drop a number of files, a

DOING THE BUSINESS

This is a pre-emptive multi-tasking system (see box) that somehow manages to be simple to use yet powerful at the same time. As with *MultiTOS* and *Geneva*, you switch from one program to another by "topping" windows - selecting a window from the program you wish to be active. Additionally, <Tab> may be used to scroll through the current applications while holding down <Control>+<Alternate>. Releasing the keys switches to the selected program.

All programs appear in a special pop-up menu, activated by clicking on any clear part of the menu bar. This can be used to switch between applications, hide an application, so removing all of its windows from view, or to hide all other programs except the current one. Hidden applications can still perform background tasks invisibly. The pop-up menu also shows the amount of free RAM and can start additional programs via the file selector, which is sometimes

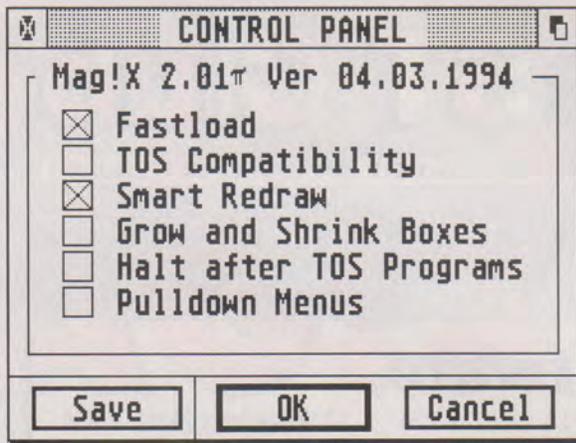


The *Mag!X* pop-up menu allows program switching and offers a quick way to load more programs.

0	MAGXDESK	waiting kb bt	ms		156164	Bytes
1	SCREENGR	running kb bt ml	ms		1277804	Bytes
2	IDLE	waiting	ms ti		24900	Bytes
3	KOBOLD_2	waiting	ms		154032	Bytes
4	XCONTROL	waiting	ms		86816	Bytes
5	AUTOPARK	waiting	ms ti		6332	Bytes
6	SNAPSHOT	waiting	ms		19100	Bytes
7	CLOCK	waiting kb bt	ms ti		46994	Bytes
8	CAL	waiting kb bt ml	ms ti	MENU MOUSE KBD	1576876	Bytes
9	AES_LUPE	waiting kb bt	ms ti		78286	Bytes
10	VT52	waiting kb bt	ms ti		101292	Bytes
11	MCMD	waiting	ms		19148	Bytes

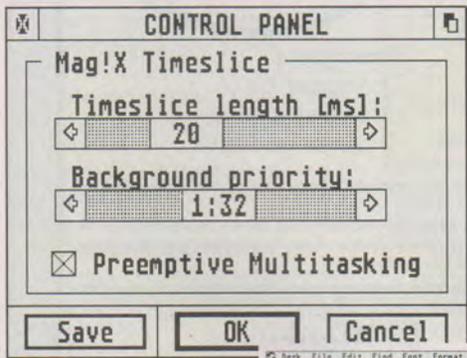
cur_up: prev | Space: OK | F: Freeze | C: Control
 cur_dn: next | Return: Switch | U: Unfreeze | Del: Terminate

The Program Manager, an in-built utility, can be used to remove "stuck" programs from the system.



Many of the options in this CPX module can help Mag!X work even faster.

MAG!X



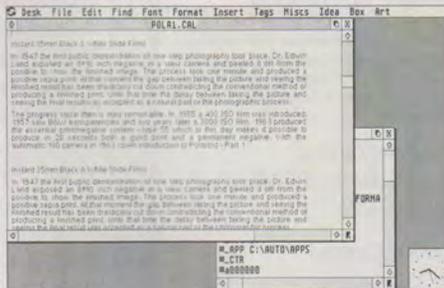
The TimeSlice CPX gives you a simple and powerful way of getting the best from the multi-tasking facilities.

faster than switching to the desktop!

Standard .TOS and .TTP programs are run inside a window managed by the VS2 program and allows you access to GDOS fonts and the GEM clipboard. Rather disappointingly, only six desk accessories can be loaded at boot-up and, unlike Geneva, accessories cannot be loaded or removed from the desktop.

Being a pre-emptive system, background applications are given a lower priority than the top one. This results in a fast response from the current application while still allowing any background programs to continue working. The simple configuration CPX allows you to define the top application's priority; the default ratio of 1:32 seems to work well. This also handles the time-slicing mechanism for the amount of time the system spends on switching between applications. Again, the default settings seems to work fine on a standard ST.

Where Mag!X really scores is in normal use. A standard ST is actually faster than with TOS and extremely stable without any sudden crashes.



Calligrapher, Everest and a clock program all running quite happily - with enough memory left for another program on a 4Mb ST!

Disk access is noticeably faster as are screen displays - hardly surprising bearing in mind that Mag!X comes from the same stable as NVDI! Text and graphics redraw at least twice as fast, although the improvement is less noticeable if you already own NVDI.

The ability to switch to co-operative multi-tasking or single tasking is very useful and gives you the option of buying Mag!X purely as a TOS upgrade without using the multi-tasking aspect. While some programs will doubtlessly be incompatible with Mag!X, the only one I could find was

WHAT IS MULTI-TASKING?

A multi-tasking system works by sharing computer power between processes such as programs and desk accessories. By constantly switching between them, each is given a portion of the processor time, a technique commonly referred to as "time-slicing". Under normal circumstances this has no drastic effect on performance as most programs sit idly waiting for your input and so requires very little processor power.

There are two kinds of multi-tasking system: co-operative and pre-emptive. Under a co-operative system, programs must co-operate to achieve a reasonable degree of multi-tasking. If a programmer so desires, a program can be made to grab the processor for as long as it wishes, effectively halting all other programs.

In a pre-emptive system, the processor retains control and switches regardless of program activity, so giving you more control. No single application can take over the system; operations performed in the background are given a lower priority. Background operations are possible under a co-operative system but this is difficult to achieve. For instance, a processor-intensive task such as dithering an image or unpacking an archive will reduce other programs to a crawl!

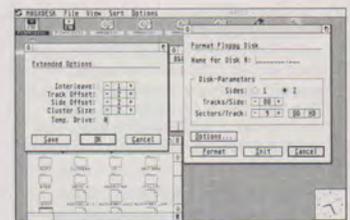
The trade-off is that pre-emptive systems tend to be slower. Mag!X, however, more than compensates for this through the use of some clever code - running under it is faster than with standard TOS.

Cubase and, apparently, Steinberg are already investigating this.

you want a multi-tasking system that works simply and reliably, then Mag!X is for you.

VERDICT

With a Falcon version of Mag!X in the pipeline, I am convinced we are looking at the future operating system for the ST. After weeks of thorough testing, Mag!X has proved that it can be trusted with my data. If you read the re-evaluations of MultiTOS and Geneva further on in this issue and then come back and read this review again, you will probably conclude that Mag!X does not provide the inherent power of MultiTOS or the configurability of Geneva. However, if



While not the most powerful around, the built-in desktop has some useful options such as background formatting and disk copying.

PERFORMANCE	OVERALL
FEATURES ✓✓✓✓✓ EFFECTIVENESS ✓✓✓✓✓ EASE OF USE ✓✓✓✓✓ DOCUMENTATION ✓✓✓✓✓ VALUE FOR MONEY ✓✓✓✓✓	<h1>83%</h1>

THE WORLD OF MAG!X

Two programs have been designed to support the new features of *Mag!X*: *Kobold* and *Ease*. Each is multi-tasking friendly and provide you with file management utilities and a superb desktop respectively. Needless to say, the programs are also compatible with *MultiTOS* and *TOS*.

EASE

Ease is a powerful replacement desktop that allows the use of GDOS fonts as well as 3D and colour icons on the desktop. It also supports colour background images, commonly called "wallpaper", but it has much more to offer apart from looks.

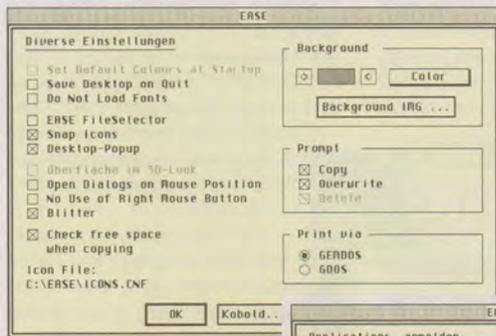
As is the current trend, you can place program and file icons on the desktop area. Programs can be started by either double-clicking or by dropping one or more files on its icon. If the program supports this then the files open immediately. *Ease* also features a Mac-like program menu where up to 20 programs can be installed. Selecting a program from this menu starts it up, passing it any optional parameters. Programs and even desk accessories can be assigned a keyboard shortcut.

Ease includes an icon editor which can load the monochrome and colour resource files as supplied with *MultiTOS* as standard. It also has many unique features such as the ability to display both text and icon windows simultaneously and even to remember which paths were viewed as text and which as icons.

Other useful features include being able to bottom a window and swap between text and icon display for each window with a single mouse click. *Ease* automatically resizes a window to fit all the items found in a directory and supports mask and search facilities as well as the ability to print out a directory listing. A simple CLI program is also included for command line enthusiasts. Pressing <Help> at any time starts the context-sensitive help system.

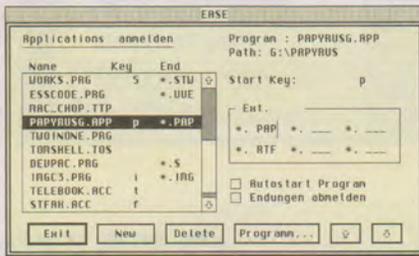
A small Auto program called *Changes* is supplied and, if installed, allows you to run .TOS and .TTP programs inside a window and even use GDOS fonts to display the text. It

As you've seen from our review, Mag!X is an impressive program. Ofir Gal previews its partners in crime...

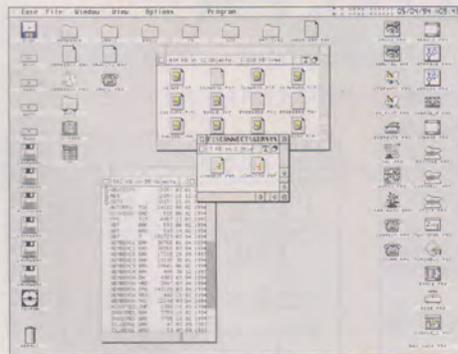


Unlike the standard desktop, Ease hosts a wide range of options, presented in modern-looking dialog boxes.

Each installed program can be assigned up to six file extensions that automatically start it, as well as a keyboard shortcut. Many options hide behind the "Program..." button.



Ease supports 3D colour icons, GDOS fonts and simultaneous use of both text and icons in windows.



also employs a very fast method of checking for free disk space which is always displayed at the top of each directory window. When copying files, *Ease* checks if there is enough space on the destination drive before

starting the operation. All file operations are supported: you can delete, rename, copy and move single or multiple files as well as create or delete folders.

Ease appears to be a fine product that is well worth considering if you are fed up with the limitations of your built-in desktop.

KOBOLD

Kobold may appear to be yet another file copying utility, but underneath this disguise lies a powerful utility that can help you back up your data and even defragment a hard disk.



You can create Kobold "jobs" which are displayed in this easy to use scrolling list. Double-click on a job to start it.

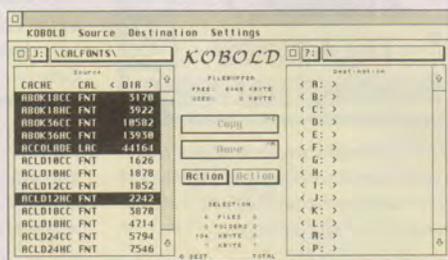
Kobold can be run as a stand-alone program or as a desk accessory and appears as two file selectors. On the left are the source files; on the right, the destination path. In its simplest form, *Kobold* is a super-fast file copier – copying 1,000 files from one partition to another on a hard disk took 40 seconds with *Kobold* as compared to five minutes on the desktop. Copying 60 files from hard disk to a floppy took 115 seconds with *Kobold* as opposed to 260 seconds on the desktop. Impressive stuff.

The program can be fully integrated into *Ease* so that any file operation is, in fact, performed by *Kobold* at a greater speed. You can also format floppy disks including high and extra high (2.88Mb) disks.

Where *Kobold* really wins is in its ability to "record" actions. This works by remembering every keyboard and mouse action and then saving the sequence as a script or a "job". A job may consist of a back-up of your hard drive to a series of floppies or even an incremental backup using the archive bits as with utilities like *The Vault*. Several small programs are provided with *Kobold* to enable you to run such jobs daily at a specified time in the background, or even every time you boot the system.

Kobold is an impressive piece of programming with a friendly and easy to use interface, and provides a useful speed increase for floppy disk users. If you own a hard disk, *Kobold* is an essential tool, providing you with facilities for which you would usually require several programs. Don't take my word – check out our cover disk demo!

Kobold – the meanest, toughest, fastest file utility in the land!



How do MultiTOS and Geneva fare against Mag!X? Ofir Gal reassesses their position in the light of the heir apparent...

HEAD

MULTITOS

Atari's own effort brought the whole issue of multi-tasking on the ST to the fore...

Based around *MinT*, a PD system designed by a Canadian mathematician, *MultiTOS* was released by Atari as a commercial product over a year ago, although only Falcon owners were entitled to a free copy.

BEHIND THE SCENES

MultiTOS comprises of two separate parts: *MinT* and a multi-tasking

version of GEM. The installation is made simple thanks to an install utility that copies *MINT.PRG* to the Auto folder and places *GEM.SYS* in the *MULTITOS* folder.

MinT is at the core of the package. This extends *TOS* into a Unix-style operating system where several programs can be run concurrently and communicate with each other. Thanks to *MinT*, you can control how

much processor time each application is allocated – in jargon, this is referred to as a “pre-emptive” system where background tasks can carry on while you freely use other applications.

One of the ways in which the power of *MinT* can be tapped is via the “Drag and Drop protocol. This lets you select a block of text or an image in one application, “lift” it and drop it into another program. While this is only supported by a handful of programs, it is still a handy feature.

MinT also features memory protection on the TT and Falcon which means that should one application crash, others should

be safe; you shouldn't need to reboot. Another feature that many users rate highly is the ability to load alternative file systems such as *MinixFS* which allows the use of long file names as on the Apple Mac. A similar facility is the relatively easy support of CD-ROM technology via a single driver file.

Of the three *TOS*-compatible multi-tasking systems currently on offer, *MultiTOS* requires the most memory – over 400Kb. It is also the least configurable: while there are many hidden options such as setting the environment, memory limit for programs, process priority and time slicing, none of these are documented. Some options can only be set in a limited way from an ASCII configuration file. The manual is little more than an installation guide that leaves you with more questions than answers...

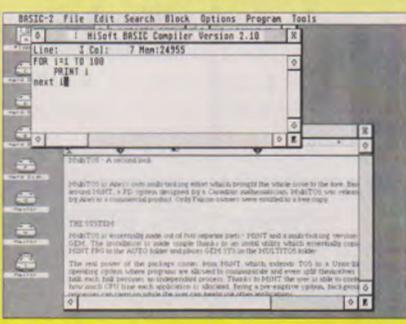
WHAT YOU SEE

The second part of *MultiTOS* is a multi-tasking aware version of the AES which is responsible for putting up menus, dialogue boxes and windows on-screen. In conjunction

KEY FACTS

Product:
MultiTOS
Company:
HiSoft
Contact:
0525 718181
Price:
£49.95

SYSTEM
Minimum Memory:
2Mb
Resolution:
Any
Computer:
ST/TT/Falcon

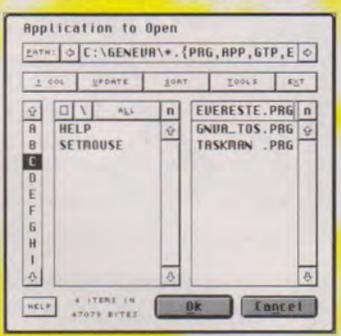


MultiTOS can run several applications at once, as long as they are multi-tasking “friendly”.

Geneva is fundamentally different from *MultiTOS* and *Mag!X* as it is purely a replacement for the graphical side of the ST, the AES, and provides a co-operative multi-tasking system. Under such a system, programs must co-operate with each other to achieve multi-tasking and so *Geneva* works best as a task switcher rather than a true multi-tasking environment.

GENEVA

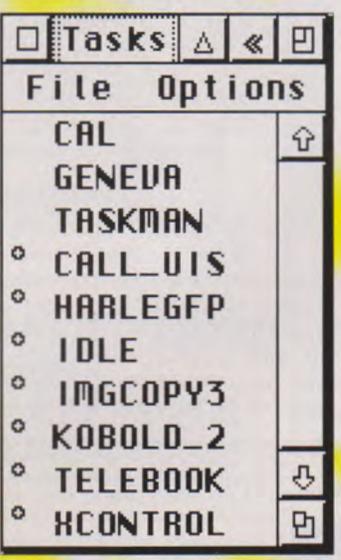
Gribnif's creation, originally reviewed in issue 22, paints a different multi-tasking picture...



The built-in file selector can be used to easily start a program, so compensating for the lack of a desktop.

FROM THE TOP

Geneva is loaded from the Auto folder and installs itself into the system. It is closely modelled on the *MultiTOS* AES in that there is no limit to the number of desk accessories and several programs may be



The Task Manager is used to start applications and desk accessories as well as to customise the set-up.

launched automatically at boot time. Since the built-in desktop on Atari computers does not support multi-tasking, *Geneva* requires a separate desktop which is not included in the package. The manual recommends *NeoDesk 4* – see our preview on page 34.

Odd as it may seem, a desktop is not essential as *Geneva* has a very flexible utility called *Task Manager* which, among other features, allows you to load a program via the file selector. Unlike *MultiTOS*, *Geneva* incorporates a powerful file selector, although it can be replaced if you prefer to use an alternative.

Each program or accessory is registered in the Desk menu and can be activated by selecting the menu item or by selecting (“topping”) one of its windows. Desk accessories can even be removed by holding <Control> and selecting their menu item as in *MultiTOS*.

Unlike *MultiTOS*, the author of *Geneva* considered the issue of backward compatibility and decided to provide several safeguards to allow you to use old, “badly behaved” applications like *Protext*. This miracle is performed by putting all other applications to “sleep”, effectively

KEY FACTS

Product:
Geneva
Company:
Compo Software
Contact:
0487 3582
Price:
£59.95

SYSTEM
Minimum Memory:
2Mb
Resolution:
Any
Computer:
ST/TT/Falcon

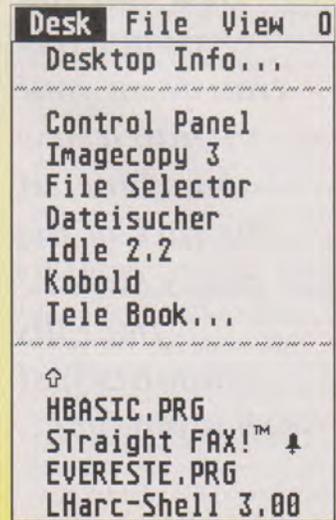
TOS HEAD

```

C:\MULTITOS\MINT.CNF
Line: 1 Col: 1 Mem:24734
multitos.cnf
# Last Modified on 6/22/1993 07:56
# -----
# Start up the GEM Desktop
#MAXMEM=1600
SLICES=3
exec C:\AUTO\FASTPRNT.PRX
#exec C:\AUTO\OUTSIDE.PRX
GEM=C:\MULTITOS\GEM.SYS
    
```

The MiNT configuration file gives some control over the system and memory allocation. Unfortunately, many of the parameters are not documented in the manual...

MultiTOS interesting – and may even use it – the majority of you will be better off with Geneva or Mag!X rather than waiting for Atari to get their act together with a usable upgrade...



Programs are listed under the desk accessories in the Desk menu. Note that the limit of six accessories no longer holds.

with MiNT, you can load as many desk accessories and programs as memory permits. Additional desk accessories can be loaded without rebooting and even removed when no longer required.

The new AES also features colour 3-D icons, pop-up and sub-menus, and offers many other techie enhancements such as a flexible environment which can be edited "on-the-fly" and system calls for which programmers have been begging for years!

MultiTOS is supplied with a built-in desktop, similar to that on the Falcon, with a few extras to support the multi-tasking features.

BOTTOM LINE

While holding a great deal of promise, MultiTOS undoubtedly failed with the general public for a variety of reasons. In particular, the current version is slow and has many compatibility problems. This is a great shame as MultiTOS allows you to benefit from the very latest version of TOS and opens the door for a new, more powerful generation of programs.

Lack of support from Atari and no bug fixes whatsoever have so far prevented this powerful system from catching on. While some programmers and techie types will find

PERFORMANCE	OVERALL
FEATURES	58%
EFFECTIVENESS	
EASE OF USE	
DOCUMENTATION	
VALUE FOR MONEY	

running Protect in a single-tasking mode.

You can set various flags globally or per application. Parameters such as memory limit, automatic keyboard shortcuts in dialogue boxes and maximum number of windows can be set from the Task Manager and saved into the configuration file.

WHAT ELSE?

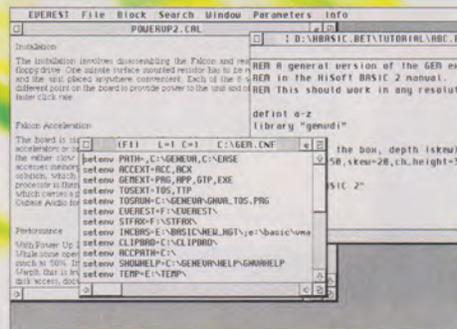
Where Geneva really excels is in the range of extra features it adds to the standard GEM interface. Keyboard shortcuts for buttons/menus and even window gadgets such as the full and close box can be assigned shortcuts and each application may also be activated via the keyboard. Whole menus can be "torn-off" the menu bar and placed in their own window for quicker access. Windows can be "bottomed" with a single click, effectively revealing others hidden behind them.

A built-in Help system is also provided as well as the ability to run .TOS and .TTP programs in a window. Unlike Mag!X and MultiTOS, these do not multi-task and suspend the operation of other programs between keyboard prompts. Beyond

that, Geneva has many other features that programmers can support within their programs. The Help system, for example, can be used to provide on-line help for a different application. New-style radio buttons and check boxes are also available as well as many new system calls which are clearly documented in a commendable manual.



Each program can be set up via this dialogue box for maximum compatibility with minimum hassle.



Calligrapher, Everest and HiSoft BASIC all running quite happily under Geneva. Selecting a program is simply a matter of clicking on one of its windows.

BOTTOM LINE

Geneva uses very little memory; it's quite amazing that the authors have squeezed so many features in. As long as no background tasks are being performed, Geneva is very fast

– in fact, some functions of the GEM interface are even faster than with standard TOS. While efforts have been made to provide compatibility, Geneva can be a little unstable although it is still a great improvement on MultiTOS...

PERFORMANCE	OVERALL
FEATURES	75%
EFFECTIVENESS	
EASE OF USE	
DOCUMENTATION	
VALUE FOR MONEY	

PACK IN A BOX

How can you completely transform your ST into a new machine, at the flick of the power switch? Jon Ellis examines just such a product...

Furst Ltd, a UK-based company has released SMS2, a new operating system that runs on the ST's hardware. Unlike MultiTOS, Geneva and others of that ilk, it does not attempt to remain compatible with GEM or even TOS programs. In fact at present, SMS2 cannot even read TOS disks, though this may change in future updates.

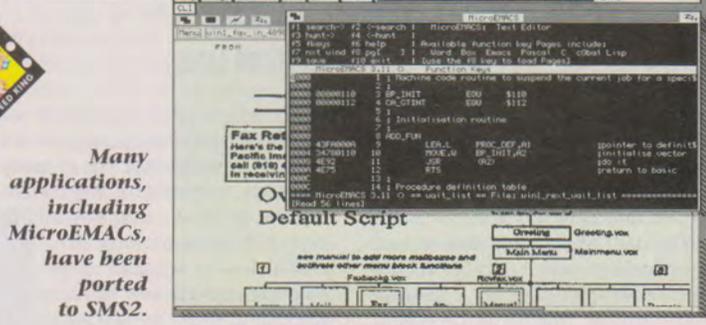
What SMS2 can do though is to turn your ST into a multi-tasking, networking computer with advanced features like code-sharing, named pipes and device-independence. The beauty of SMS2 is that these features were designed from the start, rather than bolted on to an existing single-tasking operating system like TOS.

GETTING STARTED

The SMS2 software is stored on a rewriteable ROM cartridge that plugs into the ST's under-used cartridge port. As a result, within seconds of powering up the computer, the system is ready for use. Like TOS, SMS2 is an operating system with a graphic interface, featuring a mouse pointer and multiple windows. Menus are also supported, though there is no menu bar in sight when



BASIC, comms, calculators and calendars - all multi-tasking under SMS2.



Many applications, including MicroEMACS, have been ported to SMS2.

the system is started. The absence of icons gives the interface a rather spartan look which may surprise those used to NeoDesk or Gemini.

In addition to the normal mouse-based approach to operation, SMS2 provides excellent keyboard support. A complete CLI (Command Line Interface) is provided, running in a window. "Hotkeys" can be defined by the user to perform almost any function that can be carried out with the mouse.

USING THE SYSTEM

The philosophy of SMS2 is based around the concept that each program, or "job", runs in its own window. As a result of this design, multi-tasking is natural under SMS2.

Task-switching is simply a matter of placing the mouse pointer on the window of the chosen task, automatically directing keyboard input to that job.

The one window-one program idea is quite different to GEM, with its multi-window applications, and requires a shift in thinking. To edit two documents at once under SMS2, you start two copies of the editor, and task-switch between them. To avoid wasting memory by having the editor code duplicated, SMS2 supports code-sharing, whereby programs install multiple-usable modules to be used as a resource by any program. In fact, SMS2 is very memory-efficient: the whole operating system, graphic interface and all, occupies less than 160Kb, and this



Plug in and go - getting your ST into the world of SMS2 couldn't be simpler...

KEY FACTS

Product:
SMS2

Company:
Furst Ltd

Contact:
0489 894674

Price:
£135.00

SYSTEM

Minimum Memory:
1Mb

Resolution:
ST High

Computer:
Any ST, but not TT or Falcon

NETWORKING

Amongst the many sockets that adorn the Falcon's back panel is a LAN (Local Area Network) port. Trouble is, without appropriate software to drive it, it remains unused. One of SMS2's most exciting features is built-in network support, so opening the world of LANs and connectivity to even basic ST systems.

At present, the SMS2 networking facility is implemented using the MIDI ports. Although the MIDI protocol only allows communication at a moderate speed, MIDI is provided as standard on all ST machines, so all SMS2 users will be able to network without needing extra hardware. As an additional attraction, MIDI cables are cheap and readily available.

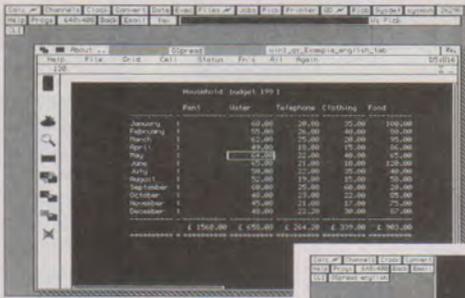
Networking under SMS2 is effortless: machines are simply connected up in a ring, and each assigned a node number. Thereafter, data stored on any of the networked ST's disks can be accessed over the whole

network, just by quoting the host's node number as part of the file specification.

The possibilities offered by SMS2 go far beyond simple file serving though. Programs running on one machine in a network can use input/output facilities attached to other machines, including their printers, displays and keyboards.

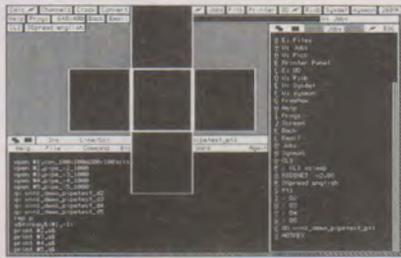
This opens the door to advanced systems like email or distributed tasks operating across networks of STs. To do this properly would require faster communications hardware like Ethernet; and there is no reason why this could not be supported by SMS2.

Best of all, the SMS2 MIDI network is both subjectively fast and stable. Machines can be reset without upsetting other members of the network. Also, unlike many ad-on LAN systems, there is no substantial performance deterioration associated with connection to the network.



The Qspread spreadsheet.

A demonstration of multi-tasking - five processes running at once, and sharing data via pipes.



economy extends to the sizes of SMS2 applications too. Any number of jobs can run concurrently, and even with more than ten jobs running simultaneously, window responses are crisp. This is because SMS2 implements full pre-emptive multi-tasking, allowing it to switch applications when the user wants, not when the programs care to offer the option. To control the multi-tasking environment, SMS2 provides a full range of built-in system utilities. The resource usage of jobs can be monitored, their priority changed, or their execution terminated, all with a couple of keypresses.

THE PACKAGE

In return for your money, Furst supply the SMS2 cartridge, along with a 30-page user manual and a floppy disk containing system utilities and other software. The manual is concise to the point of brevity, but provides just enough information for the experienced user to get the system running and to explore the environment.

The operating system runs on 68000-based STs only, with no support for the Falcon and the TT. Furthermore, SMS2 is fussy about display resolution: only ST mono is supported, though MegaST owners may purchase a video card from Furst that allows high resolution colour under SMS2.

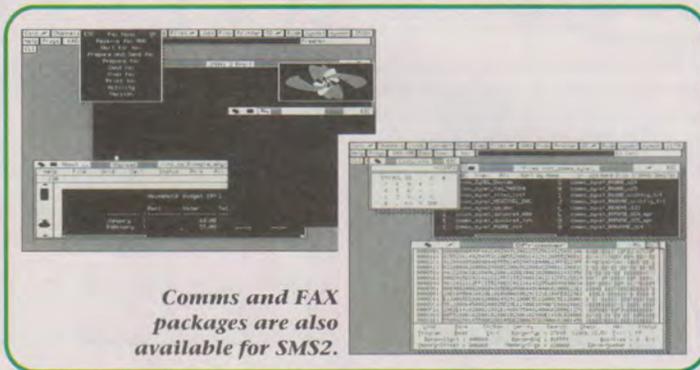
POSSIBILITIES

Novel operating systems are all very well, but no use without application software. Somewhat unexpectedly, there are some packages already available including word processors, spreadsheets and comms programs. These are mostly ported from QDOS (the old Sinclair QL operating system), though there is a growing range of native SMS2 PD and commercial software.

Given such a powerful environment, many purchasers will be interested in writing software to run under the SMS2 operating system. To do this, full documentation of all the operating system traps and services is needed, and sadly this is not supplied with the package. What is worse, the only programming tool provided with the system is a PD version of the little-known language Rexx. However, Furst have a good

going to buy it? At present, the application software is a poor second to the best of the new GEM packages, so it is not going to be users looking for the next word in DTP. However, for students of computer science, or enthusiasts who want to explore a modern operating system, or programmers needing to implement a low cost, advanced network will find plenty to interest them in SMS2.

Without a major application that exploits the unique facilities of SMS2, it is unlikely to be a mainstream product. Despite this, SMS2 deserves an enthusiastic welcome because it is truly innovative - a rare quality indeed on the British ST scene.



Comms and FAX packages are also available for SMS2.

BASIC compiler, and this should be available along with complete programming documentation in the near future, although no price details were available at the time of writing. Other software development tools available under SMS2 include a public domain C, assemblers and FORTH.

VERDICT

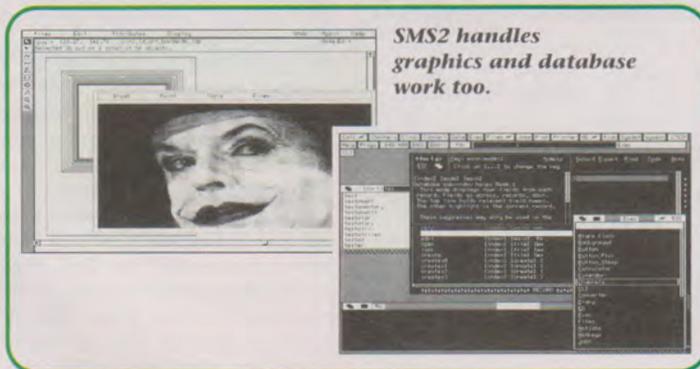
Despite the power of the operating system, one major question remains. Since SMS2 is so different, who is

SUMMARY

GOOD POINTS:
Fast multi-tasking
Networking that works
Potential for development

BAD POINTS:
Restricted hardware compatibility
Inadequate documentation

FINAL WORD:
"SMS2 has exciting features and potential, but an unpolished presentation as yet."



SMS2 handles graphics and database work too.

PERFORMANCE OVERALL

FEATURES ✓✓✓✓✓
EFFECTIVENESS ✓✓✓✓✓
EASE OF USE ✓✓✓✓✓
DOCUMENTATION ✓✓✓✓
VALUE FOR MONEY ✓✓✓✓✓

67%

PRESCRIPTION FOR SUCCESS

Marketing a new operating system for a machine is very different from trying to sell a new application package. When the operating system in question is incompatible with all existing software for that computer, you are asking for nothing less than a revolution amongst the users. Quite a tall order.

SMS2 is not the first alternative operating system to be offered for the ST. Minix and OS9/68000 have been available for several years and despite their compatibility with popular operating systems elsewhere in the computer world, they have remained outside the mainstream of ST computing.

What then of the future for SMS2? This depends absolutely on the development of application software. Operating systems on their own are of interest to only a small minority of ST owners. The majority of the ST community use their computers to do something, whether it be word-processing, DTP, music or whatever. Therefore, for these people, the quality of the application software is of primary importance.

Where will the SMS2 application software come from? Fortunately for Furst, the ST community contains a good proportion of enthusiastic programmers, and it is to this constituency that SMS2 must first be sold. To achieve this, Furst must learn from Atari's mistakes. Good programming tools and readily-available comprehensive documentation are fundamental requirements for software development. Work on SMS2 should continue to rectify the obvious shortcomings (incompatibilities with Falcon/TT, TOS-format disks and most display resolutions). As a plus, the PEROM (Programmable Erasable Read Only Memory) rewritable nature of the cartridge offers an easy upgrade process to ease this task.

Finally, some cosmetic changes would also help to excite the imagination of programmers. The graphic interface could be made a little more glitzy: the recent trend in GEM programs is toward programs that not only work well, but look good too. The SMS2 user manual would also benefit from some more attention, both in content and in presentation.

After all this, maybe, just maybe, someone will write that "killer application": the piece of software that ST owners will buy SMS2 in order to be able to run. Anyone for another Cubase?

EXCLUSIVE • EXCLUSIVE • EXCLUSIVE • EXCLUSIVE • EXCLUSIVE • EXCLUSIVE • EXCLUSIVE

Despite various PD and shareware competitors, *NeoDesk* remains the most fully-featured of the replacement desktops. During his whistle-stop trip to the UK, I managed to spend some time with Dan Wilga, the author, who give me a guided tour of version 4, the perfect front-end for *Geneva*.



a "wallpaper" option for a background picture in .IMG, .TNY or Degas or Neochrome formats. Our screenshots have a rather nice grey brick effect – including the moss!

The entire *NeoDesk 4* code has been rewritten to allow all dialogue boxes to be "non-modal", the techie way of saying that you can have multiple dialogue boxes open at the same time. So, for instance, you could have the Memory Usage box open – which shows how much memory is currently being used by *NeoDesk* and any other active programs – along with the Search Filter for finding specific files. On-line Help per box is also being implemented.

Each window has its own menu bar whose options only affect that window. Another neat function is the inclusion of a trashcan icon at the bottom left; if the windows on-screen

FIRST IMPRESSIONS

Various aspects have been added to make *NeoDesk 4* look quite different from its predecessor. There's an in-built editor allowing the creation of icons with up to 16 colours and substantial control over the window appearance. *GDOS* fonts can be used for on-screen text, so allowing you to pack a lot more information into a window, and the fill pattern, background and text colours can each be altered to taste. Additionally, there's

Various formatting methods are supported with background operation on offer.



Can't see the desktop trashcan? No problem – just use the one in the window!

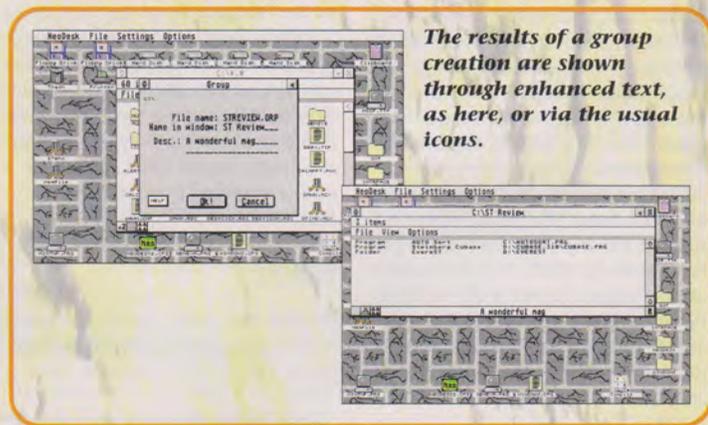
IN WITH THE NEW

After a suitably lengthy wait, *NeoDesk 4* is almost ready for release. Vic Lennard has a sneak look at *Geneva's* partner...

obscure the main trashcan, files can simply be dragged to the icon in their own window.

DESKTOP SIEVE

This open nature also extends to the creation of Groups. By opening a Group window and dragging files into it, an accurate record of that file's path is retained without actually duplicating the file. Among the numerous uses for this is the ability to organise your files in a number of different ways without wasting disk space. You might usually keep all of your letters in folders according to



The results of a group creation are shown through enhanced text, as here, or via the usual icons.



Setting the search criteria...

month and year, but can then use a Group to assemble letters according to whom you've sent them to. The names of files within a group can consist of upper and lower case letters – and up to 20 characters.

those that fall within these specifications. Once found, the files remain in their current location and a Group window opens showing the result of the search.

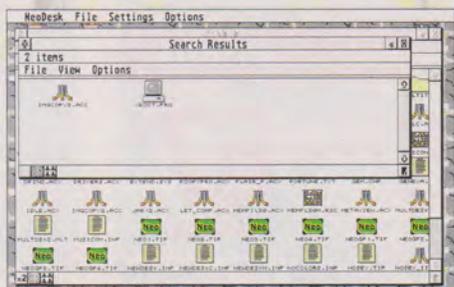
One of the most powerful new features is *NeoDesk's* Filter which allows you to search for files, view, move and copy them by any combination of file size, date, time or attribute. Also on offer are "templates" for searching by file name extension, including the use of wildcards. For example, let's say that you need to find a particular large *1st Word Plus* document created some time in February 1993, but you can't remember the file name. You could set up a filter to find all files greater than 25Kb with a .DOC extension created between 1/2/93 and the 28/2/93. The Search facility will then go through all of your files and find

IN THE BACKGROUND

Think about the system functions that currently tie up your machine – file copying and disk formatting. Both of these can be carried out in the background on *NeoDesk 4* including the setting of the speed: slower speeds lead to a better performance from the current active program.

Copying can be carried out as part of a filtering operation for the movement of specific files.

I have to admit to never getting on with *NeoDesk*, but the facilities in version 4 may make me change my mind. Watch out for a full review soon...



... produces the files in a Group window.

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BEWITCHED!

OMEn packs the power of a multi-tasking operating system into any ST and promises to be the hottest shareware release this summer. Armed with a few "crystal ball" gags, Nial Grimes separates the truth from the hype...

Multi-tasking operating systems are big business on the ST right now. With *Geneva* and *MultitOS* already available and *Mag!X* waiting in the wings, it would seem that the market already has its fair share of alternatives; so what does *OMEn*, the Open Multi-tasking Environment, offer that's so special?

To be honest, a whole lot. It's a totally new operating system and won't even think about running regular GEM or TOS applications. But before you lose interest, consider the advantages of a truly multi-platform operating system. Applications written for *OMEn* on the ST will run totally unaltered on the Mac, Amiga and PC (with a 68000 processor card) and versions for these machines are not too far away!

LOOKS TRICKY

Perhaps the most staggering aspect of *OMEn* is its size, or rather lack of it. Even with a bundle of support files, the entire directory only amounts to about 350Kb and unless drastic changes are brought into effect over the next few weeks you will be able to run happily on a bog-standard 520ST!

Although aesthetically similar to GEM, *OMEn* is quite radical in its approach to the graphical user interface. The heart of the system is



OMEn's desktop looks vaguely similar to its GEM counterpart, but takes quite a bit of getting used to in practice.

the desktop, which in itself is a window and works in a similar way to GEM's equivalent. Each window has its own menu bar and the drag-and-drop principle is put into full effect throughout. In fact there isn't really a file selector in the traditional sense of the word – to load a document into any program just find the file you want to load, drag it to the relevant window and *OMEn* will sort out the rest. The physical window

handling pinches aspects from Windows, the Amiga and the ST, and feels very strange to start off with. Many operations that require a double-click under GEM happen with a single-click under *OMEn* and you can deal with most windows in the background. What's more, the scroll bars work in real-time and each window can be backed or topped with a swift click in the right place.

My first reaction to some of these differences was frustration, but having spent some time working through the system, its individuality does become more bearable – even quite attractive at times. In fact, that's probably the biggest problem most *OMEn* users will face – separating sheer differences from real dislike.

What lies underneath the graphical exterior is often more important when it comes to operating systems and *OMEn* has untold secrets lying down there. It's coded in pure assembly language from start to finish and in line with its multi-platform approach, everything from disk drives to printers and serial output are handled through device drivers. PostScript Type 3 fonts are handled

at operating system level as is colour printing. Most standard ST, TT and Falcon screen resolutions are supported, but true-colour is still being worked on.

Of course the software to exploit these features is very thin on the ground at the moment. This early test version contained a tiny paint package, a limited text editor and one or two other small utilities, but they're not really enough to show off the system to its full potential. Development software and some more exciting programs should be available by the time the full product comes on stream...

A NEW DAWN?

It's easy to look at *OMEn's* slightly tacky low resolution interface and to automatically assume it performs in a similar way – don't! What we have

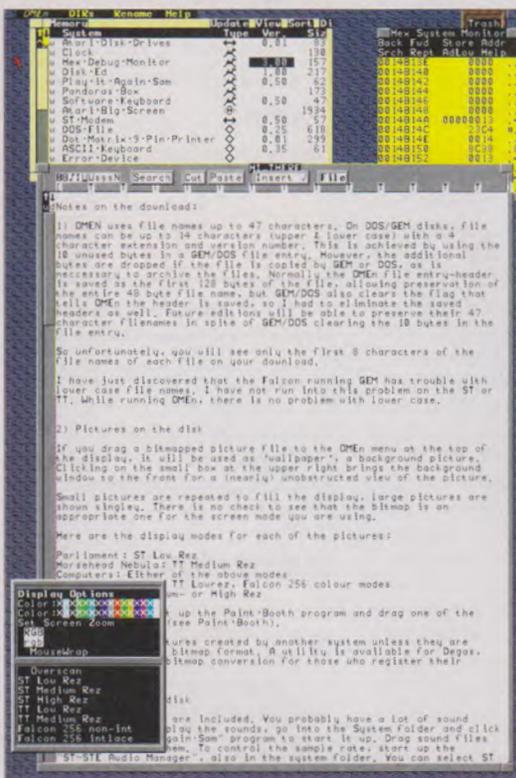


Drag and drop is the order of the day. Files are loaded, saved and copied without the help of a single file selector!

here is a fully-fledged multi-tasking operating system that will shortly be able to run on at least 90% of the computers in use today. The effects that such a concept could have on the computing world as we know it is staggering – no more cross-platform compatibility problems, only one interface to learn no matter which machine you use and, reduced hardware demands thanks to that assembly-coded kernel.

But however grand the ideals, ultimately, the success of *OMEn* will depend almost entirely on the software support it receives.

The system is almost ready to be exploited – what do you say software publishers?



The programs supplied with OMEn are quite basic, but hopefully we will see some more powerful software appearing over the coming months.

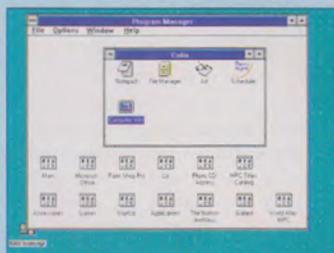


Set me - one of the many system configuration screens.

EASY PC?

Iain Laskey gives his view of the world's best selling program, Windows...

There is a joke along the lines of "How do you turn a 486 into a 286? Run Windows 3!". Using Windows certainly results in a speed penalty over standard DOS programs, but most users accept this as the price to be paid for the vast visual improvement.



Hi there! - this is how Windows greets you when first loaded.

INSTALLATION

Unlike MultiTOS, Windows 3 has to contend with a huge range of PC configurations. Luckily, the installation program can recognise most systems for itself, resulting in a generally pain-free setting up process.

Windows applications are also easy to install with a set-up program doing all the hard work. The only time you have to do anything

beyond click on a few "OK" buttons is when a custom installation is required. One bugbear though is that few programs are easy to de-install! Deleting all the files and searching through the various Windows resource files, looking for entries that the application inserted

ST Review finds out whether Windows on the PC and System 7 on the Apple Macintosh really offer that much more than the multi-tasking Atari systems...

DIFFERENT

MAC ATTACK!

Vic Lennard considers whether everything we hear about the Mac is true...

Apple Macintosh computers have quite a reputation. The user-friendly screen has lent itself to the creation of some very powerful applications including Quark XPress and Adobe Photoshop, both of which are central to the creation of this magazine.

So is the Mac really so special?

STANDARD SYSTEM

All modern Macs have an internal hard disk to which the multi-tasking operating system, System 7, is installed and loaded into memory on boot-up. This typically requires upwards of 2Mb which explains why all Macs have a minimum RAM of 4Mb. In comparison, TOS uses around 200Kb of your ST's memory.

One aspect becomes immediately apparent on seeing the Mac's desktop: upper and lower case letters are available for all file and folder names - and up to 31 characters per title! While the ST and PC obtain a file's type from the three letter extension, not so with the Mac; embedded in the file header are the file "type" and "creator", two invisible, four-character titles. Files pick up their on-screen logo from these: double-clicking on any file first loads the application that created it followed by the file itself.

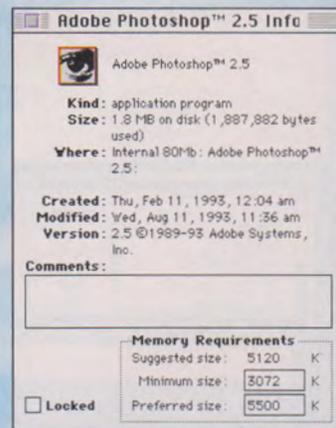
The Mac is rather flexible in that an original file or its "alias", a pointer

when first loaded, is a tedious manual job.

WORKING WITH WINDOWS

Windows 3 presents a very different working environment to GEM. The familiar drive icons are gone, replaced by the Program Manager and the File Manager. The Program Manager presents the various installed programs as groups of icons; like GEM, you run programs by clicking on their icons. To examine the file system, you run the File manager. This lets you carry out all the usual functions such as copying or deleting. The whole system is very controllable with loads of options and settings allowing you to configure Windows to fit the way you like to work.

Windows 3 is not a pre-emptive multi-tasking system, acting as a kind of task switcher. Most Windows programs grab all the processor time they can, effectively stopping any other currently active applications from running. As each program finishes using the processor, the next one takes over.

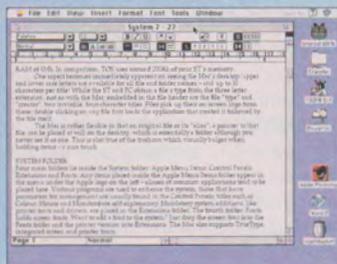


Fix it - a program's memory size is fixed from its Info box.

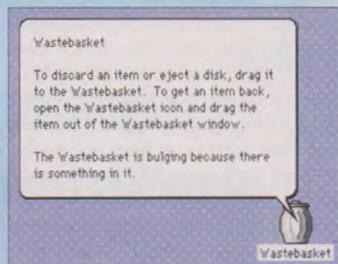
to that file, can be placed at will on the desktop, which is essentially a folder though you never see it as one. This is also true of the Wastebasket which visually bulges when holding items - a nice touch.

SYSTEM FOLDER

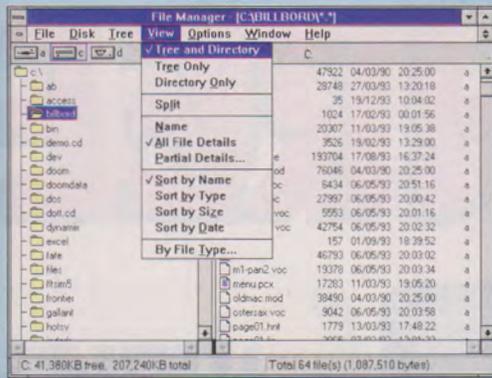
Four main folders lie inside the System folder: Apple Menu Items, Control Panels, Extensions and Fonts. Any items placed inside the Apple Menu Items folder appear in the menu under the Apple logo on the left - aliases of common applications



Every icon tells a story - italicised text is used to show an alias, PowerVic is another Mac connected by the network and as for the bulging Wastebasket...



... I'll leave it to Balloon Help to explain this!



Folders 'n' files – the File Manager is about as close as you get to the GEM desktop.

MAIN FEATURES

Windows has its own print manager that allows you to set up several documents in a queue. You can then pause, restart or cancel any of these print jobs as required. Printing occurs in the background allowing you to get on with your next task without having to wait for the printer. The downside is that you have to wait for the application to print to the queue first which can take a while! During this process you are effectively locked out. One of Windows' better features

is Object Linking And Embedding or OLE for short. This allows programs to share resources among themselves. For instance, a Word for Windows document could include an Excel spreadsheet as part of the file. It appears on the screen as a spreadsheet embedded in the middle of the text.

If you then click on the spreadsheet to edit it, Windows runs Excel from within Word, allowing you to edit the spreadsheet. When you finish, control reverts back to Word again. Alternatively, you could have a

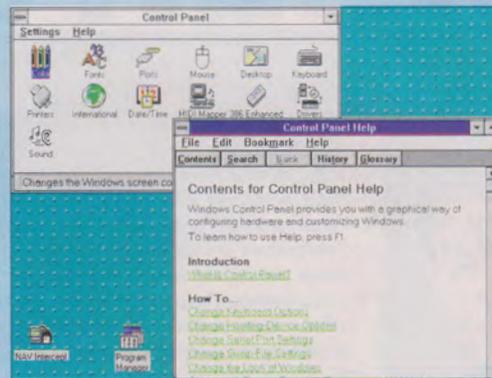
standard letter that includes information from a database. Every time you print the letter, you can set it to run the database and retrieve the latest information – a useful feature.

The Windows clipboard function is also a cut above the rest. You can save to it from one application and then read the data back using another. When retrieving, you can choose to load just the text, a bitmap image of the saved information or an object representing the data. This is a good way of setting up the object links between different applications.

CONCLUSIONS

Windows 3 has matured into a powerful and flexible system and the applications it runs can be extremely powerful while retaining ease of use. These abilities don't come cheap however and it requires a machine with a lot of muscle and loads of hard disk space to make it work.

It still has a way to go in the multi-tasking arena though – hopefully Windows 4, nicknamed "Chicago", will correct these deficiencies...



On hand – the majority of Windows programs have a built-in hypertext-style help system.

STROKES...

tend to be placed here. Various programs are used to enhance the system; those that have parameters for management are usually found in the Control Panels; titles such as *Colour*, *Mouse* and *Monitors* are self-explanatory. Mandatory system additions, like printer fonts and drivers, are placed in the Extensions folder. The fourth folder, *Fonts*, holds screen fonts. Want to add a font to the system? Just drop the screen font into the *Fonts* folder and the printer

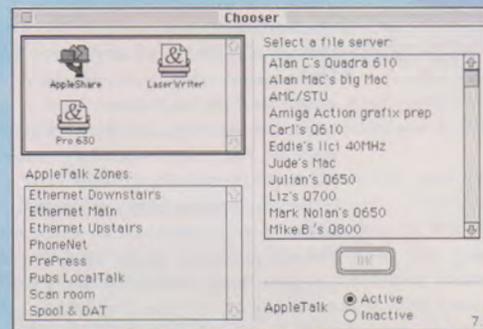
version into Extensions. The Mac also supports TrueType, integrated screen and printer fonts.

EASE OF USE

Almost all Mac applications support the same keyboard shortcuts, using the <Command> key with various others. <O> opens a file and <W> closes it; <X>, <C> and <V> cut, copy and paste items to the clipboard respectively, <Z> undoes the last function and <Q> quits the current application. Nearly all programs fully support the clipboard.

In terms of multi-tasking, the Mac is a co-operative beast – a program has to give up control of the system for another to use it. Generally, Mac programs are well-behaved in this respect. The memory management could be better; an application "steals" all of the RAM that is set aside for it rather than using what it actually requires.

Other nice features include "Balloon Help", where speech bubbles appear as on-line help, the ability to open any small text or PICT (the Mac's innate graphics format) files through the use of *TeachText*, a free viewing/editing program, instant viewing of fonts or hearing of sounds by a simple double-click and an in-built screen grabber!



Share me – the Mac's in-built Appleshare system can be used to network a small office!

POWERFUL FEATURES

Networking is fully supported; Macs, PostScript printers, modems and other peripherals can be connected via their Local Area Networking (LAN) sockets. This happily supports up to a dozen items at a reasonable data transfer rate.

The use of a hard disk partition as pseudo-RAM, usually referred to as "Virtual Memory", is provided as standard and can be used when necessary. In fact, many programs have an in-built virtual memory facility.

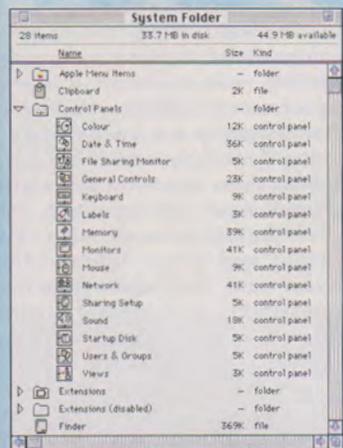
Perhaps the most powerful System 7 feature is that of *Publish And Subscribe* where a text or graphics file can be "published" for use in another application that "subscribes" to it. If both applications are open and changes are made to the

publisher, the subscriber's display automatically updates.

CONCLUSIONS

If there is a downside to the Mac, it has to be that screen redraws are proportional to processing power; the only way to speed up redraws is to invest in an accelerator board! Also, many Mac owners have been lumbered with an obsolete machine within weeks of an expensive purchase, a scenario that is continuing unabated.

That said, the Mac is certainly easy to use and has some very powerful innate facilities. Had Atari firmly set the ground rules when the ST first appeared, perhaps such a mature operating system would now be available on our machines...



Open up – the System Folder holds all necessary system files, seen here through the nested folder viewing system.

*ST Review's columnists
debate the pros and cons
of multi-tasking...*

THREE

*Oh for a little
team-work...*

IN PUBLIC



The computer industry is often accused of paying little attention to its customers, but in no area does it have its head buried further in the sand than that of multi-tasking operating systems. While *MultiTOS* is kind enough to perform dozens of operations simultaneously, try asking it to do something as simple as sending formatted text from a word processor to a desktop publisher and the best you can expect is a blank stare. When you think about it, this is a bit like persuading the design team for a new sports car to get together in an office, without actually letting them speak to each other!

Priorities, it seems, are all wrong at the moment. The focus is firmly on making more than one thing happen at once whereas equal, if not more, attention needs to be paid to getting software to work together – to integrate. Even the latest offerings on the PC seem far too interested in boasting about the fact that they are “pre-emptive” than anything else.

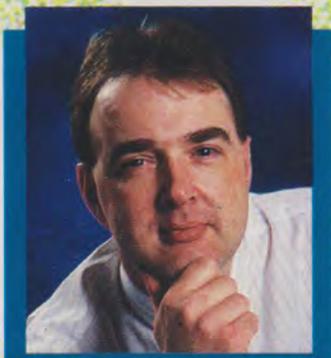
My perfect multi-tasking operating system would allow each application to blend seamlessly with the next. If *Calamus* couldn't load a picture itself, it would call on *GEMView* to carry out a conversion; a double-click on a text frame would open a *Papyrus* window and all text formatting could be carried neatly across in memory without having to worry about file formats or paths. What's more, archived files would no longer spell hassle, because the instant I chose one in the file selector, *ST Zip* or *LZH-Shell* would spark into life and depack it for me. Sure, it would be nice if a little raytracing could be done in the background, but I'm sure I could live without that.

To be honest, without this integration I see precious little reason for multi-tasking operating systems on the ST at all. Modern hard disks are fast enough to allow you to switch between applications in an instant and the savings in memory are often worth more than the convenience of being able to do two things at once. (Like Andrew Wright, I too am a single-tasking person and spend many pointless hours staring at archiver screens).

Surprisingly, *MultiTOS* already possesses much of the needed paraphernalia to deal with at least some of this integration. Message pipes between applications are in place and all it needs is for somebody to lay down the ground rules for communication. With the backing of German programmers, the Atari clipboard has already found its way into almost all new software and with similar pressure it's possible that a minor Atari miracle could occur in inter-application communication too. We can only hope...

Nial Grimes is a freelance journalist, biking fanatic and the world's biggest Red Dwarf fan. He is very interested in hearing from anyone who can supply a replacement multi-tasking operating system for his brain!

WRIGHT



Everywhere you turn these days, you see the word “multi-tasking”. The on-line networks are filled with garbage about pointless multi-tasking utilities and incomprehensible tips about how to change the number of slices and alter things like “process priority”. Well how interesting!

Magazines are full of drooling articles extolling the virtues of running three programs at once and how wonderful it is that when one crashes, the others keep on running. Great stuff. Go to a computer show and you're forced to push past hordes of anoraks salivating over an obscure looking operating system add-on, when all you want is a new printer ribbon and a box of disks.

Thanks to multi-tasking, this miracle of modern programming, you can run a word processor, an image processing package and a spreadsheet simultaneously, switching between them whenever you want. Great if you can type with the left hand, retouch with the right and enter figures with your nose. Quite apart from the possibility of a mental breakdown, it just doesn't work in practice. And that's the crunch.

All over the world there are computers with all kinds of operating systems, most of which support some form of multi-tasking. Any 386-based PC running DOS or Windows can

WISE MEN

ISSUES

A one track mind...

multi-task and so can an Apple or an Amiga. The fact that only a tiny fraction are doing so must mean something.

Who wants to do several things at once? More to the point, who can? We're humans, after all. We have one brain, one pair of eyes and one pair of hands and with them we can easily, safely and comfortably do one thing at a time. If God had wanted me to multi-task, I'd have had some spare arm sockets, eyes in the back of my head and a headache like a New Year hangover.

Task switching is fine – it's often handy to flick between two or more programs – but that's why we have desk accessories. Running something when you can't keep an eye on it is something else. I get quite nervous about things going on in the background that I can't see. Call it paranoia if you like, but I know that if I can't see it working, it won't work properly.

Add multi-tasking to your system and it'll probably be slower, more unstable and far less usable than it ever was before. Don't be fooled by the hype – there are many millions of Mac and Windows users out there who have ignored multi-tasking for years. They might have been wrong about which machine to buy, but at least they've got something right!

Andrew Wright is a freelance writer and has been a contributor to *ST Review* since its inception. He claims not to be able to do more than one thing at once – at school they called it a one track mind...

*Pick a system,
any system...*

TECH TALK



Many of you are probably considering joining the multi-tasking game, especially as there are various options now available – quite a surprising state of affairs considering the so-called demise of the ST. We now have three TOS-compatible systems – *MultiTOS*, *Geneva* and *Mag!X* – and two stand-alone packages in the shape of *SMS2* and the forthcoming *OMEn*. The real question is not which one to get, but whether multi-tasking is useful.

After experimenting with all three on both the Falcon and my old 4Mb ST I can confirm that multi-tasking is not only practical but very user-friendly. We all like desk accessories for this very reason – after all, why should you need to quit your drawing program just to look up a telephone number in your database? Pre-emptive multi-tasking systems are even more friendly as you can let time-consuming operations work away in the background. The other day I needed to convert 5Mb of TIFF images into JPEGs so that I could fit them onto a floppy disk. Under TOS, each file took almost 20 minutes to compress and the computer could not be used while this was happening. Under *MultiTOS* or *Mag!X*, such a task can be performed in the background and while it may take a little longer, the system can still be used for other things – such as writing this column.

There are several points to consider when looking at multi-tasking on the ST range. The first is memory – 2Mb is the absolute minimum! While you can run *Geneva* on a 520ST, you don't have any memory left for anything else. A hard disk is also highly recommended, if not essential, unless you enjoy swapping disks all the time. Also, many multi-tasking features such as the clipboard only become useful with a hard disk installed.

While speed is always an issue, you can rest assured that both *Geneva* and *Mag!X* feature a highly optimised version of the AES, so running under either of these results in a slightly faster performance than before. The general misconception that the more programs you have running, the slower the system becomes is, in most cases, not true. The vast majority of applications, such as word processors or art programs, simply sit idly most of the time, waiting for your input. In this state they typically require less than one percent of the processor's time and so have no noticeable effect on the system.

The last consideration is compatibility. Most modern programs work happily under a multi-tasking system and some older ones like *Calligrapher* or *1st Word Plus* can also be used. As a general rule, programs that run in a GEM window and appear to use standard menus and dialogue boxes should work correctly.

A multi-tasking environment is a real joy to use and, as the number of multi-tasking friendly applications grows daily including many PD and shareware products, it's the sort of thing you get used to very quickly – and then wonder how you managed without it!

Ofir Gal is the man behind *ST Review*'s BASIC tutorials and many of the technical features. His enthusiasm for multi-tasking knows no bounds – but will his time-keeping improve now he has *Mag!X* installed? No chance...

LET'S FACE THE

*... and speak!
Vic Lennard
finds out how the
ST figured in
Torvill and Dean's
stunning music at
the recent Winter
Olympics...*

Unless you've been on a trip to some distant planet, you cannot fail to have seen Jayne Torvill and Christopher Dean's return to the ice dancing scene and their subsequent failure to win the Olympic gold medal. I'll leave it to the purists to decide whether the judges were actually wrong or not – the rest of us are certainly convinced!

About a month later, BBC1 ran a documentary entitled *Facing The Music: The Return Of Torvill And Dean*. Part of this was filmed in the studio of the musical arranger, Cy Payne, and had you been eagle-eyed, you'd have seen an Atari ST and an SM125 monitor sitting in the corner. So did the ST play a part in T & D's return? Time to find out...

THE MUSIC MAN

Cy Payne's client history as a musical director and arranger is literally a who's who of the music industry. Cliff Richard's *At The TV Hop* single from the *Oh Boy* television show in 1958; *It's Me That You Need*, Elton John's first single in 1969; Julio Iglesias' first album and Brotherhood Of Man's *United We Stand* album in 1970 – Cy has seen them all. So how did he get to work with the two skaters?

"When Torvill and Dean decided to come back for the Olympics, they wanted to stick very tightly to the rules," explains Cy. "The International Skating Committee had declared that it wanted to get ice dance back to what it should be – a close correlation to ballroom dancing. Believing *Come Dancing* to be the best ballroom dancing programme on television, they contacted Simon Betts, the producer, and asked him to recommend someone

Olympic gains – bronze may have been the colour of the medal but the moral victory belonged to Chris and Jayne.



Sitting comfortably – Cy in his home studio including the Atari ST in the front right corner.

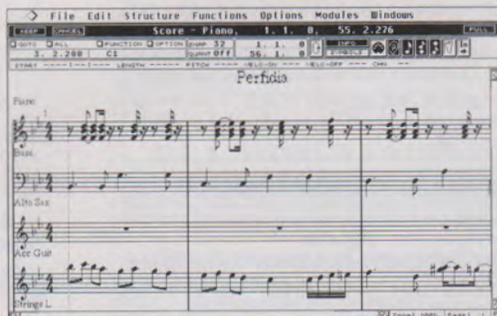
MUSIC...

to work with. "Through my long association with the programme, my name was put forward. I turned up at his office in May 1993 and heard a voice saying: 'We left at the top and really want to start back as near at the top as we can so we need someone who can write ballroom dancing music to plan'. As I walked in the office, Simon said 'well here he is!' I was very flattered."

First impressions are very important. Those of you who watched the BBC documentary may well have been horrified to see the dictatorial manner in which Chris treated Jayne on the practice rink. How did they come across at that first meeting and during the subsequent working arrangement? "They were two of the nicest people I've ever had the pleasure of working with," attests Cy. "It's unfortunate that the documentary showed Chris as being a bit of a bully, but when you have a partnership where you're striving for perfection, someone has to be the leader."

DOWN TO WORK

So how easily did the music come together? "The first time we talked about the routine, I offered to make a demo and then we'd chat about it," says Cy, leaning back with a grin on his face. "They decided on the four elements – foxtrot, waltz, tango and quickstep – and told me that it had to last no longer than four minutes and ten seconds. I did a demo, played it to them and they fell about laughing. 'It sounds like a formation team for *Come Dancing!*' said Chris.



"We want something a little more adventurous than that." He told me to think along the lines of a film score for Fred Astaire and Ginger Rogers – a big Hollywood film opening, a big finish and whatever I liked in the middle."

Chris chose the Irving Berlin classic *Let's Face The Music And Dance* for the free dance and a rumba called *Perfidia* for use in the set dance. "Unfortunately we found out that several other couples had chosen *Perfidia* so we decided to change it," recalls Cy "even though I'd already sequenced the piece using *Pro 24* on my ST. They came up with a scratchy old recording of *The History Of Love*, which I vaguely remembered from the 1950s, and I knocked up a quick rehearsal version for them in about an hour. When we recorded it in the studio we had, in my opinion, the finest trumpet player

The one that got away – *Perfidia* was originally programmed in *Pro 24* but shown here in *Cubase's* score editor.

in the world – he looked at the score twice and played it first take. That trumpet solo was largely responsible for creating the mood in the set dance."

CREATING THE MUSIC

Having been given the extra brief, Cy went back to his studio to work on the main piece. "I spent hours and hours of head scratching, writing ideas down, looking at them, playing them into *Pro 24* and listening to them." Cy recalls. "Somebody in the early days told me that you get your best ideas late at night, just before you go to sleep. I took manuscript paper to bed and tried this; when I looked at the result in the morning, it was the biggest load of rubbish I'd ever heard!"

Once the final concept had gelled, Cy wrote out a basic piano score (see picture), played it into the on-board sequencer in his Yamaha SY77 keyboard, setting up an orchestral sound to give T & D a good idea of what the final result would sound like with an orchestra. Why the SY77 and not his ST? "I knew that I was going to have to work on the music at the side of the ice rink and the ST was just too impractical," Cy clarifies.

"I sent them a demo tape. They played it through, liked it and started working to music on the ice. When



In credit – Cy is listed on the CD as the arranger for "Let's Face The Music" and the tour version of "Bolero".

we came down to refining the piece, Chris said it would be nice if we could 'quote' a bit of *Mac And Mable* from one of their previous successes, where they do the slowing down bit. That, and shortening my initial, extended ending were the only changes that were made."

Chris and Jayne hired the Milton Keynes ice rink for four hours a day, six days a week, and worked on both set and free dances in sections. "I travelled down to the rink on about twelve occasions, tightening up sections and changing the speed of the pieces as they desired. I sat on the side of the ice, freezing my feet off!" laughs Cy. "Every now and then they came over to me saying 'can we take this bar a bit faster or a bit slower' but we still had to keep it within the maximum time allowed. When Chris asked for the *Mac And Mable* piece to be included, it got so cold on the ice that I beat a hasty retreat to the relative warmth of the dressing room and made the edits there!"

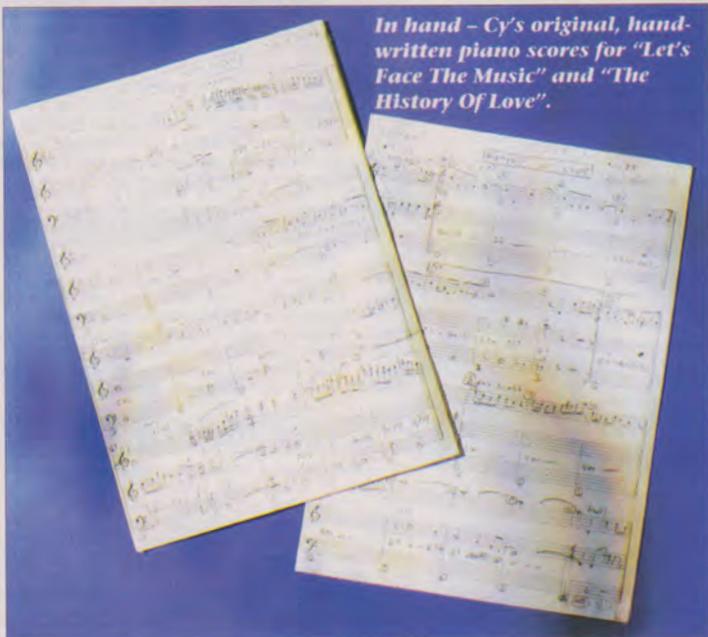
The rest, as they say, is history. The final music was scored, recorded by *Come Dancing's* 45-piece orchestra in November 1993 and performed at the British, European and Olympic championships. Cy is now carefully considering changing to *Cubase* and looking at direct-to-disk recording to replace his ancient Fostex B16 multi-track recorder. "I only wish that MIDI and the ST would have been around 40 years ago..." Cy muses.

The ice dancers certainly left a lasting impression. Cy and his wife have a new addition to the household in the form of a cute white poodle... which they've named Torvill!

We didn't want to have pieces of music that sounded like they were hacked together with a razor blade...

Chris Dean

In hand – Cy's original, handwritten piano scores for "Let's Face The Music" and "The History Of Love".



EQUIPMENT

You might think that Cy's equipment consists of the current state-of-the-art devices, but nothing could be further from the truth. There's a Fostex B16 multi-track tape recorder and a very old Allen & Heath Brenell mixing desk – so old that I couldn't find a model name! A Yamaha SY77 keyboard is a key element of the studio, especially as it includes an on-board sequencer for mobile work, and is usually coupled with an E-mu Proteus 2 which houses hundreds of orchestral instrument sounds. A recent addition is the Boss DR-660 drum machine which boasts various latin percussion instruments as well as the usual smattering of drum sounds.

His computer set-up? A modest 1040STF with TOS 1.0, an SM125 monitor and version 2.1 of Steinberg's *Pro 24*. So do you need expensive equipment to create music? Not when you have talent...

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- FALC 39 - FU Animations: A3DS, Apple, B Ball, Bugs Bunny, Chubb, Cone, Tigercat.
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- FALC 85 - Starrek Pictures - JPEG's from all series.
- FALC 89 - Animal Pictures - the first five disks of all sorts of mammals. (JPEGS).

FALCON DEMOS

- FALC 9 - Grotisque [Excellent], Gourad, Speeder, Plasma 30 & 50, Intel + more!
- FALC 11 - Morphing demo - requires 2 Meg memory + hard drive space. + 3 more!
- FALC 96 - When Dreams Become Reality (IRGB), Warum (RGB), Inconvez (RGB).
- FALC 97 - Fuji Ray animation (2 meg memory + HD space), Plastic Dreams - RGB/TV only.
- FALC 105 - Arrival demo by Agresion, Conflict demo (4meg+), Cool demo. All RGB/TV only.
- FALC 106 - Falcon Flight Demo - real time zooming over fractal landscape + great music.
- FALC 107 - Crime by the DNT crew, Magnet by Alphatech, Bobs 1. All RGB/TV only.
- FALC 111 - Le Mans - digitised sequence of cars racing round track with music.
- FALC 113 - Marga demo (4meg+) - digitised pictures of a woman modelling a skimpy bikini!
- FALC 116 - Papa was Blade Runner (4meg+) new demo by EKO, very good. RGB/TV only.

FALCON MUSIC RELATED PROGRAMS

- FALC 7 - Fortune for creating cites, Prototracker 2, TCB Tracker, Desktracker 1.11.
- FALC 17 - Winrec 1.36 (D2D), Digital 030 - new 8-track tracker program, unstable though.
- FALC 29 - Startrek Cites for Fortune, Dome - Digital Audio Multiplying Editor.
- FALC 52 - System Audio Manager 1.1 - assign samples to events, Digitape 2 demo.
- FALC 68 - 49 Wav samples for System Audio Manager.
- FALC 82 - Prototracker 50kHz modules: Come & Get me, Pugsy, Tripout, Hardcore etc.
- FALC 83 - As above: Freudian Dreams, Goodbye, Harry, Intro, Journal + 5 more.
- FALC 84 - As above: Watch Your Bass Spin, Boom And Sex, Fun + 4 more.
- FALC 94 - Mjazzick - Huge sound player program. Zipped, expands to 2 meg.
- FALC 115 - Octalyser 0.8 - another 8-track tracker ported from the STE + docs & source code.

FALCON GAMES

- FALC 21 - Humans Demo disk 1. Zipped, expands to 3 Meg. Disk 2 on FALC 22.
- FALC 35 - Nethack 3.1.1 - 2 Meg memory+. Brilliant dungeons and dragons game.
- FALC 103 - Oxyd [excellent!], Des Lasers et Des Hommes (3D shoot em up), Masters of Chaos (Dungeon Master clone), Tron, Ishar Editor, Mario Kart demo.
- FALC 104 - Spozala (RGB) - great space shoot em up, Madris (RGB) - crazy Tetris!, Vertical Mayhem (RGB) - nice version of Columns.
- FALC 112 - Mahjong II - German version of this classic tile game. Disk approx 1/2 full.

FALCON UTILITIES & APPLICATIONS

- FALC 2 - Falcon Boot 1.2, Backward 2.24 (ST emulator), New Depack, Text Files, Desk Copy, Desktop 1.05, Sysinfo, Multi Dialogue, DC Xtract 2.1, Revive, SpiritEd 1.3.
- FALC 5 - CS6K - C compiler, Chipmunk Basic 1.0, GTAR 1.11.1 - For MINT & Minix systems.
- FALC 10 - DSP5001 Assembler 1.1, ASM-CPX and DSP Bits - get programming now!
- FALC 15 - 45 assorted MINT/MultiTOS utilities + extended colour icons that run in Truecolour.
- FALC 20 - DSP Routines - about 1 megabyte of useful DSP routines.
- FALC 28 - X Control 1.2, Clock 2.0, Edison screen saver, Mini FS 0.55, Magic Boot, Gemar 1.23 - Tape Backup, BMAP Fix 2, Falc docs, Outside demo, PRG Flags.
- FALC 36 - RDE 3.1 Toswin 1.4, Lfo 2.22, Zoo 2.1, Zip 2.3, Gem Bench 3.25, Good Backup 1.1,3, Boot Init 1.1, Ecopy 1.5, Fcontrol, Shout 1.3.
- FALC 77 - Emocs 3.11, Everest 1.5, KM Term, Atomik 3.5, X-Menu 1.3, Profile 1.43, Reztroiler (run RGB stuff on VGA monitor), Fullres 1.01, Swab, Dclock 1.0, Fuzzy Clock 1.14.
- FALC 109 - DMB icons - two large sets of replacement icons, Before Dawn screensaver 1.25.
- FALC 114 - Multi-Dialogue 1.3, Master Browse 3.2 - excellent text file viewer, T-Cache 6.0.

THE ATARI ST/STE

New Age PDL is now in its third year of business supplying top quality ST/E software. We now have over 1400 disks of some of the best PD, Shareware and Licenceware to suit all tastes. Just look through our advert to get an idea of the huge range that we carry. Our disk based catalogue describes every single program in detail, has a beginners section and is very easy to use - it's also COMPLETELY FREE to new customers! Just ask for it, there's no need to send any disks or SAEs. If you are an existing customer and you would like an update then send back your disk with a SAE.

HIGH RESOLUTION GAMES

- GAME 1 - Anduril, Eliminator, Galaxy, Galgalad, Mini Golf, Bubble, Runner, Space War, Tetris, Play Thing, Once A King.
- GAME 8 - Diamond (Boulderdash), Invaders, Macpan, Megaroids (Asteroids), Minefield, Missile, Murray, Solitar, Spring.
- GAME 28 - Pyramid, Escape, Sokoban, Cube World, Battleships.
- GAME 30 - Air Traffic Control, Go-Board, Munchers, Pong, Putt Putt, Trivia, Go-Up.
- GAME 33 - Bolo [Excellent breakout game], Super Breakout, Baseball.
- GAME 34 - Park 1 & 2 - spoof Zork type adventure games, Enchanted Realms.
- GAME 38 - Net Hack v2.3, Scribble, Sherlock, Zarge, Checkers.
- GAME 39 - Eamon Fantasy Role Playing Kit, DDST - dungeons and dragons.
- GAME 50 - Jeopardy, Clueso, Airline Manager, Locomotive, Birdworm, Hextris.
- GAME 76 - Hack & Slay Construction Set, Chess, Match-it, Crossword Editor 2.
- GAME 112 - Risky Construction Set, Roulette, Yatsy, Backgammon, Poker, Pai Gow.
- GAME 125 - Cyote Dave's Poker, Deena, Cribbage, Tectic, Fast Poker.
- GAME 168 - Napoleon - a 'Risk' style game of war and strategy.
- GAME 185 - Oxyd 2 - the sequel to the brilliant Oxyd, much harder than the original.
- GAME 186 - Tetris - new Tetris type game.

COLOUR GAMES

- GAME 11 - A Question of Snooker, Pinball, Deviator, Roll n Nudge, Ranger.
- GAME 68 - Saviqde, Fruit Machine, Pin Game, Rocket Ball.
- GAME 78 - Popeyed - a pop music game with an adult theme.
- GAME 81 - Battlescope, Blax - brilliant variation on the Tetris theme.
- GAME 83 - Grandad & the Holy Vest - superb animated adventure. 1 Meg+.
- GAME 104 - Blat! - A very nice version of Tetris. STE ONLY.
- GAME 105 - Infiltration - 3D game. Ozone, Atomik Robokid, Great shoot 'em up.
- GAME 117 - Fast Freddy - lovely platform game with superb graphics.
- GAME 121 - Darkbyte - great isometric 3D war/strategy game similar to Hero Quest.
- GAME 123 - Top Trainer (horses), Anarchy Academy - wreck havoc in school. Boing.
- GAME 128 - Dungeon Lord - good Dungeon Master Clone. Arch Mage-shoot em up.
- GAME 131 - Glass Buttock of Tharg - save the land from the evil buttock! - 1 Meg+.
- GAME 132 - Psycho Pig - two disk platform game, very cute. £3.50.
- GAME 136 - Chaos 1/2 Meg version - classic Spectrum game converted. 1 meg on GAME 146.
- GAME 139 - Grandad II - the sequel to Game 83, comes on 2 disks 1 Meg+ £3.50.
- GAME 148 - Operation Blue Sunrise 3 - massive STAC adventure game. 1 Meg+.
- GAME 150 - Course Angler 1.02 - go tackle fishing on your ST!
- GAME 151 - Sim Pig! - a brilliant pig farm simulation like Sim City & Sim Earth.
- GAME 153 - Wormhole - nice vertically scrolling shoot em up with slick graphics.
- GAME 155 - Three Realms of Suspicion - STAC adventure. Spaceball - bit like Ice Hockey.
- GAME 157 - B17 - bomb the buildings, F-16 - very good flight game, 8 missions.
- GAME 158 - Viking III - shoot em up/strategy game. Demon - but like Xenon.
- GAME 163 - Theme Park Mystery, Combat - kill everything!, Summaria.
- GAME 164 - The Obscure Naturalist - STAC graphic adventure 1 Meg, Dominoes, Slither.
- GAME 166 - Nirvana - platforms, Pure Logic, Maze, Chain Reaction - columns.
- GAME 169 - Megaline - four player Tron/Light Cycles, Insectoid, Cop's n Robbers.
- GAME 170 - Magic Tomb (1meg+), Hysula - great new 3D CK game.
- GAME 171 - Oxyd (1meg+) - superb puzzle/strategy game, Duck Dash.
- GAME 173 - Lobby Invaders - uses hardware scrolling, stereo sound. STE only.
- GAME 174 - Bludgeon 1.1a - fantasy role playing with full colour graphics.
- GAME 175 - Troodon's Creation - the sequel to Three Realms of Suspicion - STAC adventure.
- GAME 176 - The Heavy Bunch - Wild West game of gunfights, gambling etc, Spot II - puzzle.
- GAME 177 - Folemaster - superb arcade adventure/dungeons and dragons.
- GAME 178 - Argon, Out, Codename Bomb, Pyramid, Quiz, Hint, Sirtel, Turbo, War Jeep, Plumber, Picket, Planet Man, Uboat, Ypsilon - 13 games!
- GAME 179 - Asteroid, Bang 3, Battle, Bellum, Quiz, Blaster, Chunks, Europe, Explode, Fuzzball, Gears, Invaders, Megaroids, Micro, Octopod, Ohello, Pac Man, Plant, Rockfall, Taux, Tennis, Wall Street, Zappy.
- GAME 180 - Mystic Well, Deep Lair, Football, Harris Goes Skiing, Haunted House, Invaders, Jumper, Room, Stoneage Deluxe, USA, Zym, Firestorm.
- GAME 181 - Utopia 1.5 - very slick STE only Oxyd/Grav type game, Endurance - 3D game.
- GAME 183 - Towers - a great new Dungeon Master Clone - the best yet! 2 disks (1 Mb+) £3.50.
- GAME 187 - Karate Champion, Hector and the Mutant Vampire Tomatoes - nice platform.
- GAME 188 - Premier Mahjong II - excellent version of this superb tile game. 60Hz only.
- GAME 189 - Cud Lee's Quest - platform game for kids, Mindmill - roleplaying fantasy game.
- GAME 190 - Quest for Knowledge - quiz type game set in a maze arena.
- GAME 191 - Walls of Illusion - yet another Dungeon Master Clone, good one though. 1 Meg+.
- GAME 192 - Rings of Power - shoot em up written with the SEUCK by Ken Reader.
- GAME 193 - World Fighting Championships - beat up opponents from all over the world.
- GAME 194 - Survival! Another shoot em up by Ken Reader made with the SEUCK.
- GAME 196 - Pegasus - complex futuristic strategy game set in space. 1 meg+ 2 disks £3.50.
- GAME 199 - Skulls - very slick version of Minesweeper on the PC. STE only. 1 meg+.
- GAME 201 - It's A Mug's Game - good overhead view boxing simulation.
- GAME 207 - Hypnic Lanes - arcade puzzle game a little like Klax, very good.

BUDGIE GAMES - £2.75 EACH

- BUGAM 83 - Cyberstorm, a very slick Defender game, really fast!
- BUGAM 89 - Horse Racing Simulator for 1 to 5 players. Buy/sell and bet!
- BUGAM 104 - Jetpack - another faithful clone of a classic Space game.
- BUGAM 113 - Football Tactician - formerly a £20! Discontinued! Excellent!
- BUGAM 119 - Football Tactician - the Premier League 92/93 season.
- BUGAM 121 - Super Scramble - take a trip to the 8-bit doys with this shoot 'em up.

POWERFIST GAMES - £3.00 EACH

- POWER 1 - Snot 93 - previously commercial platform game. 1 Meg+ (512 on POWER 11).
- POWER 3 - Seven Galaxies - extremely slick shoot em up, one of the best so far.
- POWER 4 - Hunchy 1066 - go back in time with some artillery for this classic!
- POWER 5 - Deluxe Nastrum - great flip screen arcade adventure. 1 meg+.
- POWER 8 - Power Cut - fly-around-blast-em-up with 25 power bases to destroy!
- POWER 13 - Location Universe 3D - escape four taxing levels of this brilliant 3D game.
- POWER 14 - Castle Capers - wonderful platform game set in a haunted castle.

MEGA-GAMES PACK ONE!

No less than ten disks crammed to the brim with archived games (de-archiver and printed instructions supplied) to squeeze on an amazing 117 games covering board/puzzle/strategy/arcade and adventure. For a full list ask with your order or if not ordering, send a stamp. All should run on a colour system with 512k and be STE compatible! You will need about twenty disks to unarchive these disks onto! AMAZING VALUE FOR MONEY.

117 GAMES - JUST £14.95!

ART & GRAPHICS

- ART 1 - A disk full of 23 miscellaneous utilities including viewgif 1.2.
- ART 51 - Crackart 1.36 - latest version of the best ST art package! 1 Meg+.
- ART 128 - Gemview 3.00 - new version of this superb viewer/converter.
- ART 157 - PAD 2.4 - English version of this high res drawing package. 1 Meg+.
- ART 172 - Paintshop Plus 2.03 - A commercial quality drawing package.

TEMPTATION! VOLUME 1

The first pack in a whole new range of top quality pictures of tempting girls! We have produced two versions of this pack (please state which is required) - one for the STFM and one for the STE which takes advantage of a 32,768 colour palette! This pack is EXCLUSIVE to New Age PDL! Ten crammed disks at just £15.00! Art 187-196.

JUST £14.95!

- ART 180 - Pointpal - an ex-commercial painting package which was £15.00!
- ART 207 - Car Slideshow - brilliant Photochrome pictures, Near Photographic! STE Only.
- ART 209 - Erotic Dreams slideshow 1 - all pictures of Supermodel Cindy Crawford.
- ART 210 - Erotic Dreams slideshow 2 - another disk of Cindy Crawford pictures.
- ART 212/213 - POV Raytracer, the best raytracer around! 2 disks. £3.50.

DEMOS

- DEMO 356 - Kuba Club Culture Mix Pack 1 - 6 pieces of excellent club music.
- DEMO 355 - The Brace Demo - a rather nice auto-running multi-part demo.
- DEMO 351 - The Edge of Panic Demo - STE only demo by ACCS with thrash music.
- DEMO 350 - Exhaust demo - another STE only auto-running demo by ACCS.
- DEMO 347-348 - Erasmour Aimes Les Males - strange but good French demo. 1 Meg+.
- DEMO 346 - Lethal Trash demo - Another multi-part, from Zeal. 1 meg STE only.
- DEMO 339 - Stax Hat Keaton Plan Demo - Good music demo from '93.
- DEMO 336/337 - Traou n Int Kat Bel Great Ben Breman (2 disks) 1 Meg+ £3.50.
- DEMO 335 - Reality is A Lie demo - 1 meg+.
- DEMO 328 - Ambience Demo By Chaos.
- DEMO 325 - Perpetual Dawn Demo. 1 Meg+.
- DEMO 323/324 - TNH Megademo. 2 disks £3.50.
- DEMO 314/315 - Coding So Far Demo. 2 disks £3.50.
- DEMO 311-313 - Relapse demo - Three disks. STE Only! £5.00.
- DEMO 310 - Ecstasy 1, Ecstasy 2 - brilliant STE demos.
- DEMO 276 - E605 - a great STE only demo by Percy of Light.
- DEMO 270-272 - The Omikron Megademo - takes up 3 disks! 1 Meg+ - £5.00.
- DEMO 258 - Brutal Techno - Fantastik STE and 1 Meg only demo.
- DEMO 242 - Music Dream II - 9 superb 50kHz tunes by E.I. - STE only.

SOUNDTRACKER MUSIC

- TRAC 129 - Four, Proglunk, Cult 2, Cult 3, Federal Force, Rave 1.
- TRAC 128 - Con, Short, House, Jewel, Spassong, Celtic 6, Rappit, A-Team, Sweet Dreams.
- TRAC 127 - More Learnings, Backpopped, Psychic 1, Bushfire, Donna 2, Ace Base, Echoing.
- TRAC 126 - Scrambled Mind, 1+ World, Wyre It, Hope Part 2, Lotus Turbo 2, H-Metal.
- TRAC 125 - The Loader Final, Artificial, Finally I Play, Space Journey, Sill 1.
- TRAC 124 - Donna, Hope Part 1, Meaty Man (1meg+), Sill, Piano TVA, Willow.
- TRAC 123 - Electric Revenge, Telephone, Flash 4, Racer X90, The Credits, View to a Kill.
- TRAC 122 - Klisje Pa Klisje, Olnac, Absolute Muzak, Glenz-Vector, Frog Mix, SNT Vector.
- TRAC 121 - Enigma, Eve-a-War Remix, G-Loc, Galaxy, Ewok.

WORDPROCESSING (ANY RES)

- WORD 1 - ST Writer Elite, EDI Text, Zap ST, ST Page, Typist, Desk Accessories.
- WORD 2 - Mail Merger, Spell Check, Large Printer Maker, Control, Double, Convert.
- WORD 4 - First Word - a tools, Grammar checker demo, Spell Binder, Text Filter.
- WORD 5 - Calamus Demo, no save function but you can print. High Res only.
- WORD 8 - DB Writer 1.4 - very slick wordprocessor with many features. 'H' 1Meg+.
- WORD 9 - Calamus Support disk - loads of utilities for Calamus and fonts etc.
- WORD 12 - Papyrus Office Demo 2.26 - good document processor with fonts etc. 'H'.
- WORD 13 - Calamus S demo - fully functioning except save. 2 disks. £3.50. 'H' 1Meg+.

BUSINESS (ANY RES)

- BUSI 2 - Sheet 2.0, Dbase One, First Base 1.6, Home Budget Template.
- BUSI 4 - Opus 2.2 - brilliant spreadsheet. 1 Meg+.
- BUSI 5 - WG Data, ST Sheet, Vist Clone - three more spreadsheets.
- BUSI 6 - Double Sentry Book Keeping System, Address Book.
- BUSI 7 - Astubank 1.1 at - complete home accounts system - colour only.
- BUSI 11 - Compact Office Management Program 2.05 - for any small business, loads of features.
- BUSI 12 - Inventory PRO - keep track of stock levels, GP Patient Care for GPs ('H').
- BUSI 14 - Data Techniques 1.41 - easy to use but powerful new shareware database system.



SEQUENCING BY EXAMPLE

Kevin Pawsey finds that Video Training Manuals for the top sequencers offer a practical approach to learning...

Learning to use a sequencer can be a time consuming process; rather than making music, you tend to pour over the pages of a thick manual. The main criticism of sequencer manuals is that they may take five pages to explain a particular function, but what use is this without practical examples? It's such a shame that software writers spend thousands of man hours developing code for the latest state-of-the-art music software, only to find that many functions are not used. But there is a solution. Watching someone use a sequencer is so immediate compared with working your way through a manual. Labyrinth Video Manuals Productions are a company that specialise in the production of Video Training Manuals for the leading sequencers, including Steinberg *Cubase*, EMagic *Notator* Logic and *Notator*, and Software Technology's *Breakthru* sequencers. All come with an inlay card specifying the time at which a particular subject is tackled – a welcome inclusion!

EMAGIC NOTATOR

£44.95 • 140 minutes

No, it's not a printing mistake – the video really is this expensive! Tim Walter, the presenter, opens the video with the best advice of all: "Don't watch all of this video at one sitting, otherwise you will end up braindead!" Sound advice, especially when the same piece of music is used for what seems like hours on end throughout the tutorial...

The introduction does not seem to follow in a sequential fashion and tends to jump between subjects at the speed of sound; it would be nice to have a clearer basic explanation of each function on the main screens. The individual tutorials (of which there are 28) are much better as they go into each subject in depth with a reasonable explanation of each function. The language that Tim uses is aimed at the right level as this video is intended for the new user.

ST REVIEW COMMENT: "Notator is a complex program; this video should help iron out some of the problems that you may encounter. That said, I can't work out why it is £10 dearer than the *Cubase* video though..."

○○○



SOFTWARE TECHNOLOGY BREAKTHRU

Free with *Breakthru/Breakthru 2* • 147 minutes

This is different from the others in that it is presented by part of the team that developed the software. It's a shame that Software Technology decided to use a mono monitor instead of a colour monitor one for this video; colour on a tutorial video makes a nice change.

Due to the personality of the presenters, this video moves along nice 'n' easy. Each subject is tackled comprehensively, if a little simplistic in its nature. The tutorial follows a logical progression starting with the basics of using a MIDI sequencer right through to the screen layout of putting together an album using the Jukebox. *Breakthru* tends to be aimed at the semi-pro or amateur, rather than the high end studio user and this becomes apparent from the content of the video.

STEINBERG CUBASE

£34.95 • 90 minutes

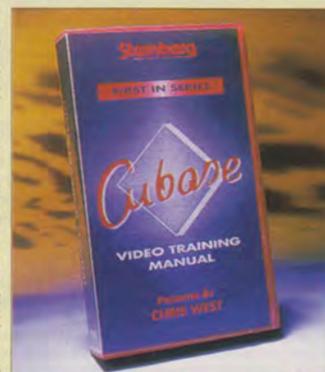
Cubase has the advantage of being very intuitive – it really is possible to start recording straight from the box at a basic level. But getting the best from *Cubase* requires some help.

The video opens with a very slick and funky introduction. The presenter, Chris West, is very informative and really knows his stuff. His manner is professional, the language he uses is jargon-free and he helps inspire confidence when using the program. He makes it look very easy – the exact intention of the video!

All four parts (Basics of the Program, Your First Session, Edit Screens and MIDI Filter) are all covered in depth with practical examples of how to use the functions. If you are going to spend £400 on a sequencer, do yourself a favour and put some money by for this video training manual to learn how to use your investment that much quicker. This video is part one in a series; hopefully part two will cover other functions such as the *MIDI Mixer*...

ST REVIEW COMMENT: "Great for beginners although experienced users may be better off with the *Complete Cubase Handbook* which probes the more advanced functions."

○○○○



CONTACTS

Labyrinth are unable to supply videos directly to the public but they can be obtained from the distributors listed below:

Sound on Sound Publications Ltd: 0480 461786

The ABC Music Company: 081-974 5505

Software Technology: 061-236 2515



ST REVIEW COMMENT: "A good video, even if it lacks a little of the "sparkle" of the others – and it comes free with the *Breakthru* package. If only other music software companies included tutorial videos in the price..."

○○○○

NOTE TRACKER

C-THRU MUSIC LTD • £24.95 • 0832 733214

It's not easy trying to remember the intervals of scales and modes; trickier still if you need to transpose them. And with over 30 possible chords available for every note of the scale, musicians need a photographic memory... or a **Note Tracker**.

The Note Tracker is a musicians' slide rule that displays intervals, chords on one side and scales/modes in all twelve keys on the other. It is reasonably large and clearly displayed so there's no eye strain when looking up a chord. Just select the tonic note for your chosen scale and slide the inner part to the bottom left window of the green blocks which show the scale, mode, chord or interval. To read the scale, start at the left and then read horizontally, ascending a pair at a time.

You may be wondering why a product like this is being reviewed in the best ST-specific magazine. Using the Note Tracker is so easy that those of you who are not primarily musicians can easily stay in key, transposing and using complex chord voicings in your own music. When attempting to harmonise using the transpose function on a sequencer, you may find that it does not perform exactly as you wish. This is because a sequencer does not know what mode or scale you are using and takes no account of interval spacing. Instead, look up the mode on Note Tracker, slide it to the relevant key and work out the harmony. Easy! It is also great if you are a musician like myself who is just too plain lazy to learn every possible scale and



mode... The Note Tracker was recently used during a jazz course at a performing arts school where I was teaching – C-Thru Music should receive a fair few orders from senior tutors as well as the pupils who were extremely impressed with it. Thoroughly recommended.

ST REVIEW COMMENT: "£25 may appear expensive for a slide rule, but Note Tracker is well designed and beautifully simple to use. The information it displays is comprehensive and, with a little care, it should last a long time."

★★★★



Note this – owning a Note Tracker means never being able to blame your sequencer when your harmony ideas don't work!

SEE HEAR

Two more useful MIDI products courtesy of Kevin Pawsey...

RHYTHM AND BASS – VOLUME 1

SOUND IMAGE

PRODUCTIONS • £9.95 • 0501 825109

When putting together a song, it is essential to have a solid foundation. This usually comes from the rhythm section – drums and bass – as these drive the beat along. They interact with each other, providing the power and rhythm that defines the style of a song. You can either learn how drum and bass patterns are put together for a particular style or you can import *Rhythm And Bass* into your compositions, the latest MIDI Files from Sound Image Productions.

Rhythm And Bass consists of nine folders each containing up to 18 examples of a particular *genre*. The styles covered are: funk, rock, groove, country, dance and miscellaneous which contains various hi-hat, snare and bass drum patterns. There are also several starts that can be used to, er, start a song and fills consisting of tom and snare breaks.

To help you select a file, there is an audition folder for each style that allows you to listen to all the patterns before making your choice. Just make a note of the bar number of the pattern and look it up on the reference sheet provided. These files will definitely suit those of you who are into

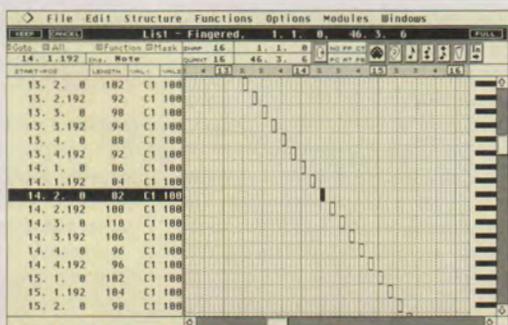


The dance rhythms are very convincing; plenty of drive and power that work well with the bass lines.

dance music, but are of less use if what you're looking for are realistic nuances, especially as these files have little in the way of rhythmic and velocity variation. While not exactly stale, they certainly seem to be lacking in the kind of sparkle that would really lift these files. Having said that, they do supply a sound backing and as a medium for providing inspiration for experimentation, they have a useful role.

ST REVIEW COMMENT: "A good collection of styles that could be used in most situations. An improvement would be the inclusion of more velocity variation and a little less quantising or step-time recording in the relevant styles – it's the slight imperfections of a real drummer that bring a rhythm to life."

★★★



A fairly consistent rock bass line. Some variation in the velocity values would add realism...

All of the bass lines are written in C, so if your song is in another key just grab the transpose function!



GAME PLAY

GOAL!

After what seems like an eternity, Dino Dini's unofficial sequel to his highly successful Kick Off series is finally here. Tina Hackett referees Virgin's latest offering, Goal!



A well laid out Options screen allows you to tailor the game to your taste.

The larger sprites show some nice animation.



Pitch graphics are disappointingly basic...



The tactics screen gives a strategic angle to the game.

highly playable, frantic football simulation that also combines a great arcade mode.

OPTIONAL EXTRAS

The range of options available make this title exceptional every aspect of the game can be tailored to suit your own requirements. First, you choose the sort of match you wish to play in: League, Cup, Arcade or even an excellent practice feature that allows you to perfect your technique. You can also choose from up to five speed levels, a clever design feature that ensures longevity for both the novice and expert alike. A goalkeeper's skill can also be selected from hard, medium or easy. A novel aspect peculiar

to Goal! is that the pitch view is changeable from the typical overhead, vertical view to the unusual horizontal view. This makes for a totally different game in itself but does take a bit of getting used to.

The sprites have been made larger than expected which allows for some nice animation but results in a smaller pitch area in view. This is counteracted by the scanner which shows the whole area plus players' positions. A zoomed out view can also be accessed by a simple press of the <space bar> so providing the best of both worlds.

THE REAL THING

Gameplay is a primary factor for a good football game. The controls are intuitive to use, allowing you to carry out moves with ease. Being able to "trap" the ball results in directing your shot with spectacular accuracy.

Another innovative design in Goal! is the players' "turning circle" and realistic acceleration and deceleration. A player's speed can be built up and slowed down gradually as it would in a real game and likewise with the width of a player's turning circle which depends on his speed.

Set pieces have also been improved, employing a system of dots that can be altered to accurately select direction, height and the strength of the kick.

THE ROAD TO WEMBLEY

Other options include being able to select the pitch type from normal, muddy, wet – even Wembley! A nice feature in theory but let down through being conveyed by one, basic pitch graphic. Also, goal posts lack nets which takes away a lot of the authenticity. That said, the overall presentation of Goal! has been well thought out and the clearly designed "Options" screens provide maximum ease of use.

Sound effects are sparse but those provided work well. The usual crowd chants are included, creating that all-important match atmosphere.

VERDICT

Despite suffering from some flickering in places, Goal! is one highly playable football game. Simulated moves are realistic and it is easy to master the different manoeuvres.

Longevity is ensured through the different styles of matches and the variable skill settings. With a two-player mode included, the game is certainly a highly addictive title.

KEY FACTS

Product:

Goal!

Company:

Virgin

Contact:

081-960 2255

Price:

£25.99

SYSTEM

Minimum Memory:

1Mb

Resolution:

Low

Computer:

All machines except TT

PERFORMANCE

GRAPHICS

✓✓✓✓✓

SOUND

✓✓✓✓✓

VFM

✓✓✓✓✓

PLAYABILITY

✓✓✓✓✓

OVERALL

68%



ATARI ST/E

Floppyshop

PO Box 273,
Aberdeen, AB9 8SJ

Partners: Steve Delaney & Irene Lamb



FALCON 030

Quality and Service

At Floppyshop we only stock the very best software. All our ST disks are double sided and are crammed full! In addition, our catalogues are the most detailed in the UK. They cost £1 on their own or just 50p if ordered along with software. **Please state ST or Falcon.** Same day despatch on orders. Credit card orders are welcome. Unless otherwise stated, ST disks cost £2 each and Falcon disks (HD) cost £2.50 each. All disks run on a standard machine with 512k of memory (1 Meg if it's a Falcon) upwards, unless otherwise stated.

COLOUR OR MONO - Disk numbers ending 'C' i.e. BUD.10C are for COLOUR MONITORS OR TV'S ONLY. Disk numbers ending 'M' eg: ART.63M are for MONO MONITORS ONLY. RGB or VGA - Indicates the type of monitor required to run a specific Falcon program.

ART & GRAPHICS

ART.12C PALETTE MASTER - Touch up your NEO or Degas screens using 50 or more colours!
ART.63M BUTTERFLY ARTIST - Edit and create pictures larger than the ST's screen.
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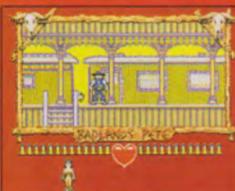
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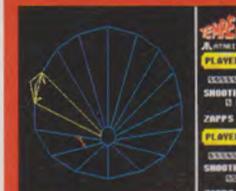
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VFM

Dave "Our Nige" Jones dons his asbestos suit and crash helmet...

Couldn't decide which of the three Lotus games from Gremlin to buy? Then here is a package that incorporates all three! *The Lotus Trilogy* is a trio of driving games in one box, but do they measure up?

We played all three and present our conclusions...

LOTUS CHALLENGE 2

IN BRIEF: *Lotus Turbo 2* adds a few new features that were missing from the first game. The car remains the same, but the tracks have more depth to them and a lot more hazards and challenges.

The form of the game is close to a rally-style of racing. There are eight stages taking you through forest, night, fog, snow, desert, city, marsh and storm conditions. New challenges, like jumping logs in the forest stage or trying to drive under a truck crossing your path in the city, are included and all add interest and excitement to the gameplay.

Up to four players can compete in this game using two STs and a null-modem cable, which is probably the best way to play. In fact, head-to-head with two players linked is great!

ST REVIEW COMMENT: "This is quite different to the first game although it still retains the familiar feel. What is lost from the original is made up for with the new features. Link-Up mode is great fun and provides a lot of arcade excitement!"

☆☆☆



Lotus 2 offers lots of different stages - this is the lead-in to the forest section.



The green light starts the full-screen race action...

LOTUS III - THE ULTIMATE CHALLENGE

IN BRIEF: This game was originally called *The Final Challenge*, but Lotus reportedly said that nothing about their cars could ever be described as "final", so a new name had to be found.

Arguably the best of the three, *The Ultimate Challenge* take the best of the first two games and adds to them, including a choice of car. You can race in an Esprit, Elan or the M200 concept car, which never went into production.

The biggest new feature is "RECS", a system that lets you design your own track and racing conditions. This modular style of track creation makes it easy to design, race and set a good time on your own choice of features covering 13 scenarios and 9 different settings for everything from curves to scenery. Each stage can be raced in stages or laps and a code is created as you change settings which can be written down and saved to call up your own unique track at any time. You could even telephone your friends and get them to try it.

ST REVIEW COMMENT: "A comprehensive collection of tracks, surfaces and settings give endless racing possibilities. The RECS system is easy to use and offers almost as much fun as the racing itself."

☆☆☆

LOTUS TRILOGY

LOTUS ESPRIT TURBO CHALLENGE

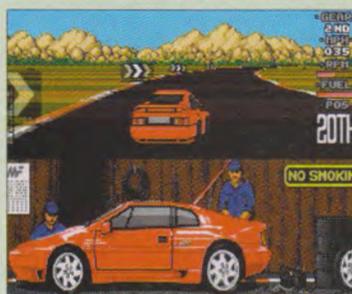
IN BRIEF: The first of the Lotus games was very well received when launched in 1990. It features split-screen racing for head-to-head battles with a friend and a total of no less than 32 tracks. A reward is offered to anyone who can complete all 32 and finish top of the racer's table - the Lotus License.

You start on the easy level and there are seven tracks to complete. To qualify for the next race, you must finish in the top ten drivers. In two-player mode, either player can qualify to allow both to progress.

Races vary in length and pitstops are needed to complete some stages. A yellow spanner sign signals the entrance, which is always sited just past the start/finish line. To enter the pits, just pull over and brake; the screen changes and refuelling starts straight away. When you have enough fuel to carry on, just hit the fire button on your joystick.

ST REVIEW COMMENT: "This is a capable racing game that still stands the test of time. It offers no nonsense, head-to-head, arcade-style racing in a Lotus Esprit Turbo look-alike (well, as close as you can get from a rear view!)."

☆☆☆☆



Oh dear - I'm at the back again!



The opening sequence shows the full specifications of the car, including the interior.

CONCLUSIONS

Each game has its own merits and, as individual games, each is good fun, but we're not sure that they are different enough to be sold as a package.

Apart from the box, no attempt has been made to offer the buyer any more than three budget games. Even the manuals are different sizes and each game has a different protection system - track recognition, tyre pattern recognition and "find the word".

The price of £29.99 is, in my opinion, about £10 too high to make this an attractive buy for anyone other than a die-hard fan.

PACK RATING ☆☆☆



The M200 concept car will never go into production, but you can try it out in Lotus III.

PD SCENE

Twenty days to payday? No problem – Nial Grimes shows you what you can buy with a few quid and a stamp...

ZUFFERS

LAPD • DISK NO: L.85 • £3.00 • MEMORY:
0.5MB • LICENCEWARE

IN BRIEF: *Zuffers* is the sort of game you dread ever landing on your desk, simply because it's so damn difficult to describe. The plot revolves around a race of tiny creatures whose planet is about to be destroyed by a meteor. The only way to protect these little heroes is to move them into custom-designed shelters that are liberally scattered around the screen.

So basically we have a puzzle game. The *Zuffers* can be moved freely in any direction, but only stop when they hit a wall and often it's necessary to pile several up to reach a particularly tricky shelter. Over thirty stages of brain-teasing action are on offer and each screen comes complete with its own password, so you don't have to battle your way through dozens of completed levels.

ST REVIEW COMMENT: "In terms of simple addiction, *Zuffers* is hard to beat. It's incredibly difficult to put down once you've completed that first level and the graphics suit the style of game well. Action fans won't find much to shout about, but really they should be busy playing *Storm '94*..."

☆☆☆☆

Zuffers' addictive puzzle gameplay makes up easily for any small deficiencies in the graphics department.



Just move the Zuffers into their shelters before time runs out and you're on to the next level, and the next, and the next...



Fast-paced action and a strong Aliens atmosphere make Storm '94 one of the best scrolling PD blasters to date.

STORM '94

LAPD • DISK NO: L.87 • £3.00 • MEMORY:
1MB • LICENCEWARE • STE ONLY

IN BRIEF: With *Alien 4* in the late stages of production and *Alien vs Predator* due out on the Jaguar "real soon now" it looks as if the world is once again set to go *Alien*-mad. And all set to join in the action is *Storm '94* – a souped-up version of the licenceware game that every self-respecting *Ripley* fan has come to know and love.

In addition to the atmosphere offered by its predecessor, the '94 remix includes a lot more gameplay to back it up. The scrolling speed is just that little bit faster, the *Aliens* follow a more random attack pattern and some vicious looking face-huggers have been incorporated to complicate things further. The updates can still get a bit sedate in the heat of a battle, but that's the last thing on your mind with two dozen nasties on your tail. Once again, rookies need not apply – this is one hard-hitting game with a difficulty level to match.

ST REVIEW COMMENT: "The slightly faster scrolling, tweaked gameplay and phenomenal music all add up to make *Storm '94* the best public domain blast-'em-up for some time. Sure it's tough, but I know you can handle it!"

☆☆☆☆



FLUFFIES

LAPD • DISK NO: L.86 • £3.00 • MEMORY:
1MB • LICENCEWARE

IN BRIEF: Ye olde platform game makes yet another appearance in the form of *Fluffies* which has to be one of the best looking licenceware games in existence. The main character is the dead spit of those little furry blobs that were given away by building societies in the mid-seventies and the mini animations that line the game are sickeningly cute. The trouble is, the gameplay doesn't really follow the same pattern; while the visuals are busy, promising fast platform action, what you actually get is more along the lines of an adventure. Once you've overcome this slight mismatch however, the game begins to make sense and becomes much more enjoyable. Potions must be collected and puzzles solved to complete each beautifully drawn level, and hidden jewels can be used to inflate a sagging score. In many ways it's a bit like a thinking man's *Mario* (oh dear... Ed).



Fluffies is no mindless platformer – the rock solid first level sets the pace for the rest of the game.

ST REVIEW COMMENT: "*Fluffies* isn't world class material, but it looks fantastic and plays reasonably well. If you're a fan of *Rick Dangerous*-style gameplay and are looking for a new challenge, it's definitely worth a few plays."

☆☆☆☆



Scramble resurrects yet another ancient concept, although your ST is free to join in the action in the nineties remix.

SCRAMBLE

GOODMAN INTERNATIONAL • DISK NO: GD.2182 • £1.95 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Now before you get all hot under the collar at the thought of playing a fast-action, horizontally scrolling shoot-'em-up, *Scramble* has absolutely nothing to do with *Defender*. Instead it's a souped-up clone of another classic arcade game called *Space Duel*. True, the spaceships may have been replaced with World War II fighter planes, but the principle is much the same – spoil the baddies' day before they spoil yours.

In common with its forerunner, *Scramble* is basically a two-player game. One of those players can be the computer if you choose, but this does present a couple of problems: it's no real substitute for playing against a real human opponent, and the ST is too damn good at this game! Attractive graphics round off a well-executed game nicely.

ST REVIEW COMMENT: "Scramble is based around a very simple concept, but it remains a great two player game. What's more, the slick animation and sound effects put this offering some way above the original."

☆☆☆



Scramble! Bandit at 12 o'clock! The slick animation and fast gameplay lift this incarnation well above the original.

BLACK HOLE

GOODMAN INTERNATIONAL • DISK NO: GF.66 • £1.95 • MEMORY: 4MB • FREWARE • FALCON ONLY

IN BRIEF: *Black Hole* is a poor excuse for a puzzle game. You take command of a blue square in the centre of the screen and the object is to find two coins that are hidden below the surface of the play area. There's no way to know exactly where these are and it's just a case of wiggling the joystick and hoping for the best – if a bomb is uncovered, you have a set number of seconds to exit the level or face the consequences. To be honest, the whole game is so ridiculously simple you end up wondering whether you've missed something.

The only reason for trying it at all is the sampled sound and flash graphics, which are admittedly very good. With the audio out jack wired up to a hi-fi, it sounds like a war is taking place in the office! The graphics are equally trendy, but no amount of sophistication can hide the total lack of gameplay.

ST REVIEW COMMENT: "All looks and no action is probably the best way to describe *Black Hole*. The game sounds like it's having great fun, with an orgy of sampled sound blasting out of the speaker from start to finish, but unfortunately it's not a feeling shared by the player."

☆☆



Sumptuous sound effects and colourful graphics line Black Hole, but unfortunately, the author forgot to add any playability...

INVESTIGATION

FLOPPYSHOP • DISK NO: 4171C & 4172C • £5.00 ALL IN • MEMORY: 0.5MB • PUBLIC DOMAIN

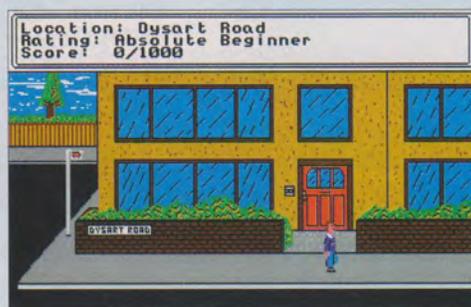
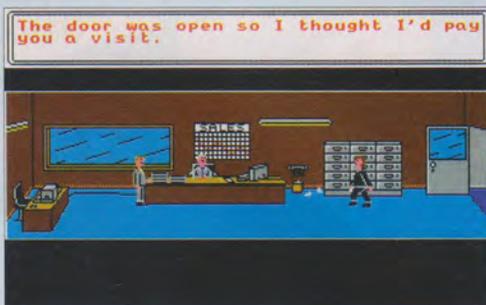
IN BRIEF: *Investigation* is set in the seedy world of industrial espionage. Top software firm Wellard & Co (*interesting name... Ed*) have developed a virus so powerful, it is capable of wiping other companies off the face of the planet within months of its release. It's your job to guide agent Dave in finding the master disk, so Binary Bargains (a rival firm) can develop a vaccine in time to save the industry. Got that?

The main character is controlled via the cursor keys but any other task you want him to perform can be typed in. Graphically, it's not quite up to *Grandad* standards, but somehow the cartoony style works well in the setting. Be warned: *Investigation* doesn't like machines with 4Mb of memory – you will need a utility such as *Memset* to make your ST think it has less.

ST REVIEW COMMENT: "Investigation could learn a little from the *Grandad* series in terms of user interface, but apart from this minor quibble, it's a very amusing game. Definitely an essential purchase if you are a fan of the *Operation Stealth* genre."

☆☆☆☆

An animated intro leads you into a tale of industrial espionage in the software industry – how believable do you want?



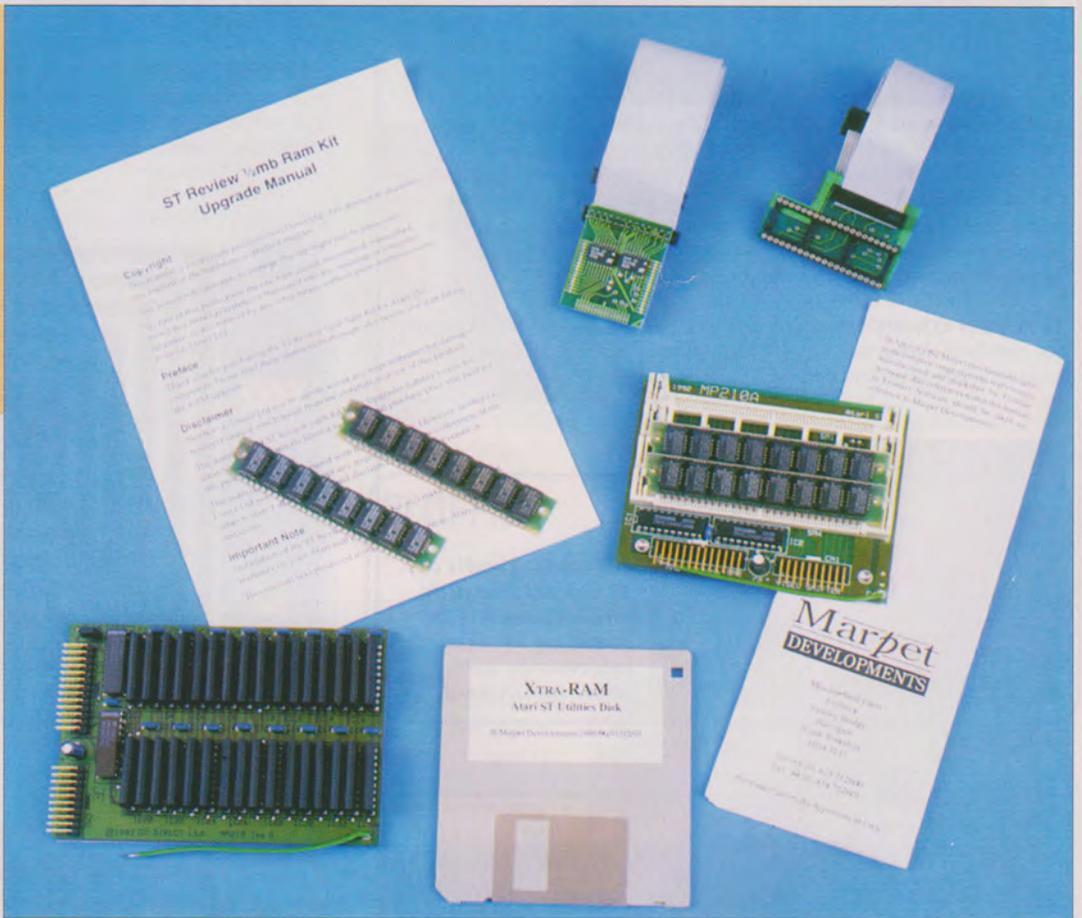
Investigation lacks Grandad's easy-to-use interface, but the plot is great and the cartoony graphics add to the atmosphere well.

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A 520 STe is usually supplied with two 256K SIMMs and has sockets to plug in two more – it's that easy! A few do not have sockets, in which case you will need a pair of adaptors. These may need soldering; if this is the case, we will supply the sockets at no extra cost – that's service!

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MEMORY UPGRADE PROBLEMS – TAKE TWO

Last issue we looked at possible problems with the Video Shifter chip on STF, STFM and STM computers. This month it's the turn of the MemoryManagement Unit, or MMU for short.

Atari computers use one of three different MMU types. Two of these are about 2.5cm square and labelled either "CO25912" or "100109". You may need to remove a small metal retaining clip to read this number and there may be other numbers printed on the chip – ignore them.



Either of these can be socketed or surface-mounted. How do you tell the difference? If your MMU chip is socketed, it will be sitting in a plastic socket; look at it from the side and see whether you can see black plastic. If so, you've got the easy option and require the standard kit. Surface-mounted means that the MMU's legs are splayed out and individually soldered to the top surface of the main circuit board. If you look from the side of the chip, you'll see silver pins, not black plastic. In this case, you need a special connector – remember to specify "surface-mounted MMU" when you order your upgrade kit.

There is a third type, a small rectangular chip with the number "101601" printed on the top. If you find this kind of MMU in your ST, life is very easy – you don't even try and fit an upgrade kit! Time to call in the experts – us! Your machine is one of a very small minority; now how many times has this kind of thing happened to you?

If you are at all doubtful about your ability to take your computer apart, or concerned about what you need to upgrade your computer's memory, call the hotline and have a chat with an experienced technician...

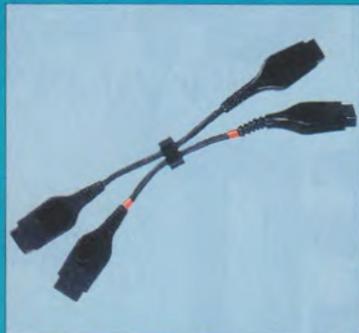
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Who sets the time each time they switch on their ST? If like many thousands of ST owners you don't, then you are missing out. Every time you save a file it gets stamped with the time and date - invaluable when you are hunting for a file. Get a clock cartridge and the time will be set automatically each time you switch on your ST.



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Do you use your ST for art, graphics, DTP or music? Then you really should consider our state-of-the-art, 162 dpi trackball, as used by the editor of this magazine. Movement from one side of the screen to the other is effortless and cursor motion is rapid and smooth, far more so than with a mouse. The feel is superb thanks to the high quality micro switches under the buttons. There's also a third button that acts as a locking left button - ideal for continuous scrolling, painting or line drawing!

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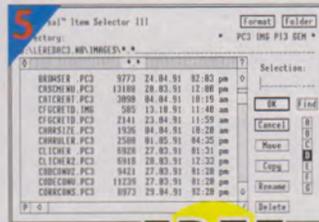
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PD ZONE

WHAT'S IT ALL ABOUT, PD?

The public domain is a huge and confusing place, although there are really three forms of freely distributable software. First, there's good ol' *Public Domain* which basically has no restrictions on distribution at all – you are free to copy, alter, mangle or feed any public domain program to your pet piranha and the author won't complain. The *Freeware* system runs along similar lines, but in this case the programmer retains the copyright and you are not allowed to alter programs without permission.

Possibly the fastest growing form of software distribution today is *Shareware* which relies on payment from you. Typically, you are given a time period to try out a package, after which you must "register" – pay a fee to continue using it. The Shareware system is all about honesty; if you don't pay the fee, the author won't send somebody round to rearrange your face, but you won't get any of the benefits of registering. Also, you won't get that warm cuddly feeling inside that comes as part and parcel of being honest. OK? Right, then let's look at...

CATEGORY OF THE MONTH: LICENCEWARE

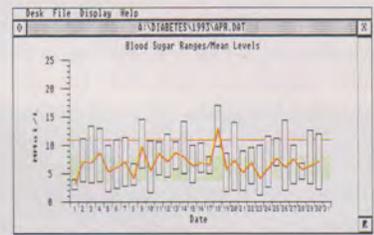
EXAMPLE: STORM '94

Licenceware is an extension of the Shareware principle. However, instead of paying money directly to the author, he takes a small cut from the original purchase price. While Licenceware doesn't usually net as much money as successful Shareware, many authors see it as the only viable option considering the UK public's severe allergy to paying registration fees...

DIABETIC DATABASE

LAPD • DISK NO: M.167 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: As the name suggests, this disk is designed to help diabetics maintain a balanced diet and the right insulin doses. It accomplishes this by monitoring blood sugar levels over the year and pointing out any bad trends through a graph. A custom program is used to deal with all of the data and being a standard GEM application it is very easy to use. However, it is incapable of running in high resolution which could be a problem for SM124 fans.



The graphing facilities provide an instant reference to blood sugar levels over the month and make it easy to spot bad trends.

The documentation complements the program nicely and the author has been kind enough to provide his own blood sugar levels over the past year, to help acquaint you with the software. The fact that he himself has been using the package successfully for so long has to be worth something.

ST REVIEW COMMENT: "The Diabetic Database is a very effective custom-written application. It's just a case of deciding for yourself whether you can be disciplined enough to enter blood sugar details each and every day."
 ○○○○

DAVE MUNSIE GAME COLLECTION

GOODMAN INTERNATIONAL • DISK NO: GD.2170 • £1.95 • SHAREWARE



IN BRIEF: If you have been reading *ST Review* for any length of time you will be very familiar with Dave Munsie's work. He's been responsible for some of the very best games ever to grace our cover disks and specialises in recreating the arcade classics we all know and love. This offering contains no fewer than nine of his games together with a mouse-controlled menu and is guaranteed to provide hours of fun for the nostalgic coin-op fan.



Talk about value for money – nine of Dave's very best arcade classics will set you back just \$5.00!



All of the old favourites are faithfully recreated, although Crazy Kong seems to be even more difficult than it was in the arcade!

find pixel-perfect interpretations of *Crazy Kong*, *Space Invaders* and *Centipede*. All blend just enough old style gameplay with slightly modernised graphics and reasonably good quality sound. *Frogger*, in particular, is the best version I have ever played outside of an arcade and it's irresistible to give it "just one go" to make sure you haven't lost that old touch. On the other hand, *Kid Kong* is much harder than the arcade version ever was and it's gonna take your best shot just to crack the first level! Moving away from

the arcade clones for a few moments you'll find a number of more original games in there too. Perhaps the most ambitious of these is *Black Crystal*, a race through space on the back of a cosmic tennis ball, but *Evader* follows closely behind. Although original, most of the games have an arcade feel and play very smoothly.

Only two slightly sub-standard games have crept into the collection; *Bobbles* is a rather weak attempt at a *Columns* clone and *Kaboom* is a bit short on gameplay. Overall though, the standard is very high.

Perhaps the best news of all is that you no longer have to pay registration fees on the individual games – no, just one \$5 payment will cover the lot and you'd have to go a long way to find any other game that cost less than 50p, I think you will agree!

ST REVIEW COMMENT: "As a person who grew up on *Space Invaders*, *Frogger* and *Boulder*, I thoroughly enjoyed this collection. Each game is a classic in its own right and provides just enough nostalgia without having to go to the extreme of using the Spectrum emulator."
 ○○○○○



One or two semi-original games make the collection too. Black Crystal is a cosmic bounce-'em-up with shades of Boulder.



Frogger may look primitive by today's standards, but play one game and you'll be addicted for the rest of the day!



DISKS OF THE MONTH

MOUSE KA MANIA 2 & TWO COLUMN

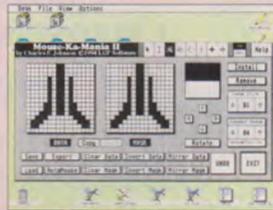
**GOODMAN INTERNATIONAL • DISK NO: GD.2188
• £1.95 • MEMORY: 0.5MB • SHAREWARE •
FALCON-COMPATIBLE**

IN BRIEF: Some of the best shareware ever to emerge from the States has come from Charles Johnson and this disk contains an update to his ever popular "pointer hacker", *Mouse Ka Mania*. Its main aim in life is to remove all traces of Atari's dull pointers and replace them with animated alternatives. Each of the ST's eight standard pointers can be altered individually and a full editor is built in if the 100 or so examples don't suit your needs.

To top up the disk you will find a two column printing program also from the States. It features a nicely-designed interface, drivers for a wide range of printers and seems to work very well indeed. The documentation is a bit sketchy at times, but you are unlikely to need any help.

ST REVIEW COMMENT: "An animated pointer is a quick recipe for insanity, but *Mouse Ka Mania* does come in handy for livening up the busy icon – the bouncing Fuji is particularly amusing. Add the two column printing program and you have a very high quality disk."

○○○○



Replace dull Atari mouse pointers with animated alternatives courtesy of Mouse Ka Mania 2.

POV SOURCE

**MERLIN PD • DISK NO: MPD.1889 • £1.25 •
MEMORY: 0.5MB • PUBLIC DOMAIN**

IN BRIEF: Persistence of Vision is well known on the ST scene for its compacted demo compilations and if you've ever wanted to find out exactly how the flashy menus on its disks are put together, now's your chance. Buried among the folders on this disk you will find source code for eight intros with all of the graphics and tunes included, so you can assemble and run them straight away.

Sadly, there's a distinct lack of comments in some of the code, but the symbol names are quite informative. Amongst the effects the code will teach you to master are: border busting, scanline interrupts, music replay and, of course, the statutory scroll-lines. As intros, they really don't lie on the cutting edge of demo coding, but are a lot easier to follow than something like the *Mindbomb* source.

ST REVIEW COMMENT: "POV Source makes a reasonable introduction to the world of demo programming. The sparse comments in some of the source code could be a problem, but at least all of the graphics and muzzax (hey, I'm catching on fast!) are included."

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All of the graphics are included with the source, meaning you can assemble and run any of the intros straight from the disk.



TOP TEN DISKS OF THE MONTH

**1 DAVE MUNSIE GAME COLLECTION • GOODMAN INTERNATIONAL •
DISK NO: GD.2170 • £1.95 • SHAREWARE**

A roller-coaster of a collection from Dave Munsie, crammed to the brim with sizzling arcade classics. If your trigger finger still quivers at the mere mention of the words *Crazy Kong*, *Frogger* or *Centipede*, this is the disk for you. Younger games players might find *Street Fighter 2* more appealing, but for nostalgia freaks, this is only one step away from heaven.

**2 ARCHIVER COLLECTION • FLOPPYSHOP • DISK NO: F.4351 • £2.50
• MEMORY: 1MB • FREWARE • FALCON ONLY**

A selection of archivers and shells capable of dealing with almost any format under the sun. The statutory ST Zip and LHA are included alongside command line utilities for ARJ, ZOO and ARC, plus you'll find UUE-decoding software thrown in for good measure. The versions aren't the very latest, but will comfortably handle most archives.

**3 DIABETIC DATABASE • LAPD • DISK NO: M.167 • £1.50 •
MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE**

A useful program for monitoring blood sugar levels in diabetics. It's fully capable of plotting results in an easy to understand graph format and comes wrapped up in a functional GEM shell. As a diabetic himself, the author has been kind enough to supply a whole year's worth of sample data.

**4 DISK MAG 36 • THE ST CLUB • DISK NO: DMG.36 • £1.25 •
MEMORY: 0.5MB • MIXTURE • FALCON-COMPATIBLE**

The usual selection of high quality utilities find their way onto this disk magazine from the ST Club. Amongst them is a file recovery program, fractal generator, mouse fiddler, 3D world creator and driver B waker-upper. Just under 20 programs in all and certainly a few afternoon's worth of experimentation.

**5 MOUSE KA MANIA 2 & TWO COLUMN • GOODMAN INTERNATIONAL
• DISK NO: GD.2188 • £1.95 • MEMORY: 0.5MB • SHAREWARE •
FALCON-COMPATIBLE**

Personalise your ST with an animated mouse pointer. A huge range of pre-designed examples are provided including the Mac's watch, a pulsating pointer and a rather amusing bouncy Fuji. All pointers can be adjusted on-the-fly and it seems to behave well in just about any screen resolution.

**6 VAN GOGH & ANI-ST • WIZARD PD • DISK NO: ART.08 • £1.50 •
MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE (PART)**

Two classic paint and animation packages have been lovingly squeezed onto this disk. *Ani-ST* was originally a commercial product from Aegis and is still one of the most memory-efficient animation packages around. *Van Gogh*, on the other hand, is looking a little long in the tooth.

**7 POV SOURCE • MERLIN PD • DISK NO: MPD.1889 • £1.25 •
MEMORY: 0.5MB • PUBLIC DOMAIN**

A disk full of source code from top demo crackers Persistence Of Vision. It could be a bit hard to follow for beginners, but if you're on the brink of coding success and just need a few tips, this is the place to look. Graphics and sound are also included.

**8 FOOTBALL TACTICIAN • GOODMAN INTERNATIONAL • DISK NO:
GBU.113 • £2.95 • MEMORY: 0.5MB • LICENCEWARE**

I am afraid I couldn't bring myself to review yet another footy game in the games section but *Football Tactician* is certainly good enough to be squeezed in somewhere. Die-hard fans look no further!

**9 MAKIN' SWEET MUSIC VOLUME 1 • RIVERDENE PDL • DISK NO:
1020ST • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN**

Turn your dull game into an audio delight with a little ripped music courtesy of MUG UK. This disk comprises 26 tunes, replay source-code for assembler, GFA BASIC and STOS, plus a few helpful instructions to keep things moving.

**10 NEW TREND DEMO • FLOPPYSHOP • DISK NO: DEM.3909C •
MEMORY: 0.5MB • PUBLIC DOMAIN**

A flashy demo that claims to be a lot more original than it actually is. Having said that, the introductory animation is quite nice and there should be something here to amuse most people. A bit of bad language is also present, but that seems to be the case with most demos these days.

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ST Handbook (£2.50), the printed PD magazine is available from MerliN.

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PD ZONE

The configuration editor is quite complex, but most of the options can be safely left at their default values.



SPECTRUM EMULATOR

GOODMAN INTERNATIONAL • DISK NO: GD.2205 • £1.95 • MEMORY: 1MB • SHAREWARE • FALCON-ENHANCED



IN BRIEF: It is many people's firmly held belief that some of the best computer games of all time were released on the humble Spectrum. Titles like *Manic Miner*, *Knight Lore* and *Jet Set Willy* (ooo-err!) may lack the flash graphics of today, but there was certainly something about the gameplay of these golden oldies that kept you coming back for more.

The *Spectrum Emulator* allows you to run all of these old favourites and plenty more from the comfort of your own 16 bit beastie. Everything from Kempston Joysticks to Sinclair's Interface-1 is supported and you'll find a small selection of games included to get you started. In terms of raw emulation, the ST version runs slightly slower than a real Spectrum, but a Falcon or TT will provide a near-as-dammit perfect clone. Both SNA and Z80 formats are supported which provides access to Spectrum games from Amiga or PC emulators and you'll find almost every Speccy game ever produced somewhere on the Internet.

ST REVIEW COMMENT: "Initially, the *Spectrum Emulator* looks over-complicated, but ignore most of the settings, plunge straight into the classic games and I guarantee you won't be able to wipe the nostalgic smile from your face."

★★★★



Dozens of classic Speccy games can be reborn on your ST with some help from the *Spectrum Emulator*.

GAMEFIX

FLOPPYSHOP • DISK NO: BY NAME • £2.50 • MEMORY: 4MB • SHAREWARE • FALCON ONLY

IN BRIEF: Until Atari see fit to release the souped-up games they've got hidden under their corporate blanket, Falcon owners face a tricky decision: sit and sulk, or get an ST emulator and boot up some 16-bit games.

As you've probably already sussed, *Gamefix* is yet another "hey, let's turn



The lack of English prompts and relatively low level of compatibility do little to recommend *Gamefix* as a replacement for *Backward 2*.

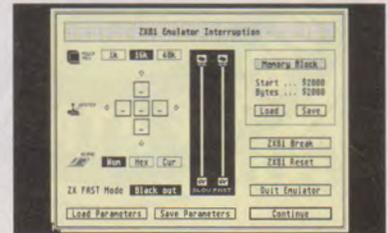
ZX81 EMULATOR

GOODMAN INTERNATIONAL • DISK NO: GD.2203 • £1.95 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE



IN BRIEF: The Sinclair ZX81 was one of the first affordable home computers and many people hold fond memories of that tiny black case, "bubble wrap" keyboard and a whole kilobyte of memory.

As you've probably sussed by now, the *ZX81 Emulator* turns your ST into uncle Clive's best box of tricks and is one of those rare pieces of software that actually improves on the machine it mimics. You can forget about the RAM limitations of the past because you are offered up to 48Kb of memory and it'll even map your joystick to four keys of your choice. It seems to run all ZX81 software without any problems and in fact, the only "feature" it lacks is RAM-Pack wobble!



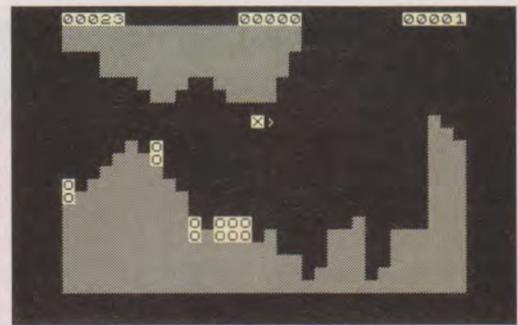
The emulator goes one up on a real ZX81 by providing support for 48Kb memory and even a joystick.

The best aspect of this particular emulator though is the bundled software. You won't need to worry about finding any of your old games or utilities because included on the disk are over 80 examples including all of the old favourites.

ST REVIEW COMMENT: "Once again the *ZX81 Emulator* is really only of interest to nostalgia freaks, but there's no denying that it does its job incredibly well. I certainly couldn't resist a few quick plays of *Kong*, *Galaxians* and *Invasion Force* – the first computer game I ever bought!"

★★★★

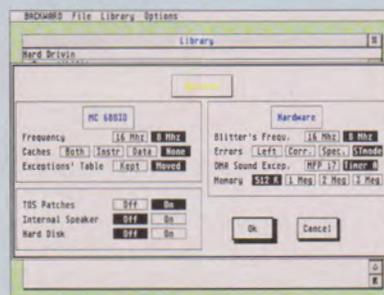
Who can forget *ZX-Scramble*? This and many more games are bundled with the emulator.



the Falcon into an STE" type program. It features a similar GEM interface to early versions of *Backward* and would be very easy to use if were not for the German language prompts. Although, having said that, many words such as "blitter" and "data cache" are pretty universal. And that's just about it really; confirm the settings, pop the games disk in the drive and pray that the programmers didn't use anything too naughty in terms of copy protection.

ST REVIEW COMMENT: "*Gamefix* isn't as compatible as *Backward* and lacks the English prompts. It's probably only worth investigating if you can't afford the registration fee of other similar programs."

★★★



Backward 2 is more flexible than *Gamefix* and includes TOS patches to boost compatibility.



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Spotlight '94 will provide visitors with demonstrations of software and hardware configurations and permit them to ask questions about many products directly to

experts in the field. The show will also offer a wide range of hardware and software bargains, many items at substantially reduced prices.

Discover the world of Amiga and Atari with the following top name companies:

Among the top companies exhibiting will be HiSoft with a wide range of software for both the Atari and Amiga range including a 12 bit sound card for the Amiga A1200 and a Voicemail system for the Atari. Meridian Software will be showing new software from America. AlfaData Benelux have a range of brand new CD32 add-ons. Power Computing will be showing their new SCSI hard drive controller for the Amiga A4000. Microvitec are displaying their latest multisync monitor, the 1438, suitable for use by both Atari and Amiga machines. System Solutions and Atari Workshop will be demonstrating an exciting range of new products from both Germany and America. This includes new software called Expander for an Atari CD ROM, HD Drive, an invaluable hard drive utility and Power Up, a Falcon accelerator. BSC of Germany are showing their superb add-on ROM drive for the A1200 Amiga together with other useful products. Europress, well known publishers of Atari ST User, Amiga Computing and ST Review will have all their magazines and back issues available. GE Soft Systems are demonstrating an accelerator for the Atari Falcon together with a novel 'clone' STE. Digital Village and Music Village will be showing and demonstrating all the latest products for the music industry and Prima Technologies have a keyboard for the CD32 and various other successful and unusual products. Golden Image will be exhibiting a wide range of peripheral hardware at amazing discounts and ACE will be showing the World of CD ROMS from Holland. 16/32 Systems will have their huge Public Domain software library for both the Atari and Amiga and Lightwave will be able to solve all your cable and connector problems. We also hope to demonstrate the new Atari Jaguar 64 bit machine with its amazing capabilities and CU Amiga will be offering technical support to help solve those little problems that are ever present.

- Hi-Soft
- Meridian Software
- Weekend Developments
- 16/32
- Power Computing
- Computronics

- Gasteiner
- Marpet
- Antic Systems
- 1st Computer Centre
- Alfa Data (Benelux)

- Golden Image
- Europress Enterprise
- Microvitec
- BSC (Germany)
- Broadfield Computers

PD ZONE

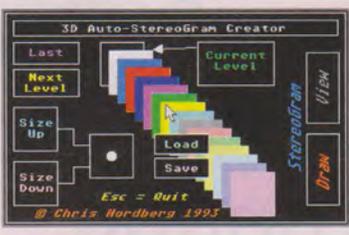
AUTO STEREOGRAM CREATOR

LAPD • DISK NO: L.77 • £3.00 •
MEMORY: 0.5MB • LICENCEWARE

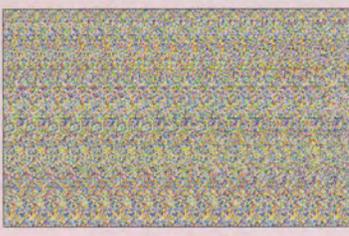


IN BRIEF: Walk around any market or boot sale these days and you will find at least half a dozen stalls selling "holographic" posters. To the casual browser these pictures look like nothing more than a jumble of dots, but relax your eyes and suddenly a stunning three-dimensional picture will jump forwards out of the paper!

As you've probably guessed by now, the techie term for these images is a "stereogram" and this package will allow you to produce your own, with a little help from an ST of course. Basically, each picture you put together is built up from a number of layers, each with its own individual colour. Simply draw a layer with each colour, click the display button and within a few seconds a beautiful 3-D picture will appear before your very eyes. The results can be saved in Degas format and printed with any package capable of colour output.



The interface may lack pizzazz, but start experimenting with the Stereogram Creator and you won't be able to put it down.



That's right - relax those eyes and see the figure "123" floating in front of the page!

ST REVIEW COMMENT: "The Stereogram Creator is one of the most entertaining programs to arrive on the PD scene in some time. Sceptics may even care to give it a try, because if anything the images are easier to see on screen than they are on paper."

MOVIE

GOODMAN INTERNATIONAL • DISK NO: GD.2199 •
£1.95 • MEMORY: 0.5MB • FREWARE •
FALCON-ENHANCED



IN BRIEF: If you've visited a multi-format computer show, no doubt you've seen PCs running endless impressive animations. Almost all of these shows were created with a program called *Autodesk Animator* and *Movie* allows you to play them from the comfort of your own ST.

The program itself can be run as an accessory or normal application and displays almost any .FLI or .FLC animation in a GEM window on the desktop. A scroll bar displays the progress and grabs from the animation can be dragged to other applications when running under *MultiTOS* - it even supports the iconify feature under later versions.

The screen display varies, depending on the resolution you are using: mono is reasonable, 16 colours is better and the Falcon adds a further touch of class.

ST REVIEW COMMENT: "Movie is a first for ST owners and a big improvement over other .FLI players available for the Falcon. Considering it's a GEM program, it's very fast indeed and the "animation in an icon" feature sounds incredible - if Atari would only get around to releasing *MultiTOS 1.08*, we might be able to try it out!"

By using a radius search, you can determine which bulletin boards fall within the local charge band.

THE BBS DIRECTORY
SET SEARCH LOCATION
RADIUS BBS SEARCH
SEARCH FOR A BBS

BBS DIRECTORY

GOODMAN INTERNATIONAL • DISK NO: GD.2181
• £1.95 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: The *BBS Directory* is the cyberspace answer to British Telecom's 'phone book. It contains a huge range of numbers for bulletin board systems across the country and all of this information is very easily accessible.

Considering the limited scope of the package, it's surprisingly sophisticated. Having pinpointed your location on the map (by clicking or entering an STD code) a radius search can be performed and the results displayed together with the exact distance from your home. The shareware version contains details of 100 boards, but sending off the fiver registration fee provides four times as many numbers and also includes further details on each system. It can even link in to the info files of some popular terminal programs and add the number automatically for you!

ST REVIEW COMMENT: "If you are new to the world of communications, *BBS Directory* is ideal. It's probably the easiest way to find all of the boards within your "local call" area and at just a fiver for the registration, it's got to be worth a look."

THE BBS DIRECTORY

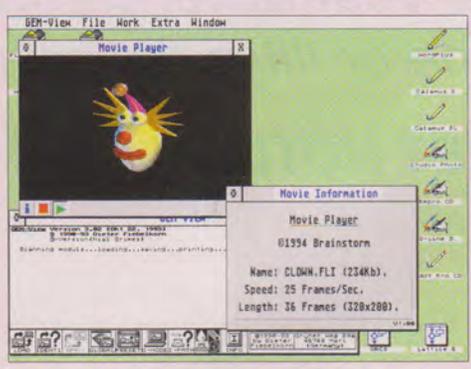
39 Bulletin Board Systems Found Page: 1

NAME	NUMBER	LOCATION	MILES	KM
AT&T	091 700 0000	LONDON		
PAO BREAMS	091 625 0651	LONDON		
BLACK WATER	091 700 7017	LONDON		
CIX	091 350 8446	LONDON		
CIX	091 350 2523	LONDON		
CIX	091 350 1244	LONDON		
CIX	091 350 1255	LONDON		
CORPUS TNC	091 350 1344	LONDON		
CONNECT	091 065 1191	LONDON		
CONNECT	091 065 6646	LONDON		

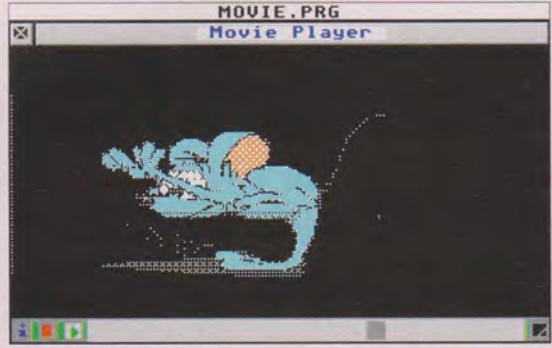
Exchange: LONDON Radius of 35 miles, 56 kilometres searched.

OK PREVIOUS PAGE NEXT PAGE BBS INFORMATION SHOW LOCATION PRINT ALL
PROGRAM INFO
EXIT PROGRAM

The registered version includes four times as many numbers and is capable of adding numbers to your autodial directory.



Movie is fully MultiTOS compatible and carries on ploughing through an animation no matter what is going on in the foreground.

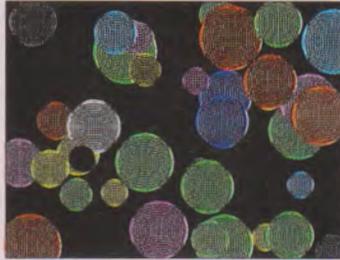


The display quality is compromised in sixteen colours, but remains quite nippy even on a standard ST.

DARK LORD

THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

IN BRIEF: You might be surprised to learn that the eighth biggest selling program on the PC during January was *After Dark*. Yes, while most of the heavyweight word processors and spreadsheets lurk in the lower regions of the chart, PC owners are happy to spend money on screen savers; and lucky ST freaks can have similar kicks for absolutely nothing thanks to *Dark Lord*.



A number of good effects modules are provided with the package, including the aptly titled "globes".

In common with *After Dark* – and its ST equivalent *Before Dawn* – *Dark Lord* is an "effects" screen saver. It does away with dull blank screens of the past and instead presents a range of entertaining animations when your ST is left idle for more than a few minutes. Several modules are included with the program and details of customising or writing your own are included if you feel brave. One or two minor bugs have been spotted in early versions, but the author should have crushed most, if not all, by the time you read this.

ST REVIEW COMMENT: "*Dark Lord* is similar in terms of features to *Before Dawn* but requires no registration fee, which has to be a good thing. It runs effectively on any machine from ST to TT or Falcon and should be considered an essential toy."

☆☆☆☆

OCR

FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

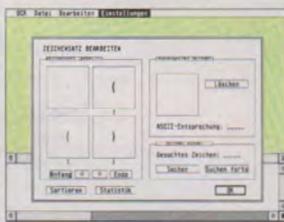
IN BRIEF: Optical Character Recognition, or OCR for short, is traditionally an expensive business. Not only have you got the cost of the scanner to worry about, but the software itself can often make a crippling impact on your bank account. So when OCR comes along (*innovative title... Ed*) claiming to do the same thing for nothing you have to be a bit suspicious don't you?

Well, the surprising thing is that it actually seems to work; one minute you've got a scan of some text on the screen, the next you have an editable ASCII file – just like magic. A good deal of training is needed to make it understand new fonts, but once you've got it walking to heel, the whole thing seems remarkably accurate. On a Falcon it takes around ten seconds to translate a line and the ST is naturally a little bit slower. Even so, it's ten times faster than typing up a page full of text and a run through a spell checker is usually enough to pick up on the small amount of glaring errors. The only real downer is the lack of English prompts, which makes the beautiful GEM interface less than intuitive.

ST REVIEW COMMENT: "Anybody with a scanner should seriously consider getting hold of OCR. It may lack some of the bells and whistles of its commercial rivals, but works surprisingly well once trained up and now all we need is some English instructions!"

☆☆☆☆

If you can put up with the lack of English prompts, OCR is worth its weight in gold.



TOP TEN UTILITIES

1 MOVIE • GOODMAN INTERNATIONAL • DISK NO: GD.2199 • £1.95 • MEMORY: 0.5MB • FREWARE • FALCON-ENHANCED

View .FLI and .FLC files from your desktop in style with this superb player from Brainstorm. Two versions are supplied – one for the ST, one for the Falcon – and it runs in any standard Atari resolution from mono to true colour. Who said GEM software couldn't be fast?

2 COPYINF • THE ST CLUB • DISK NO: DMG.38 • £1.95 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

Superboot is essential if you run a hard disk system, but having to copy *DESKTOP.INF* files around every time you change your set-up is a constant source of frustration. *Copy Inf* automates the process, plucking the *DESKTOP.INF* file from the root directory and placing a renamed copy in the *Superboot* folder for you – pure bliss!

3 DARK LORD • THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

A superb effects screen saver which runs happily on any machine in the Atari range (except the Jaguar of course!). It's fully modular meaning new savers can be slotted into place as and when they appear and the whole thing is fronted up by a good-looking GEM accessory.

4 SHELL BUFFER • THE ST CLUB • DISK NO: DMG.39 • £1.25 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

The *NEWDESK.INF* file is used to store a whole host of information about the desktop these days, but if you let it get too big things start to go bump in the night and your system can get seriously messed up. The solution is to increase the size of the shell buffer, which this utility does very nicely. Simple, sweet and very effective.

5 BBS DIRECTORY • GOODMAN INTERNATIONAL • DISK NO: GD.2181 • £1.95 • MEMORY: 0.5MB • SHAREWARE

Spot the bulletin boards within your local call area instantly with the help of the *BBS Directory*. A clever point-and-click interface turns a relatively simple idea into a superb piece of software and registration only costs a fiver.

6 MONKEY • FLOPPYSHOP • DISK NO: UTL.4272 • £2.00 • MEMORY: 0.5MB • FREWARE

A neat little macro accessory that owes most of its strength to its simplicity. All that's required is an <Alt><F> key combination to start, another to finish and the sequence can then be played back at the press of a button. Whole sets can be saved and used with specific applications.

7 OCR • FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

OCR turns your scanned images into ASCII text and must be the cheapest optical character recognition software available for any machine. The interface displays all of the charm we've come to expect from German programmers and the program seems to be very accurate once trained.

8 MARCEL • GOODMAN INTERNATIONAL • DISK NO: GD.2198 • £1.95 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Fans of *1st Word Plus* will find *Marcel* right up their street. It's a simple word processor with adequate block commands and a very easy-to-use interface. It even includes a spell checker although you'll need a meg of RAM (and an archive shell that can handle .LZH) to use it.

9 CALAMUS TO PAGESTREAM FONT CONVERTER • THE ST CLUB • DISK NO: DMG.37 • £1.25 • MEMORY: 0.5MB • SHAREWARE • HIGH RES ONLY • FALCON-COMPATIBLE

The public domain is positively bursting at the seams with quality *Calamus* fonts, but *PageStream* DMFs are a lot harder to come by. As the name suggests, this program solves the problem by converting one format to the other. There's a limitation of 37Kb on the fonts it handles, but this is apparently due to a bug in *PageStream*.

10 GOOD BACKUP UTILITY • FLOPPYSHOP • DISK NO: UTL.4272 • £2.00 • MEMORY: 0.5MB • FREWARE

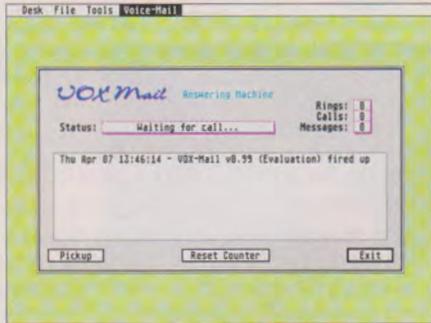
As long as you don't put too much store by the title, the *Good Backup Utility* is a reasonably effective hard disk backup system. It's no replacement for *Diamond Back*, but then again it's only a fraction of the price.

PD ZONE

VOXMAIL

FLOPPYSHOP • DISK NO: BY NAME • £2.50 • MEMORY: 1MB • SHAREWARE • FALCON ONLY

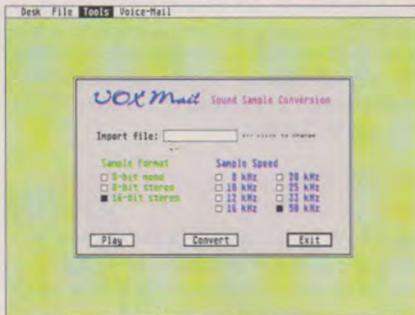
IN BRIEF: The advent of direct-to-disk recording has opened up all sorts of possibilities for integrating the Falcon further into the office environment. One of these is voice mail, which in theory can take on the role of a secretary, providing information to the caller on demand. *Voxmail* goes some way towards fulfilling this dream by turning your machine into a digital answer-phone. Just provide a recording of the pick-up message and a path to store the incoming calls and *Voxmail* will handle the rest. It's all very straightforward to use and the interface makes good use of GEM.



Voxmail turns your Falcon into a digital answer machine, although you'll need to register to get the necessary connection hardware.

The software is fully usable as it stands, but you will need to send off the \$50 registration fee in order to hook your machine up to the 'phone line and as the software is American, it's debatable whether this will work (or indeed be legal) in the UK.

ST REVIEW COMMENT: "Voxmail has real potential, but at the moment it doesn't provide many more features than your average £50 answer machine. Once the scripting and tone recognition features have been implemented, it will become a much more interesting proposition altogether."



The interface takes full advantage of the latest GEM enhancements, but doesn't seem too happy under MultiTOS at present.

3D ANIM

FLOPPYSHOP • DISK NO: BY NAME • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON ONLY

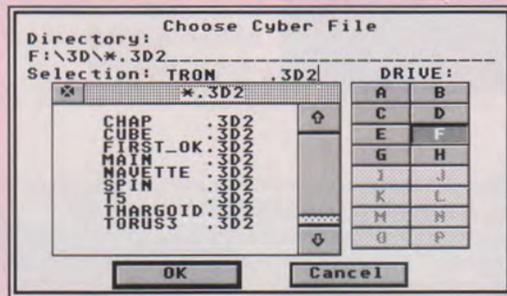
IN BRIEF: For many years, the only animations available for the ST were produced with the Tom Hudson's *Cyberstudio* and as a result the public domain is littered with files in .3D2 format. *3D Anim* is a program designed to display these objects and it does so with unrivalled punch thanks to the DSP. The preliminary version uses flat-shading, but future releases will Gouraud-shade the objects for even prettier effects.

Once the selected file is on-screen, it can be user-controlled with the mouse and the movement is so fluid you feel as if you could reach out and touch the objects. A rather sickly purple colour is used for the display and it barfs at very large files, but apart from that it does its job perfectly well.

ST REVIEW COMMENT: "3D Anim is an interesting toy, but it is evidently still in the early stages of development. Now, if the author could see his way to adding a few spaceship objects, a little bit of gameplay and an *Elite* plot we could be looking at something very special!"

☹☹

3D Anim allows Cyberstudio objects to float effortlessly around the screen under mouse control.



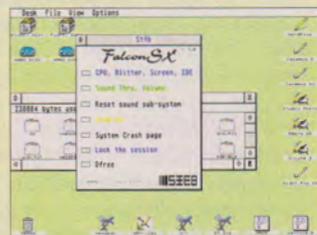
Several example files are included, but be warned, it doesn't deal with large objects too well.

FALCONSX

THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 1MB • SHAREWARE

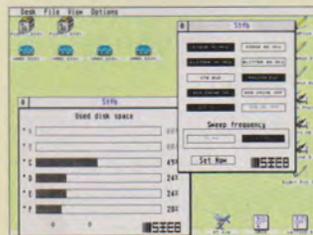
IN BRIEF: *FalconSX* is yet another program that allows you to configure the hardware of your machine. It runs as a desk accessory and provides an easy means to disable the internal hard disk, adjust the volume settings, slow down the CPU and dozens of other things besides. Among the more unusual features are crash page display – useful for programmers – and a disk space monitor. The unregistered version is

FalconSX provides more configuration options than any of its rivals and only the tasteless colour scheme spoils a perfect interface.



fully functional, although you won't be able to save a defaults set-up to disk. All of the options are presented through non-modal dialogue boxes and the only stain upon a perfect utility is the colour scheme, which can be just a bit hard to see at times – especially the bright yellow text. Naturally this is not a problem in mono and the majority of the prompts are presented in more legible shades.

ST REVIEW COMMENT: "FalconSX is the best Falcon configuration program so far. In addition to the options offered by rival utilities such as Falcon Control you get an easy way to reset the sound system, complete control over the processor speed and a useful disk space gauge."



In addition to the Falcon specific settings, FalconSX provide a disk space fuel gauge and password protection.

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Yep - our coupons are an ST Review service for you, the readers. Just cut 'em out and send 'em off...

SYSTEM

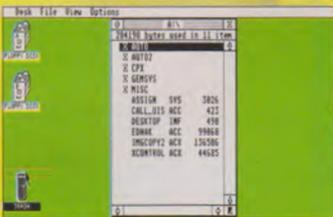
STEP BY STEP GUIDE

RESORTING YOUR AUTO FOLDER

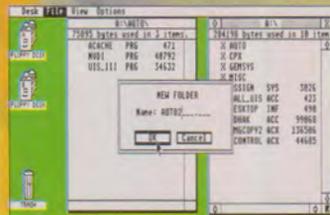
When you get more adventurous, it's not difficult to have twenty or more AUTO folder programs on your boot disk. This brings with it a number of problems, including the question of incompatibility between some programs and the need for some programs to run before others.

The shareware utility, *PINHEAD*, for example, should be first in the AUTO folder, as should *NVDI*. Boot managers like *XBoot* and *Superboot* need to be the first programs to run, otherwise they will be unable to disable those that have already loaded. How on earth do you do this?

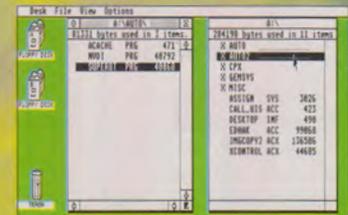
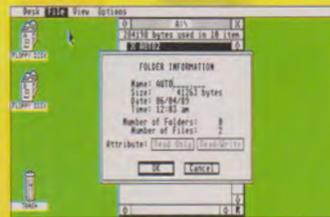
There is a PD utility called *AUTOSORT* that does the job for you and boot managers like *XBoot* come with an installation routine that makes sure *XBoot* is in the right position. Indeed, *XBoot* itself can alter the position of any programs in the AUTO folder once it is installed. Nonetheless, there are times when you'll have to do it yourself, so here's how.



Now you can close the A:\AUTO window and in the other one, showing the root directory, delete the folder AUTO entirely (or rename it to something like *AUTOBACK* if you're still unsure).



1 Open two windows onto drive A, with your boot disk in the drive (see the accompanying panel for more on this "double glazing" approach). One should show the contents of AUTO and the other the root directory. In the root directory create a new folder called AUTO2.



2 Now "drag and drop" the files from the original AUTO folder into AUTO2 - hold down the <Control> key to move files rather than copying them, although this only works with TOS 1.04 and later. Copy/move the files in the exact order you want them to execute, with your chosen boot manager first.

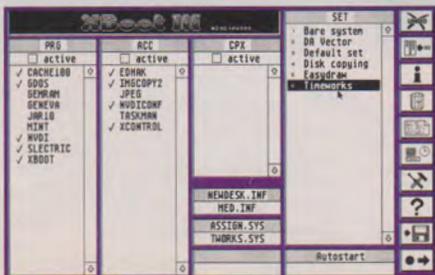
4 Lastly, rename the folder AUTO2 to AUTO, and you have a new, sorted AUTO folder to boot with. Owners of older machines with TOS 1.02 or earlier will be unable to rename the folder create a second AUTO folder on a second disk...

utilities I'd label as utterly indispensable. It isn't cheap - it costs £35 from HiSoft (0525 718181) - but it comes with an excellent manual and has a far nicer interface than the shareware alternatives. It's also easy to install via a short installation program that places *XBoot* in the first position of the AUTO folder and copies the ancillary files into a folder called *XBOOT*. A special program for auto-starting GEM programs is also installed if you have a version of TOS before 1.04.

Again *XBoot* lets you use the mouse instead of function keys and keyboard to select which accessories and AUTO programs to load. Each set can have an associated application

that runs automatically, so in theory you need never see the desktop at all. You can create a set for a program like *Timeworks* that chooses an *ASSIGN.SYS* file, any required accessories and AUTO folder programs (such as *GDOS*) and then launches straight into the program itself.

It can also save and store particular set-ups for different purposes and has its own built-in macro language for running simple batch files at boot up time. Add a built-in file selector that will delete, move and copy files, an AUTO folder sorting program and even control over which modules to load into *XControl*, and you've got an essential buy.

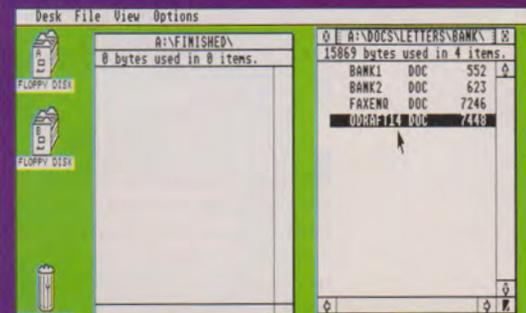


XBoot - best on boot up.

DOUBLE GLAZING!

I'm going to introduce an odd concept here and ask you to open two windows on the same drive. Strange as it may seem, it is perfectly possible and TOS has no problems with it. In this way you can copy a file from deep inside one nest of folders to another position on the same disk in one operation.

For example, if you have a letter tucked away in a folder called *BANK*, inside a folder called *LETTERS* which is in turn inside a folder called *DOCS*, and you want to copy it to another folder called *FINISHED*, you open one window on the folder *FINISHED* and another on *DOCS\LETTERS\BANK* and just copy or move the file between them.



Opening two windows for the same disk can have definite advantages...

Back in issue 19,
we gave away
Flair Paint on our
cover disk. Keith
Berry gives it a
dose of style...

Somewhat belatedly in 1988, *Flair Paint* hit the Atari marketplace. *Hyper Paint* appeared at the same time resulting in *Flair's* failure to make the anticipated impact, as evidenced by the fact that virtually no other graphics or print utility has supported its format. Another reason may well have been its irritating method of protection, for few artists would be happy during an intense period of creativity to have to stop and look up the stupid word that appears, for example, halfway along the fifteenth line on page

forty of the manual! *ST Review* readers had an advantage here, for when the package was featured on a cover disk last year, our editor, benefactor that he is, decreed that it should be supplied protection-free when he could just as easily have printed a look-up chart!

THE BIG SCREEN

The program runs on any STe in low resolution or monochrome, either as a program or as an accessory and preferably with at least 1Mb of RAM though more available memory allows for a larger workscreen. Despite a medium resolution option on boot-up, this is not supported.

The photographer and artist-with-easel are aware that there are many subjects for which the camera or canvas should be rotated to provide the vertical or "portrait" format, and the illustrated step-by-step shows the creation of such a picture of a canal-going narrowboat. *Flair Paint* permits the Atari artist to break out of the "landscape" format imposed by the monitor screen.

Before loading, *Flair Paint* invites you to accept the default canvas size or to set up another. In this case one of 320 pixels wide by 400 high was

chosen – the equivalent of two low resolution screens placed one above the other. Unfortunately a boot-up is required whenever the canvas size needs changing.

Unlike a few of the more recent offerings, the program allows the complete view of a canvas much larger than screensize – the opposite of a magnifier – and even more unusually, this displayed picture can be drawn upon. The important thing to remember here is that drawing takes place at the resolution of the image as viewed. For example, if you draw a single pixel while in a reduction of 4, when the viewing ratio is returned to 1:1 that dot will be seen to consist of 4 pixels.

While in reduction mode, it is also possible to load, say, a Degas-format screen (*Flair Paint* distinguishes between a "Canvas" and a "Screen" when loading or saving) that will fill the visible screen. If the view is reduced to the extent that the canvas, which is shown as a rectangle with sizing boxes at the corners, only fills part of the screen, only that portion of the imported picture will be loaded.

You could greatly increase the resolution of your favourite Degas format picture by loading it in this way, returning to 1:1 and manually

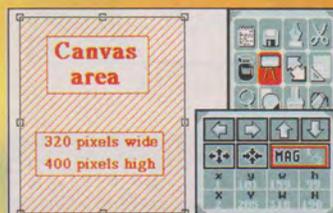
FINE ART



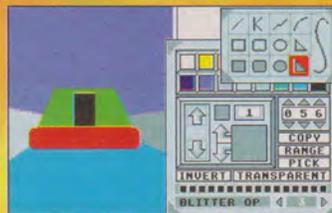
STEP BY STEP GUIDE

THE STRAIGHT AND NARROW...

Canal boats are often highly colourful in appearance. Here, Keith creates the rear of a Narrow Boat including all of the vivid, individual characteristics...



1 You can select the workscreen (Canvas) size before *Flair Paint* loads. The size selected here is the equivalent of two low-res. screens, one above the other. Select *Hoverport's* MAG 1/2 for an overall view.



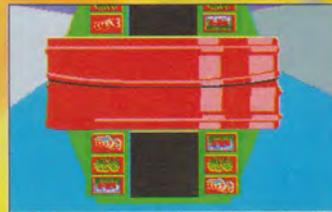
2 The shapes of the subject are blocked out using the filled patterns from the Shapes menu. Diagonal lines drawn at this level of reduction will be extra jagged at normal resolution.



3 Back to 1:1 viewing for adding more detail. Redraw the diagonal lines to reduce jaggedness and here the curved bottom of the boat is outlined using the Curve from the Shape menu.



8 The Block (Scissors) function is used this time to vertically flip the image of the boat to form its reflection. Select (<Shift>-click) its colours in the palette to avoid picking up the surrounding detail.



9 After clicking on the Scissors icon again to return to the picture, the reflection's image is pasted into position beneath the hull after scrolling the screen to allow enough room for it.



10 Again with the aid of the Magnifier, the galley chimney and a decorated water jug are added to the cabin roof. The grass and the boat's shadow are freehand drawn and filled.

painting or spraying over the coarse detail.

HINTS 'N' TIPS

Degas Elite's CHANGE function was very useful in protecting a particular colour against overpainting and Flair's programmers took this further by allowing any number of the 16 colours on the Palette to be marked using a simple <Shift> left-click. Such marked colours are selected as the only ones to be affected by overpainting or facilities such as the Block Cut function. When wishing to overpaint a blocky fill pattern, you simply select from the Palette the colour(s) making up the elements of the pattern to protect adjacent detail. Remember to unmark the colours when you've finished. Incidentally, when airbrushing near the left and right screen margins, there is a marked tendency for the paint flow to accelerate suddenly, so be ready with the <Undo> key.

The ability to provide a canvas as large as the memory allows has a down side however, for unlike many of its contemporaries, Flair Paint uses only one workscreen although there is a screen-sized Edit screen for the manipulation of blocks. Access to this is via the Scissors icon – click on it to



Here's the final picture in mono – a decent size and with enough shades of grey to look good!

activate a dialogue box offering Cut, Paste or Edit. Selecting Cut (which should be called Copy as the image is not removed) allows you to rubber-band an area to copy. You can hold down <Shift> and move the cut-out around the screen before left-clicking to copy it to the Edit screen where it can be flipped, rotated or the like

before returning it to the main screen. If you are in doubt as to which screen you are in, note that while you are in the Edit screen the Scissors icon remains highlighted.

If the surrounding detail is not required, as with the inverted cut-out to provide the reflection in our illustrated narrowboat, use the

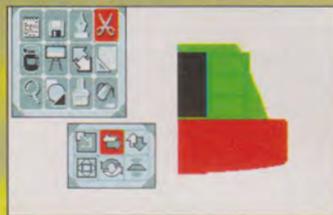
protected Palette colour method to select just the colours of the parts of the required object. After the necessary manipulations of the object in the Edit screen, just click on the Scissors icon again to return to your workscreen and Paste the whole contents of the Edit screen back to it. To paste back just part of the Edit screen, hold down <Shift> while clicking on the Scissors and rubber-band the required area. Either way, the image will float "above" the workscreen until you left-click it into place, allowing you to scroll the screen if necessary using <Control> and the relevant arrow key.

GET AN IMAGE

Saving canvasses in its own .FLR format tends to be unreliable, folders on the destination disk often remaining empty even after several saves! Much safer is the .IMG (colour XIMG) format even though not all utilities have the same way of interpreting the palette data – often noticeable when using ImageCopy, for example, to output to a colour printer. One solution is to save the required printing parameters as default and print the file while a Degas-format screenshot from the same .IMG file is being viewed.



4 Using an unfilled rectangle from the Shape menu, the outlines of the boat's cabin doors are drawn ready for decoration, but only one of them needs to be drawn because...



5 ... by selecting the Block menu (Scissors icon) the left half of the boat is rubber-banded and transferred to the Edit screen. Clicking on the Horizontal flip icon and then the Scissors icon again...



6 ... allows it to be pasted back to the picture to ensure correct symmetry. Straight and curved lines from the Shapes menu are used to add modelling to the hull's strengthening ribs.



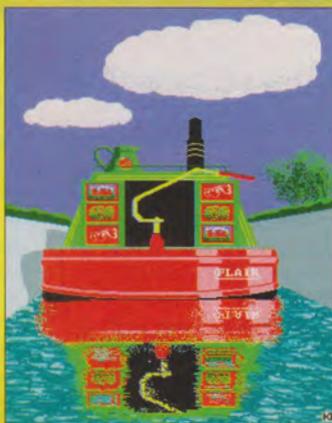
7 Small filled rectangles add a shine to the hull, emphasising the modelling of the ribs, and the Magnifier is used to add traditional decorative paintings to the cabin doors' inner panels.



11 The Brush and Airbrush are used to add realism to the reflection in the water and the tiller bar is added using a combination of curved and straight lines from the Shape menu.



12 A suitable name for the boat is chosen and added in white paint to the stern using the Text function. The text is then embellished with the aid of the Magnifier.



13 The completed picture after adding clouds and a tree. Save it as an .IMG (colour XIMG) file as Flair Paint's own format is unreliable.

PRECIOUS GEM

The whole computing industry is obsessed with speed and when it comes to viewing pictures, it's very easy to understand their point of view. Through no fault of *GEMView*'s own, a single, large JPEG picture can easily take five minutes to depack and viewing your way through a whole disk full of similar images can take what seems like an eternity.

Short of fitting an expensive accelerator there's very little you can do to speed up the decompression either, but *GEMView* does offer a halfway solution in the form of "iconification". In effect, this allows you to build a library of quickly loadable pictures on disk. Instead of bothering itself with compression and dithering when it saves, the program just takes a snapshot of the picture as it is seen on screen and dumps it to disk in the iconify folder. The resulting file does take up more space, but can be dragged back onto the screen as fast as the disk can manage – in fact, with a hard disk, the whole operation can seem instant at times!

The ST's palette can be edited directly, X-Control style, through the "Colour Map" menu option.



A PICTURE OF HAPPINESS

To put the principle into practice, try loading up one of the demo pictures on last month's cover disk. When the image appears on screen, go to the *GEM-View* menu and choose

Trimming unwanted borders from pictures is as simple as outlining the area you want to keep!

Iconify; having given your "icon" a name, it will be saved to disk and can be reloaded with the **Open** icon dialogue box. Do remember to tell *GEMView* where to save its icons though – the **Install Path** is the place to look – otherwise it might complain.

The benefits of iconified pictures are twofold: not only do they speed up loading, but can also save memory as well. Because the format is so fast, *GEMView* only stores the part of the picture you see on screen in memory and reloads the other parts as and when you resize the window. Control over this facility is through the **External** menu option: if checked, the picture will be stored on disk, if not it will be kept in memory – simple. Either way, when you

Sick of waiting for large pictures to depack? Nial Grimes dives deeper into GEMView with a few tips on speeding up picture loading...

decide that you no longer need the iconified pictures, a swift click on the **Clean up** button deletes the lot.

There are one or two small drawbacks in the iconification process. For a start, the images can take up quite a bit of space seeing as they're not compressed and when you add the demands made by the "Extern" facility, a hard disk really is the most sensible option. Secondly, an iconified picture can only be reloaded in a screen resolution with an equal or greater number of colours than that in which it was saved. It may sound complicated, but to give an example, a picture iconified in mono will happily reload in any resolution, whereas an image iconified in low will only reload into a screen mode with sixteen colours or more.

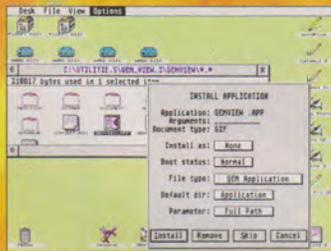
SCALING THE COLOUR MOUNTAIN

By now, your skills in getting pictures from disk onto the screen know no bounds, but *GEMView* also offers us quite a bit of help in the editing department. Try holding down the left mouse button while over a picture window and you'll notice that a rubber band appears. This is the clipping rectangle and it can be used

STEP BY STEP GUIDE

INFORMATION ON DEMAND

GEMView is lifted to a new dimension with the addition of a hard disk. Not only is the package that much faster, but with just a little fiddling you can have it automatically start up whenever you double-click on a graphics file! So here it is, the definitive guide to wiring *GEMView* 3 into your ST's desktop...



1 Select the *GEMView* icon, go to the "Options" menu and choose "Install Application...". Enter "GIF" as the document type and select "Default dir: Application" and "Parameter: Full Path" if the options are available. Save the desktop.



2 Open the *DESKTOP.INF*/ *NEWDESK.INF* file with a text editor and find the line with "GEMVIEW.APP@ *.GIF@ @" at the end. Copy the whole line and change "GIF" to read "TIF" on the copy as illustrated above.



3 Now just continue repeating the process until you've added all of the formats included on the cover disk (and plenty more besides if you've registered!). All that remains is to reset the machine and start clicking on those graphics files!



Control lines are used to adjust the brightness and contrast of a picture.

to crop unwanted areas from around the image. Don't worry too much if you are a few pixels out, because you'll notice that as soon as you release the mouse button, a confirmation box appears and you are free to edit the clipping coordinates by hand.

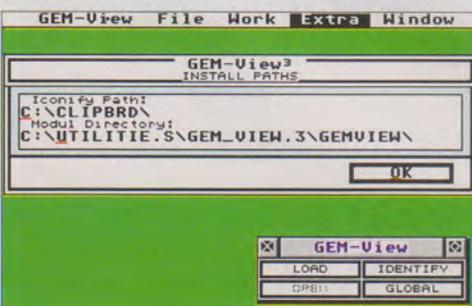
Colours can also be adjusted easily through *GEMView's* window-based menu. The most familiar option here will be *Colour Map* which allows the ST's palette to be adjusted directly in much the same way as *XControl*.

The colour scale dialogue box requires a bit more explanation however. It is used to adjust a whole picture, by defining how much of each primary colour is used throughout. As a brief example, try raising each of the control lines by one notch – the whole picture instantly becomes brighter!

As you've no doubt discovered, more points can be added to each line by clicking on the "+" icon and at this point, the whole concept of control lines really does demand a bit of explanation. Basically, the left of each line represents the darkest shades and slowly gets brighter as it climbs towards the right. Therefore to brighten the darker areas of a picture without washing out the lighter shades, the left hand side of the line needs to be raised. Don't worry if you can't quite grasp it to start with – control lines take time to understand and practice makes perfect. On saving a colour-adjusted picture, *GEMView* will ask whether you want to save using the new settings or revert to the originals.

SPLIT PERSONALITIES

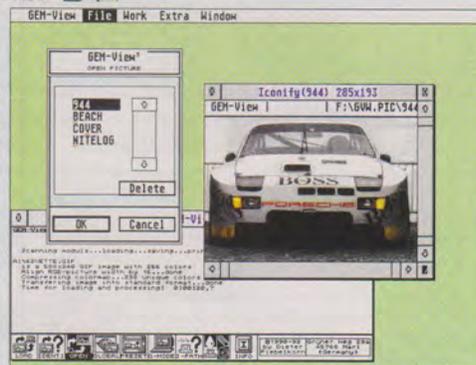
GEMView is renowned for supporting all of the latest enhancements to GEM and really benefits from running



Before you attempt to iconify any pictures, be sure that the path points to a disk/partition with plenty of free space.



Iconification saves images in a very fast format that can be reloaded in an instant from hard disk.



Iconified pictures can be reopened quickly through the "Open icon" dialogue box.

MISSED THE MAY COVER DISK WITH GEMVIEW 3?

No problem – just turn to page 90 for information on how to order back issues.



MORE FOR LESS

If you think the cover disk version of *GEMView 3* is good, you ought to see the full package! Over and above the flexibility you've already come to respect, it features:

- Support for over 30 image formats including JPEG, TIFF, PhotoCD, GIF, Targa, Degas, IMG, NeoChrome and many more.
- Drivers for the Hewlett Packard DeskJet (colour or mono) and GDOS printers.
- An increased range of processing modules including bitmap half, bitmap double, picture border, horizontal flip and more.
- An on-disk English manual.

Your code-key will also allow you to unlock future revisions of *GEMView 3* at no extra cost. To register your copy and receive all of the benefits mentioned above, just fill in the details and forward an £18 cheque/postal order (made payable to Graeme Rutt) to:

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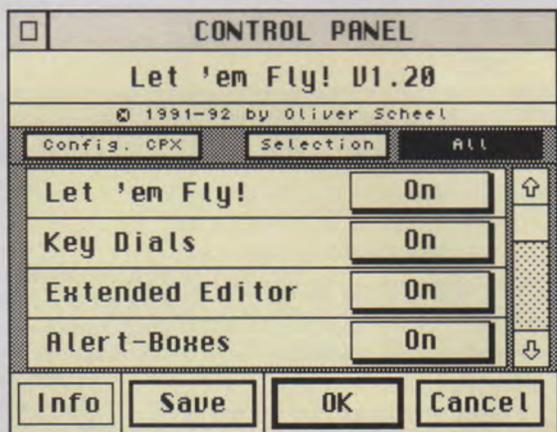
Let 'em Fly is one of the most useful utilities on the ST. Ofir Gal guides you down the right path...

TOP NOTCH

Most GEM programs make use of dialogue boxes to let you select options, find text or choose a font. Dialogue boxes form an important part of the GEM interface and are usually self-explanatory. But when working with a keyboard-driven program such as a word processor, dialogue boxes can slow you down as you have to keep reaching for the mouse to select a button.

The original implementation of GEM allows for the use of the <Return> key as a shortcut for the default button, but other than that, you just have to use the mouse. *Let 'em Fly* is a clever utility that automatically assigns keyboard shortcuts to all buttons in a dialogue box – in fact, once you use it you'll never manage without it. And best of all, it's absolutely free!

Let 'em Fly is fully configurable via this CPX module. Any feature can be switched off if it causes compatibility problems.



INSTALLATION

Let 'em Fly is fairly simple to install. Copy the file *LETEM-FLY.PRG* into your Auto folder and the file *LET_CONF.CPX* into the CPX folder from last issue. If you prefer, you could use the desk



accessory version *LET_CONF.ACC* which you should copy to the root directory of the boot drive. *Let 'em Fly* uses about 30Kb of RAM and the configuration accessory another 20Kb or so. Using the CPX version of the configuration has the clear advantage of using less than 1Kb!

Once the files are in place, reset the system. Ignore the silly message that *Let 'em Fly* flashes up when installed and use the configuration program to switch various features on and off as required. For full details, check the documentation.

KEYBOARD SHORTCUTS

The most obvious feature of *Let 'em Fly* is the keyboard shortcuts that it assigns to any button in a dialogue box.

The shortcut is indicated by an underscore and is always accessible by holding down <Alternate> and

pressing the underlined character. The <Return> key works as normal, but in addition, the <Undo> key is assigned to any button with the text Cancel, Abort, Undo, Quit or No. This means that you can use the keyboard as well as the mouse with dialogue boxes.

If the box does not contain any editable text fields, the <Alternate> key is optional – the shortcuts work by simply pressing the underlined character.

Let 'em Fly also replaces the GEM alert boxes with smaller and nicer looking ones. The alert buttons are given keyboard shortcuts as before and additionally, depending on the number of buttons in the alert box, the first three function keys are assigned as shortcuts as well. Use <F1> for the left button, <F2> for the second button from the left and <F3> for the third. The <Return> and <Undo> buttons can also be used if needed.

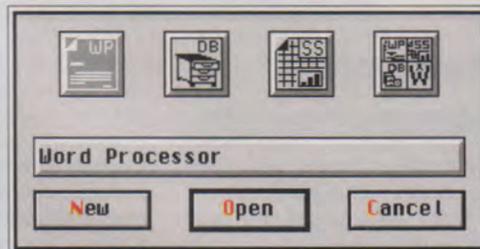
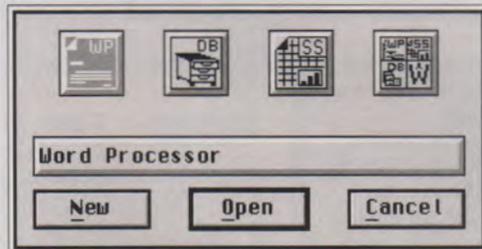
CLIPBOARD SUPPORT

If you use a hard disk, you'll be happy to learn that *Let 'em Fly* supports the GEM clipboard functions. This means that any text in an editable text field can be cut or copied to the clipboard and then pasted into a text field. The keyboard commands to use the clipboard are <Control>+<X> for cutting, <Control>+<C> for copying and <Control>+<V> for pasting.

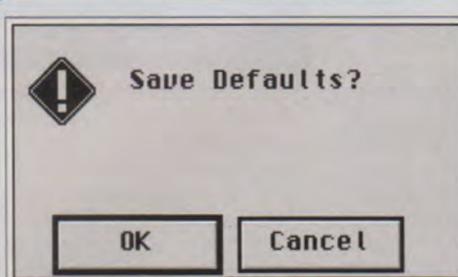
To quickly get a feel for how useful the clipboard can be, try the following:

- Load a GEM program that uses GEM dialogue boxes.
- Type some text into a text field in a dialogue box.
- Press <Control>+<C>.
- Close the dialogue box and open another one.
- Place the cursor in a text field and press <Control>+<V>.
- The text should appear in the text field.

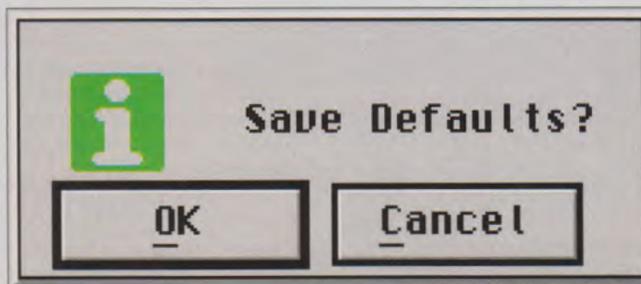
If you don't own a hard disk, you can still benefit from the GEM clipboard which is now supported by a growing number of applications. See the other box about the GEM clipboard and floppy-based systems.

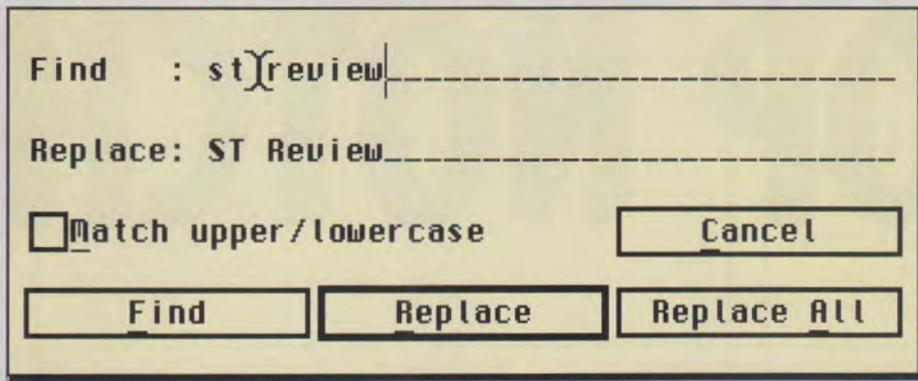


All buttons in a dialogue box are assigned a keyboard shortcut, indicated by an underline or a coloured character depending on the settings.



The standard alert box and the one you get with *Let 'em Fly*. This includes keyboard shortcuts and can be moved around the screen.





The extended editor lets you place the cursor anywhere you like by clicking with the left mouse button.

Let 'em Fly gets around this by taking a snapshot of the screen before the dialogue box is displayed and then restoring the image when the box is closed.

This function requires a little extra memory, so if RAM is short Let 'em Fly will automatically disable this feature. To enable this function, go to the configuration accessory or CPX and set *Send Redraw Off*.

Too much to absorb in one go? No problem - read this article again and then check out even more features in the *read.me* file...

EXTENDED EDITOR

And there's more! As you probably know, many dialogue boxes feature more than simple buttons; some have editable text fields. The "Find" text facility in *Calligrapher* is a good example. Normally you can place the cursor anywhere you like by using the arrow keys and also use the <Delete>, <Backspace> and <Esc> keys to manoeuvre your way around the text. The up and down arrow

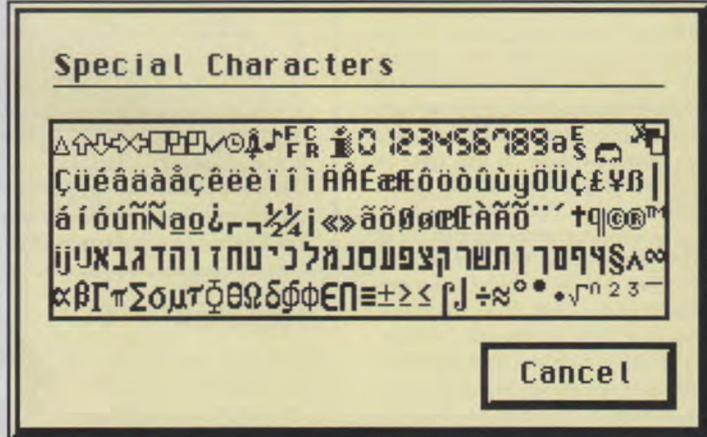
cursor to the top field; pressing <Shift><ClrHome>, to the bottom text field. Impressive, huh!

Sometimes you may need to enter a non-English character that is not available from the keyboard. Simply press <Shift><Insert> and *Let 'em Fly* presents you with an ASCII table; click on any character and it will be pasted into your text field.

OTHER FEATURES

Other less apparent features of *Let 'em Fly* include the ability to move dialogue and alert boxes around the screen. Just click and hold the mouse down over a button-free area of a dialogue box and move it! It is also the only utility that successfully stops those "grow and shrink" boxes you see whenever a dialogue box is drawn or removed from screen.

Further, *Let 'em Fly* can actually speed up your system. Normally whenever a dialogue box is closed and removed from screen, whatever is underneath it has to be redrawn. This can be painfully slow if you're using a graphics program, font-based document processor or DTP package. Try loading a document into *Calligrapher* or *TimeWorks* and opening a dialogue box such as a font panel. When you close the box, you will have to stare at the screen while the program rebuilds the text...



Let 'em Fly reaches parts that the keyboard cannot!

Parameters	Info
Insert mode	Insert
Overwrite mode	Insert
<input checked="" type="checkbox"/> GEM Clipboard On	OK
<input type="checkbox"/> GEM Clipboard Off	AL
Screen elements...	OR
Typeface...	BT
Formatting...	FW
Miscellaneous...	EM
Error messages...	EE
Abbreviations...	AR
File Lists...	EF
Program exit...	EQ
Save setup...	ES

Let 'em Fly replaces the separation dashes in menus with smooth grey lines.

keys or the mouse may be used to move the cursor from one text field to the next and the <Tab> key is of some limited use, moving the cursor to the next editable field if one is available.

With *Let 'em Fly* installed, all of these GEM features are still available, but a host of new options are at your finger tips. First, the cursor can be placed anywhere in the text with the mouse, by just pointing and clicking. Under GEM it has the annoying habit of always ending up at the end of the text; if the text is more than one word, the cursor can be advanced one word at a time by holding down <Control> and using the left and right arrow keys.

You can also jump from the beginning to the end of a field by holding down <Shift> and using the arrow keys. If you hold down <Control> and press <Delete>, all text in front of the cursor will be deleted - not just the one character. Last but not least, pressing <ClrHome> moves the

Block	Search	Window
Delete		^Y
Cut		^H
Copy		^C
Paste		^U

Delete line		^Y
Cut line		^H
Copy line		^C

Set block start		^A

Paragraph format		^Z
Indent left		^J
Indent right		^K

GEM clipboard support is growing. This Everest menu shows the standard keyboard shortcuts for the clipboard functions.

THE GEM CLIPBOARD AND A FLOPPY-BASED SYSTEM

The GEM clipboard was defined by Atari and Digital Research (the developers of GEM) to allow programs to exchange data. Chunks of text or graphics can be copied from one application to another with ease. While it took ages for programmers to start supporting this excellent feature, over the last couple of years a growing number of programs have added clipboard support. These include *Connect*, *Everest*, *Atari Works*, *Papyrus*, *Harlekin* and *STraight FAX!* to name but a few.

The clipboard works by cutting a chunk of data from an application and temporarily storing it on disk - fine if you own a hard drive but frustrating otherwise. The solution? Use a small RAMdisk!

On this month's cover disk you will find a small program called *M32RDE.PRG*. This is a reset-proof RAMdisk created with *RDE*.

The disk already contains a folder called *Clipboard*. Copy the program to your Auto folder and use a program such as *AUTOSORT* to place it at the very top of the Auto folder so that it is the first to load. Reset the

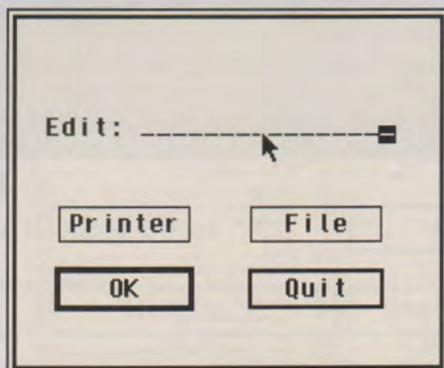
system. Now use the Atari Clipboard CPX from last issue to set the clipboard path to *M:\CLIPBRD* by double-clicking on the Clipboard CPX in the Control Panel.

Next, click on the path text and use the file selector to point to the *CLIPBRD* folder in drive M. Save the settings and the clipboard is at your service - faster than any hard disk could ever manage.



Use the Clipboard CPX to benefit from the additional clipboard functions of *Let 'em Fly*.

The dialogue box used in the examples can be created using *K-Resource* or *WERCs*.



LISTING 1
'inquire object state

```
DEF FNcurob_state(VAL object,VAL flag_mask)
STATIC state,addr&
addr&=FNObjectAddr&(object)+ob_state
state=PEEKW(addr&)
IF state AND flag_mask THEN
  FNcurob_state=-1
ELSE
  FNcurob_state=0
END IF
END DEF
```

BUTTON IT!

TESTING, TESTING

The full program, resources and toolkit files are on this month's cover disk in the *BASIC.TUT* folder. You may like to compile and run the program to see it all in action.

The *y* option used in the program defeats the default window BASIC normally opens. This prevents the use of any PRINTing to screen. If you would like to temporarily output text to screen for debugging purposes add the statement:

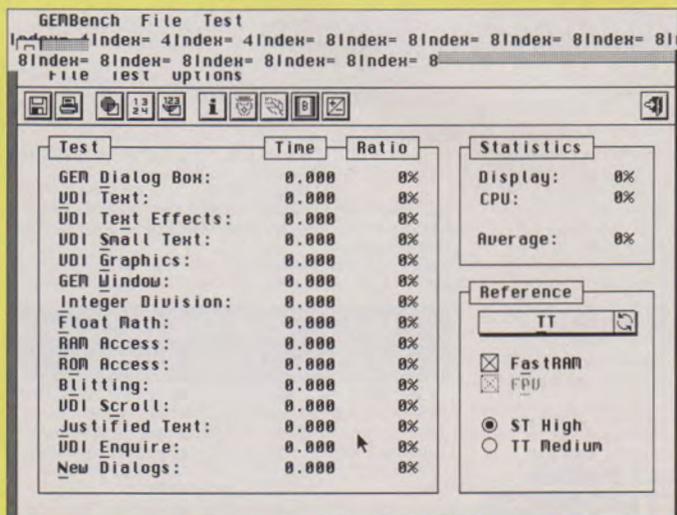
```
LIBRARY "gemdos"
```

This enables the use of *Cconws* which is a low-level routine to output raw text to screen. The call takes a single parameter, a text string. If you need to output numerical values you must convert these to text strings first using *STR\$*. The example below illustrates this:

```
Cconws "Hello"
Cconws a$
Cconws STR$(v)
```

There are a few control codes that you may find useful. These may remind you of printer control codes as they all start with *ESC - ASCII 27*. To enable line wrapping for example, try the following:

```
Cconws CHR$(27)+"v"
```



GEMDOS text output may be crude, but it doesn't need an open window and can survive the nastiest *GEM* errors...

Ofir Gal adds radio buttons to his *GEM* Toolkit...

As you may have noticed, the resource file I have used for this series of tutorials has two radio buttons labelled "Printer" and "File". The AES, with the help of *FNform_do* handles radio buttons automatically. When the user presses one button, the other is deselected. However, when the user finally exits the dialogue box, the value returned by *FNform_do* is the exit object - there is no information about the radio buttons.

To find out which radio button is selected, you need to *PEEK* into the object structure of each button. The way to do this is to find the state mask of the button and *AND* it with the value *mask_selected* as defined in *AES.BH*. The explanation of how the *AND* operator works can be found in last month's tutorial.

Since checking the state of an object is something you're likely to need more than once, it's best to create a function to handle the logic and simply call it when needed. The function is shown in listing 1 and should be added to your toolkit.

It works by first obtaining the memory address of the object then reading the state. The state is the *AND*ed with the required flag; if the result is non-zero the function returns -1, else it returns 0 which indicates that the flag was not set. If you need to find out if an object is selected, simply call this function, pass it the object index and the constant *mask_selected* as shown in listing 2. The function is not shown at its most efficient form but rather in a clear and easy-to-follow manner. *HiSoft BASIC 2* users can compare this with the more compact version found in *TOOLBOX.BAS* in the *HGT* folder. Nevertheless, both functions do the same job and return identical results.

If you load the sample resource file into *WERCs* or *K-Resource* you will see that radio buttons are defined by setting the radio flag and clearing the exit flag. Needless to say, radio buttons must be selectable.

TEXT OBJECTS

So far we have only dealt with buttons and the like. Such objects are usually selected by the user but not much else goes on. Text objects can be editable in which case the user may enter text into them. A dialogue box may contain several such objects and normally you would need to check what was entered. Again, this information is not returned by *FNform_do*. Instead, a more complex *PEEK* is required. As before we will construct a general purpose function that will return the text.

The object specification of a text object contains a pointer to the *TEDINFO* structure. The structure contains various pointers and other data relating to the text, but most importantly the first field is a pointer to the text itself. So in order to read the text in an object one must do the following:

- Obtain the address of the object as usual.
- Read the value stored in the object spec which is the *TEDINFO* address.
- *PEEK* the address to find the memory location of the text string.
- Read the string character by character to its end which is marked with a 0.

A text object always contains a null terminated string - the last character is simply a zero. The function is shown in listing 3 and is separated

The master
of ceremonies,
Jon Ellis,
continues his
work with
Prospero C and
K-Resource...

WIPE OUT!

The last tutorial posed a couple of programming questions to while away the time before the next edition of *ST Review* arrived. The first of these problems concerned the conversion between AES and VDI rectangle formats. Readers of the series since the beginning should have had no trouble solving this one.

One possible solution appears in Listing 1. The second question referred to the return value of the `AES_form_do()` call. If the user terminates a dialogue interaction by double-clicking on a `TOUCHEXIT` object, `form_do()` returns the index of the object with bit 15 set to 1. How should our dialogue-handling code cope with this possibility?

The answer is simply to mask off bit 15 before trying to interpret the object index. In the Christmas edition of the tutorial, we introduced the bit-wise-AND operator, "&". This can be used to strip off the unwanted data:

```
button = button & 0x7FFF;
```

0x7FFF is the hexadecimal representation of the binary number 0111111111111111 which when ANDed with our return value will clear bit 15 and leave the rest of the value unchanged. C supports lots of other operators for processing numbers at the bit level; see the "Bit Twiddling" box.

ON WITH THE SHOW

Returning to the development of our GEM back-up file deletion program, we are now in a position where we can add the functional code developed several months ago to the interface routines that we have concentrated on recently. With a little bit of code to weld the pieces together, we have a working program.

The source code for the program is in the *C.TUT* folder on the cover disk as *GEMPURG2.C*. Remember when playing with this program that it really will delete files without any subsequent warning messages, so be

careful what input you give it! In particular, asking it to delete "*" from the root directory of your hard drive is a very bad idea...

There are some new features in the glue code that need explanation. We will look at a few of them now, and round off the examination in the next issue. Listing 2 shows the changes made to the `main()` routine to accommodate the functional file deletion code.

The previous declaration of `get_purge_details()` has been changed so that it now accepts two arguments. These are the default values to preload into the "Path" and "Type" fields in the dialogue box. Once the user has finished the dialogue box interaction, these strings are updated from the input data, ready for passing to the deletion code. The processing of the path data after the function call ensures that it lacks a trailing backslash that would confuse the code in `purge()`.

To provide an intuitive starting value for the "Path" field, the program obtains the pathname for the current folder using `getcwd()`, and writes it into the path array. `getcwd()` needs to know the size of the array used to hold the pathname. This is calculated using `sizeof`:

```
if (getcwd(path,sizeof(path)-1) == NULL)
```

Although `sizeof` looks like a function call, it is actually a C operator that is used to determine the size of the memory representation of a variable or type. The size is calculated in units equivalent to the char variable type. In *Prospero C*, `sizeof(int)` is 2, because integers are 2 bytes (16 bits)

NEW LIBRARY FUNCTIONS

getcwd(buffer,size): This function obtains the pathname of the current working directory. This will normally be the same as the top-most open window on the Desktop. The inputs are a pointer to a character array into which to write the path details, and the size of the array. The return value is a pointer to the start of the path string or NULL if there is any error, including the case where the buffer is too small to accommodate the path data.

sprintf(buffer,...): `sprintf()` works just like `printf()`, except that instead of putting its output onto the screen, it writes it as a null-terminated string into the character array. This string can then be passed to other functions like `form_alert()`.

getdisk(): This function returns an integer that indicates the currently active disk drive. 0 means drive A, 1 means drive B and so on.

Of these functions, neither `getcwd()` or `getdisk()` are part of the ANSI-standard library, though something that does the same job can be found in most C libraries. `sprintf()` is an ANSI function.

LISTING 1

```
void AES_to_VDI(short,short,short,short,short [4]);
void VDI_to_AES(short [4],short *,short *,short *,short *);

/*
** Function to convert an AES rectangle specification into
** the VDI format. The function accepts five arguments:
** a pointer to a four-element array that is to hold the
** VDI format, and the standard x, y, w, h variables of the
** AES area. There are no function returns - the output
** is written straight into the output array.
**
** Usage: AES_to_VDI(x,y,w,h,array);
**
** void AES_to_VDI(short,short,short,short,short [4]);
*/

void AES_to_VDI(x,y,w,h,array)

short x, y, w, h;
short array[4];

{
    array[0] = x;
    array[1] = y;
    array[2] = x + w - 1;
    array[3] = y + h - 1;
}

/*
** Function to convert a VDI rectangle specification into
** the AES format. The function accepts five arguments:
** a pointer to a four-element array that holds the VDI
** rectangle, and pointers to x, y, w, h variables into
** which to specify the AES area. There are no function
** returns - the output is written straight into the output
** array.
**
** Usage: VDI_to_AES(array,x,y,w,h);
**
** void VDI_to_AES(short [4],short *,short *,short *,short *);
*/

void VDI_to_AES(array,x,y,w,h)

short array[4];
short *x, *y, *w, *h;

{
    *x = array[0];
    *y = array[1];
    *w = array[2] - array[0] + 1;
    *h = array[3] - array[1] + 1;
}
```

BIT TWIDDLING

Part of C's power derives from its capability for low-level processing of data. Essential to this is the ability to play with values at the level of individual bits. To this end, C has a rich set of bitwise operators. We have already met the bitwise-AND operator, "&" – now is a good time to introduce the rest.

In addition to AND, bitwise OR, NOT, and exclusive OR operators are also provided:

```
lower = upper | 0x20; /* Set bit 5 by ORing with 0x20 */
```

```
black = ~white; /* Invert the bits using NOT */
```

```
image = screen ^ sprite; /* Write sprite data in EOR mode */
```

These operations follow the normal truth tables as in figure 1. To round off the collection, C also has two shift operators: << and >>. These shift the bit-pattern of their first operand left and right respectively by the number of bits indicated in their second operand. As an example:

```
high_nibble = byte >> 4;
```

shifts the value of byte four bits to the right, and stores the resulting pattern in **high_nibble**.

In some C programs, particularly those written a while ago, the shift operators were used as a way

to do quick arithmetic. This use is based on the fact that a left shift of 1 bit is equivalent to multiplying a number by 2 (and a right shift to division by 2). Since the shift operators compile to very efficient machine code, it was often faster to write code in this way than to use the more general multiplication and division operators. Most modern C compilers are smart enough to spot this time-saving trick, and automatically optimise multiplies and divides by powers of 2 into shifts. Given this, it is better

to make the programming intention clear by using the straightforward arithmetic operators, and leave this sort of code optimisation to the compiler.

At the beginning of the series we noted that C provides a shorthand way of expressing constructs like:

```
total = total + postage;
```

using the **assignment operator** form:

```
total += postage.
```

It should not come as too much of a shock to learn that, with the exception of the bitwise-NOT operator, there are shorthand forms for all of the bitwise operators. These are &=, |=, ^=, <<= and

Bitwise OR		Bitwise EOR		Bitwise NOT	
	0	1	^	0	1
0	0	1	0	0	1
1	1	1	1	1	0

Figure 1: truth tables for the new logic operations OR, EOR and NOT.

>>= for AND, OR, EOR, left shift and right shift respectively.

Bitwise operators may seem a little obscure, but it is surprising how often the "&" and "|" operators at least are used in GEM programming. Many of the properties of OBJECTs are controlled by variables best manipulated at the bit level.

Finally, a word of warning. Bit-twiddling is only meaningful when applied to certain kinds of data. C restricts use of these operators to integer data types (char, int, unsigned int, long, short), and the compiler will flag an error if you try to apply them to other types of data such as pointers or floating-point variables. To avoid problems when porting code onto other compilers, it is safest to confine use of the shift operators to unsigned quantities.

LISTING 2
void main()

```
{
  int button;
  char path[41], extension[6], buffer[64];
  char *s;

  if (initialise_GEM() == FALSE)
    return;
  if (initialise_resource("GEMPURGE.RSC") == FALSE)
  {
    form_alert(1, "[3][Could not load resource|file.
    Where is it ?][Abort]");
    shutdown_GEM();
    return;
  }

  if (getcwd(path, sizeof(path)-1) == NULL)
  {
    path[0] = 'A' + getdisk();
    path[1] = ':';
    path[2] = '\\0';
  }

  button = get_purge_details(path, extension);
  s = path + strlen(path) - 1;
  if (*s == '\\')
    *s = '\\0';
  if (button == TRUE)
  {
    purge(path, extension);
    sprintf(buffer, "[1][ |Files deleted: %d.][ Done ]",
    found);
    form_alert(1, buffer);
  }
  else
    form_alert(1, "[3][The Cancel button was selected.
    |Program aborted.][Quit]");

  shutdown_GEM();
}
```

wide, and **sizeof(long)** is 4. For arrays, the result of a **sizeof** is the number of elements multiplied by the size of an element, so for the variables:

```
char buffer[73];
int list[21];
```

sizeof(buffer) would yield 73, but **sizeof(list)** would be 42. In Listing 2, one is subtracted from the **sizeof** result to leave space for the string-terminating null.

The code includes the facility to cope with an error return from **getcwd()**, such as might be caused by very deep nesting of folders on a hard disk. If **getcwd()** returns NULL, the program reverts to the root folder on the current drive.

The final new item in Listing 2 is the use of the **sprintf()** function. This generates output like **printf()** but makes a null-terminated string out of

it. The code uses **sprintf()** to insert numerical results into a string formatted for display using **form_alert()**.

PROBLEMS, PROBLEMS

For this month's C brain-teaser, here is a code fragment that does not work as the programmer intended:

```
if (bits & bobs)
  do_something_really_interesting();
```

Most of the time the if test operates as was intended: something really interesting happens when both variables **bits** and **bobs** are non-zero. The problem is with test values for some pairs such as 192 and 7. Can you explain what is wrong, and why it manifests itself in this fashion? Answers next issue, along with an explanation of the remaining new code from the file purging program.

SEPTEMBER ISSUE IS SOLD OUT...

... but we still have some of the cover disks! If you missed out on *Prospero C* and would like a copy of the disk along with the first tutorial, send £2.50 (payable to Europress Enterprise) to: *Prospero C* Disk, ST Review, Europa House, Adlington Park, Macclesfield SK10 4NP.



FAMOUS LAST WORDS

Roger Derry rounds off our series of Calligrapher tutorials with a look at FlexText and some useful hints 'n' tips...

If you've been following our tutorials, you'll probably have ventured quite some way into *Calligrapher*. Even so, it's one very powerful program so this final tutorial will give you some hints and tips that will save you having to learn them the hard way!

The spacing between letters (tracking) of headings can be widened by placing a ruler above and below the line without a carriage return between them. Justification should be set for text to have a straight edge on both sides and intra-word justification (in the Display Options dialogue box) should be set to "allowed when needed". You can then use the column position arrows to adjust the position and width. This can be

especially useful for headings. Hard spaces (<control>+<space>) should be used.

When you have .IMG graphics that are the right size and resolution for your printer, select *Integer X* and *Integer Y* scaling within the "customise" dialogue box. *Calligrapher* scales the graphics on-screen but prints them without scaling. This is important when your graphic contains dot patterns that will otherwise have odd "aliasing" patterns when printed.

If you want to precisely size graphics, set the ruler's column width arrow and click on the graphic so that it reverses. Hold down the <Alt> key and size the graphic (with left mouse button held down) until the column edge markers stop the graphic being any wider. Release the mouse button and the graphic will be sized to the exact value.

You can use *Calligrapher's* spell checker to check ASCII text files. Import the file using "IMPORT ASCII para based". Check the text and then export as ASCII again.

Entire documents, lay-outs or graphics can be kept as an abbreviation. Highlight what you want to abbreviate and copy it using <Alt>+<C>. Click on *Abbreviations*,



Rulers have an extra use - setting the spacing, or tracking, between letters in headings.

MISSED THE MARCH ISSUE COVER DISK WITH CALLIGRAPHER?

No problem - just turn to page 90 for information on how to order back issues.



YOUR FLEXIBLE FRIEND!

The *FlexText* pak provides a simple but effective way of making headings more interesting by bending text around a circle or along a way line. In each case the "controls" are small circles that you move with the mouse until a suitable shape is produced. In the arc mode, a radial line sets where the text starts. There is also a small cross that controls the centre of rotation when using the buttons at the very bottom of the control panel.



FlexText with examples of the line mode (right) and bézier mode (top). The two arc modes are used to place text inside and outside a curve...

Enter the text at the bottom of the window. Click on the next button to change the font. Use the left and right arrows on each of the next three buttons (font size, fill and line type) to change their settings. Every time you want to see the result of a change, click on *UPDATE*.



... and here's the final .GEM file in Outline Art!

"Options" produces a pop-up menu. Load, Save, the two Clears, Cancel and Quit are as you would expect. Scale and Translate let you resize and move GRABbed or LOADED drawings. Grab "fixes" your text, allowing you to add more text in a different place until you have built up your complete design. The arrow buttons move it in the indicated direction to align it with any imported drawing.



Here's the result of loading a simple .GEM file into Calligrapher and adding some text in Cooper Black...

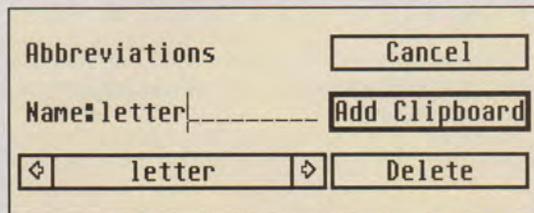
enter the name you want and click on *ADD CLIPBOARD*. When you run *Calligrapher*, all you have to do is type in the name followed by <Control>+<A> - in a few seconds your standard lay-out will appear.

Material in adjacent columns can be aligned using blank lines. Final adjustments to within 1 point can be made by changing the point size of one blank line!

Create a blank document called *DEFAULT.CAT*. This will be loaded every time you run *Calligrapher*. Fill it with a standard lay-out using the abbreviation facility, defining all eight of its "Tag" slots using your most often used fonts. If you want to change, say, the bold tag in a new document, all you have to do is place the cursor on an example of the bold font and change it. An alert box then asks you if you want to change all the other occurrences of bold font.

No Tag Style	
Normal	F1
Bold	F2
Italic	F3
Bold Sub head	F4
Font 2 Heading	F5
Font 2 subheading	F6
Big Font	F7

Using a DEFAULT.CAT document can help you when you need to change type styles.



Use the abbreviation facility to cut and paste entire layouts...

ALL THE EXTRAS!

*This is your final chance to grab some of
Calligrapher's add-ons...*

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Manual	All 368 pages, including a ring binder	£19.99
Upgrade Kit	Complete Calligrapher Professional disk set, including English dictionary, Thesaurus, all five fonts and all printer drivers (including BJ10e, NEC P6, Ricoh 1200 and PostScript)	£24.99
Both		£34.99

THE PAKS

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LAST CALL!

- **OFFER ENDS AUGUST 31, 1994**
- **All 82 fonts can be found listed in issues 25 and 26.**
- **Information on FlexText on opposite page.**
- **If you have a hard disk and at least 2Mb of memory, Calligrapher displays vector typefaces on screen.**
- **You can only install one extra font if you have a floppy disk system in addition to those provided with the upgrade kit. With a hard disk system, the only limitation is memory!**

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<input type="checkbox"/>	UPGRADE KIT.....	£24.99
<input type="checkbox"/>	MANUAL AND KIT.....	£34.99
<input type="checkbox"/>	FLEXTXT.....	£9.99
<input type="checkbox"/>	FORMULA EDITOR.....	£14.99
<input type="checkbox"/>	LABELS.....	£9.99
<input type="checkbox"/>	BARCODES.....	£24.99
<input type="checkbox"/>	GRAMMAR.....	£19.99
<input type="checkbox"/>	INDEXER.....	£9.99
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<input type="checkbox"/>	GERMAN.....	£14.99
<input type="checkbox"/>	ITALIAN.....	£9.99
<input type="checkbox"/>	SPANISH.....	£14.99
<input type="checkbox"/>	ONE FONT.....	£17.99
<input type="checkbox"/>	THREE FONTS.....	£34.99
<input type="checkbox"/>	TEN FONTS.....	£79.00
<input type="checkbox"/>	ALL FONTS.....	£149.00
<input type="checkbox"/>	FONT CODE (S).....	

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The intro - hey, look at all that colour!



The main menu - nice and straight forward.



FLYING VISIT

Graeme Rutt travels down to Bristol at the speed of sound - without even leaving his chair!

The Chameleon is probably the largest Atari-specific board that I've had the pleasure to log on to. Based near Bristol, it'll be a local call to many of you in the South-West but is well worth the extra money for those of us further afield.

The Chameleon is a board that pushes Atari hardware to the limits. Linked across two sites with its sister board, The Holodeck, it uses no



fewer than five Atari, several hard disks, a Datanet network and home-grown interfacing software. The upshot of which is over 1 Gigabyte of storage and two telephone lines for the caller to use. Smart!

WHAT'S ON OFFER?

Chameleon uses the highly-flexible QBBS software - in fact it's a testing



Mercury A - the non-techie messaging network. Kewell!



The file areas - beam me up...

while Mercury Net has a myriad of non-technical message areas. There are also Startrek and Amiga sections - but I didn't dare venture into either of these, for roughly identical reasons!

File areas are as excellent and wide ranging as any I've

seen on an Atari-based board. This "same-but-not-better" file selection is becoming more and more prevalent as many BBSs, Chameleon included, start to use networks to share files with other BBSs. That said, those of you with a hankering for pointed ears and strange ribbed foreheads couldn't find a better collection of Trekkie files anywhere.

The main menu has the usual routes to mail, email and files and also entries for the on-line games, BBS information, your own set-up (see the *How To* box) and several others. It's worth noting that there are several attractive offers for subscribers under the "Information" menu with a minimum suggested donation of £5. These include laser monochrome and deskjet colour printing, send and receive fax facilities and BBS files through the post.

MOVING AROUND

There are a startling array of message areas, some 70 at least, ranging from Beavis and Butthead discussion to Atari ST programming. I made the obvious choice for a quick read-through - kewell! The message areas are linked to a number of national and international networks.

The local and Atari area is mainly for technical messaging regarding the Atari - it contains local, Turbonet and NeST message areas. The Fidonet A network covers a range of topics both technical and otherwise

As well as the standard file and message areas there are two other associated entries in the main menu. The first is the *Jekyll* file transfer protocol, a remarkable beast which facilitates uploading, downloading and chatting with the Sysop, all at the same time. The other is the essential QWK off-line reader.

Give The Chameleon a try. It's an excellent bulletin board with a wide range of message areas, files and useful facilities. I'll see you next month with a report on a BBS that's just a little bit *different*.

SYSTEM INFO

Phone Number: 0454 881095
(Yate, Nr. Bristol)

Sysop: Martin Stacey

Times: 24 Hours

Speeds: v32bis (14400)
with v42bis

HOW TO... YOUR SET-UP

Most, if not all, bulletin boards have an Options menu for personal settings. It's given a variety of names by different Sysops: Your Setup, Utility Menu, Change Settings and so on. Chameleon uses the term "Profile". The options vary from board to board but there is a hardcore of entries that you'll always find.

High among these will be your personal details - address, telephone number, password and the like. You'd be well advised to change your password on a regular basis. On Chameleon, just hit <P> from the Profile menu to do this.

The number of lines your terminal can display on-screen, whether to clear or scroll the screen, and the graphics mode depends on your preferences and

your terminal's capabilities. Change these using <L>, <S> and <G> respectively - I use 24 lines (the default), no screen clear and ANSI emulation.

The menu optimiser is an item cropping up on a few BBSs at the moment. It uses special control codes instead of space characters to speed up menu formatting.

Try this option, but be prepared to turn it off if your menus are no longer displayed clearly. On Chameleon, you'll find this entry under <O>.

And finally, the Editor entry - you'll find this facility on more and more BBSs. It uses various terminal emulations to give you a much better class of on-line editor. Try it out but remember - you shouldn't really be doing much on-line editing with QWK available!

FRONTIER FREE

Mark Baines looks at TurboNet, the second largest Atari-based network...



High powered stuff! A recent discussion in the International Technical conference...

Two issues ago, *Frontier Free* introduced you to non-profit making networks run by amateurs who are interested in exchanging ideas and software with other like-minded individuals. These are the Bulletin Board Systems or BBSs. This month examines *TurboNet*.

POTTED HISTORY

TurboNet is an international network although not as large as *NeST*. It is also based in the UK with its central hub being the <<<InterNet>> BBS run by Ben Van Bokkem. *TurboNet* is divided into three Zones – Europe, the United States and Canada, where Europe consists of the UK, Germany, Denmark and the Netherlands. In total there are 67 nodes, the majority being in the UK and US.

TurboNet has its roots in the first decent ST network, running under the original *FoReM* BBS system software and started by David Chiquellin in the United States. The *FoReM* software was incompatible with other network software and so *FoReM* BBS Sysops could only exchange messages amongst themselves. This network was called *FNet* and it quickly grew to include several hundreds of computers. After a while, the European section of *FNet* developed some autonomy with a few UK-only message areas and called itself *EuroNet*. In 1990 the <<<InterNet>> BBS became the central hub for exchanging messages within *EuroNet* and swapping

messages with the US-based *FNet*.

New BBS software emerged, demands on the system increased and some disagreements broke out over the best way to implement changes and improvements to the network. At about this time, in 1991, a core moved away from *FNet* and formed *NeST*. The remainder stayed as *EuroNet* within *FNet* for a short while until new BBS software was developed to replace the aging *FoReM* program. This new program was called *Turbo Board* and after taking it on board, the remains of *EuroNet* became known as *TurboNet*. In 1992 it made a complete break with *FNet* in the US and became an autonomous Atari-based network like *NeST*. Ben took over the development of the BBS software and wrote *T-Mail* which replaced *Turbo* in 1993/4.

FEATURES

The *TurboNet* is free for users with easy access through the many UK nodes, many of which are also nodes for other networks such as *NeST* and *FidoNet*. Even so, messages still can't be exchanged between networks except for a few rare echoes. There are the usual three main areas of interest – message areas, files to download and on-line games.

There are 26 different message areas or echoes that cover a wide

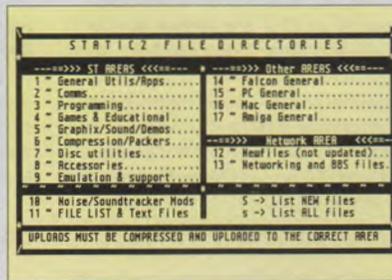


Help and advice is on hand for new programmers within the Programming echo.

area of interest, perhaps the most popular being the *General Chat* area where any topic not covered elsewhere is allowed. This area is frequented by some interesting characters! The *International Technical*

Chat and *Programming* areas are also particularly strong. *TurboNet* is a very good source of program and data files, with links to the US and Germany maintaining up-to-date file echoes. *TurboNet* boards are often the first to obtain the latest German software and comms programs. On-line games are popular and *Space Empire Elite* has a strong presence on *TurboNet* with its own message area where players can discuss tactics.

Ben's original aim for *TurboNet* was "...to set up a fast, reliable, and efficient network with facilities to make things easier for the Sysop, and less time-consuming for the user." Two years on, he is to be congratulated for the successful realisation of that ambition.

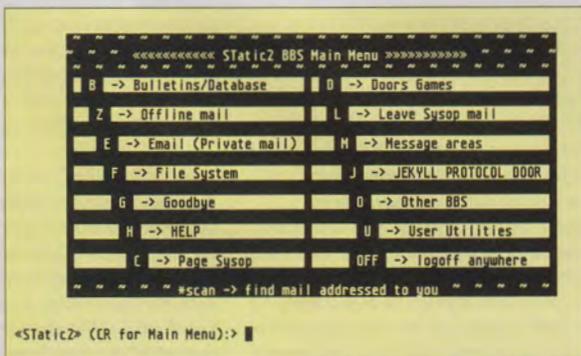


Plenty of File Areas to choose from here – including Falcon.

POPULAR ECHOES

- T_GNCHAT: General European chat area
- T_NEWNET: International general discussions
- T_INTECH: International technical discussions
- T_TRADER: Sale and wants base
- T_ATARIS: Atari European general discussions
- T_GRAFIX: General graphics chat area
- T_LEXCOR: Lexicon animations and graphics
- T_PROGER: General programming discussions
- T_BBUSER: BBS users general queries
- T_CCOMMS: International communications discussions
- T_POINTS: Discussions and help for point systems
- T_FZTSUP: Freeze Dried Software support base
- T_IGSSUP: Instant Graphics and Sound support
- T_GAMERS: General discussion on computer games
- T_STMIDI: ST MIDI and music discussions
- T_EXPLOR: Atari Explorer On-line magazine

A typical TurboNet BBS Main Menu. Select "F" to get some files.



ASK THE EXPERTS

Another month, another mailbag – ST Review's panel of experts are here again to answer your questions...

problems have been reported. It may be worth removing all programs from your AUTO folder and trying again. Alternatively, try reordering the files in the AUTO folder; some programs like to be first, some like to be last. If you have GDOS or SpeedoGDOS installed, it must run after NVDI. As for Lapcat, this program seems to contravene the Atari guidelines since it works in non-standard screen modes. Consequently, I am not surprised that you are experiencing problems with it. Again, a resort of the AUTO folder and a lookout for any incompatibility with desk accessories may help to cure this. Good experimenting! Ofir Gal

PROTEXT PROTEST

 Your reviews of NVDI have commented on its remarkable compatibility but I'm having problems!

My set-up? Falcon030, 4Mb of RAM and an 87Mb hard disk. The problems? When quitting *Protext 6* I get between two and four bombs and an on-screen image of a very large desktop (although the computer keeps running and seems to be closing files as usual).

I've followed the Install procedure for NVDI and it seems to me that it's too fast for its own good when quitting *Protext 6*!

Coincidentally, I can't run *Lapcat* with NVDI installed. Most frustrating because when I'm backing up from my Amstrad Notebook 100 (an excellent machine running *Protext*) I have to first disable NVDI!

Am I doing something wrong or is there something wrong with one of the software packages?

Andrew Tagger, Pontefract

I am sorry to hear that you have problems with NVDI as I find it very reliable. The problem with Protext is not related to NVDI as far as I can tell – there are many Falcon owners who use a similar setup with Protext and no

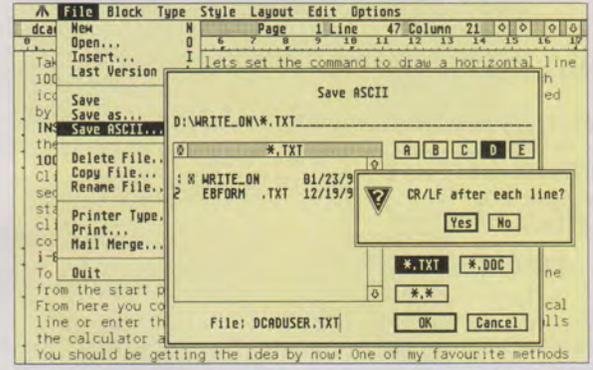
FEEDS 'N' RETURNS



I've been using *Write ON* and *EasyBase* to print out mailshots for our local genealogy group. Sometimes when I exchange ASCII files between these two programs the text formatting goes haywire! Is this a problem with *EasyBase* or *Write ON* or is there a simple explanation?

Martin Chester, London

Your problems are almost certainly caused by two hidden characters used to control the formatting in ASCII text files. These elusive characters are named after the old typewriter actions Carriage Return (CR) and Line Feed (LF) and represented by the decimal ASCII values 13 and 10 respectively. They usually travel in pairs so if you really want to see what the little critters look like, open the ASCII table CPX included on last month's cover disk or look at the file directly using Harlekin or any disk editor capable of displaying hidden characters. CR and LF characters are necessary to display ASCII files correctly



Problem solver – Write ON exports ASCII files with or without line feeds and carriage returns.

from the desktop Show option otherwise paragraphs appear as truncated single lines on screen.

If you intend to import ASCII files into another application, check whether it reformats the text. Both Timeworks and Calamus reformat imported text so any CR/LF characters just get in the way and cause extra editing work to remove them.

ASCII text files can be read by most applications, even on other hardware platforms, which makes ASCII a truly universal format. Text styles such as bold, italics and the like are lost but the main text should remain intact. It's much easier to solve formatting problems when you know about the hidden characters. The general rule is this: turn the CR/LF option ON if you intend the file to be viewed from the desktop and turn the CR/LF option OFF if the ASCII text is destined for use in an application that reformats text.

Joe Connor

COLOUR ADDITION



At present I have a 1040 STF with TOS 1.00, which I use with a monochrome monitor. I would like to connect it to a TV (I can't afford a colour monitor) so that my son can play games on it. Is there any way of doing this? I hear things about "SCART" and "modulating", but I am just rather confused now.

Gina Green, Monmouth

If you have a television with a SCART socket (about two inches long with twenty holes) it's just a case of getting the appropriate cable. Any good independent computer shop will be able to order you an ST to SCART lead, or maybe you'd prefer to give one of our advertisers a ring.

However, if your TV lacks the SCART input, you are in a much trickier situation. The ST monitor

port supplies RGB or composite, whereas normal TVs expect a modulated signal through their aerial socket. At one time it was possible to buy external modulators for early STs, but these haven't been available new for a number of years. However, Silica on 081-309 1111 might be able to help... Niall Grimes

CD-ROM TODAY



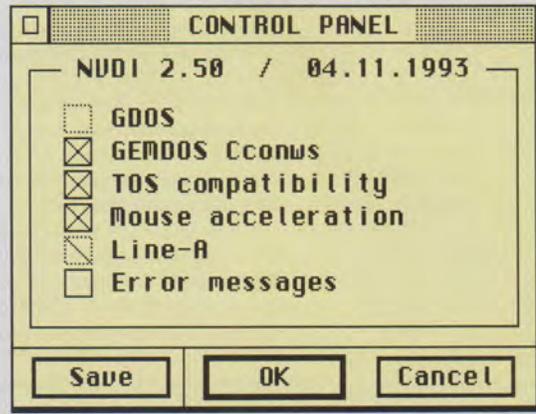
As a newcomer to computers I try and read all sorts of magazines to improve my knowledge and understand the jargon. It seems as though we are in a CD-ROM explosion, certainly in the PC world and I wonder if this medium will extend to the Atari by way of host adaptors or The Link. It certainly seems a very good way of transmitting information. Personally, as a registered geriatric, I have no desire to own a hard drive but having looked at prices find that a case and power supply for a hard drive costs around £70, while a PC desktop case with 200W power supply costs less than half of that. Would it be possible to mount my second floppy and a CD-ROM drive in such a case provided of course the necessary interface was available?

My current machine is a 1040 STE with 2Mb memory and TOS 1.06, the one that always requires the STE-FIX program. I also use a colour monitor.

Please accept my apologies in advance if my questions are elementary – it's quite a job trying to learn a new hobby, and I certainly have a lot to learn!

R. Elks, Derbyshire

The CD-ROM has already arrived! You can hook any SCSI-compatible CD-ROM drive such as the Apple CD300 to your STE's hard drive port using a suitable host adapter such as The Link or Translator. You'll also need the latest EXTENDOS drivers from System



Almost perfect – but NVDI features a TOS compatibility mode which may help in some cases.

RESOURCEFUL BASIC

A couple of answers to BASIC programming with GEM from our resident expert, Ofir Gal...

I have been following the tutorial on using resource files from *HiSoft BASIC*, with interest and success so far as it goes. I am looking forward to finding out the "proper" way to find out what text the user entered in a dialogue box. My trial and error solution works, but isn't particularly elegant.

I have found that there is a problem with programs that load a resource file using *FNrsrc_load* and then try to read in a data file using the *BASIC OPEN* statement. The data file comes back with an immediate end-of-file condition.

This can be avoided by some code I picked up by chance in another situation that uses a temporary disk transfer address for the *FNrsrc_load*, which means carrying out the listing below.

I imagine that this is well known among those who use GEM programs and *HiSoft BASIC* more than I do, but it might save some people some head scratching.

Martin Taylor, Herts

```
DEFINT a-z
DIM mydta(22)

dta&=FNfgetdta&      ' get the standard dta address
fsetdta VARPTR(mydta(0)) ' set temporary dta for rsrc_load

IF FNrsrc_Load("c:\stock.rsc")=0 THEN
  junk=FNform_alert(1,"[3]Error loading rsc file.[Abort]")
  SYSTEM
END IF
fsetdta dta&        ' restore the standard dta address

OPEN "c:\prt.out" FOR INPUT AS #1 LEN=10000

WHILE NOT EOF(1)    ' eof now works correctly
  LINE INPUT #1, item$(i)
  INCR i
WEND

CLOSE #1
```

Thank you for the tip. You have indeed isolated a clash between HiSoft BASIC and certain TOS versions, a problem that does not occur with HiSoft BASIC 2 where much of the code has been either optimised or totally re-written.

As for getting text out of AES objects, I think you will find the answer in this month's tutorial...



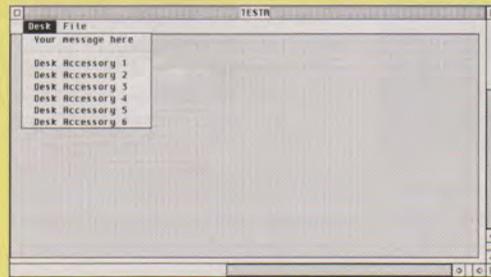
I would like to start off by saying what a good magazine you are producing, and I'm not just saying that so you will print my letter. Your magazine really does have some brilliant reviews and excellent cover disks – some of the programs you have given away are really quite something.

What I need to know is: how do you produce a menu bar in *HiSoft BASIC* as whenever I make one it always messes up! Could you give me a small listing which would produce a working menu bar?

Robert Brown, South Humberside

The simplest way to produce a menu bar is with a resource editor.

Unfortunately, I cannot include a listing here as this subject is far too complex for a letters page. Generally speaking, a menu bar is installed using the menu_bar AES call. Menu handling though is much more complex since you are required to interpret AES messages. If you follow the BASIC tutorials, this very subject will be covered in detail as part of our "Working with GEM" series.



Scroll your own – resource editors like K-Resource and WERCS are normally used to create menus.

Solutions (recommended) or the MiNT drivers supplied with programs like the ICD Pro Utilities, Photo Show and Studio Photo all of which we've reviewed recently.

An internal CD-ROM drive is the same size as a standard bare floppy disk drive and many PCs have both fitted inside either tower or desktop cases. However, I wouldn't advise you to buy a PC tower case, unless you know what you're doing and are prepared to do a lot of extra work. They were designed for the more or less square PC motherboards so you'll have trouble getting the STE motherboard inside. A better solution would be the System Solutions tower case.

It costs more but it was specially designed for Atari computers so you'll have no trouble making everything fit, including second floppy and CD-ROM drives. See our photographic step-by-step on page 22.

Finally, I'd question your wisdom in opting for a CD-ROM drive before a hard drive. Adding a hard drive would give you so much more in terms of performance as well as offering faster and more convenient data access. With prices dropping – you can

get a small 40Mb drive from System Solutions for under £200 including interfaces and driver software – I'd recommend that you go for the hard drive first. The Atari CD-ROM market is still in its infancy and apart from PhotoCD and a handful of PD/shareware titles, there is little you can get your teeth into at present.

Andrew Wright

MONITORING SOUND



I have owned an Atari 520STFM for quite some time and have just been given a Mitsubishi colour monitor but unfortunately it's a display monitor only and doesn't give me an audio output. Is there anything I can purchase or adapt to give me sound from the Atari for games and the like, and what ports, if any, I can use on the Atari other than the monitor port?

K Hutchins, London

There is a very cheap way to do this, but it does involve a little bit of soldering. Pin 1 at the Atari end of the cable carries sound and by wiring this to a phono plug you can redirect output through most

hi-fi. So to take things step by step:

- Slide back the casing on the Atari 13-pin DIN plug and locate pins 1 and 13 (a diagram of the port is printed towards the back of your ST manual).
- Solder the core of your microphone cable to pin 1 and the shielding of the cable to pin 13 (ground). Pop the phono plug on the other end and feed it into the CD/Line-in socket on your hi-fi. Of course, it's equally possible to wire up to a microphone socket for use with headphones.

Warning: if you have any doubts about your ability to carry out the above procedure, give it a miss. It's not worth frying your ST for a little bit of sound!

A second possibility (and a slightly more straightforward one) is a sound cartridge. These devices were designed to give the standard ST stereo output, but should do an equally good job of redirecting sound to a hi-fi. As far as I know neither the Monster Stereo Cartridge or Microdeal's offering are still available new, but you could try placing a "wanted" advert in the classified section of ST Applications or MicroMart.

Nial Grimes

CAN'T COPY...



I wonder if you could please help me with a disk drive problem. I own a Mega 2 and recently I've been having trouble making a copy of a disk. There's no problem in reading the disk by using *Fastcopy* or the back-up program supplied on the cover disk, but when I come to write to the new disk it stops on track 44.

Also if it helps, I can format a disk using *Fastcopy* but not from the desktop. I find it all very confusing.

Many thanks for a great mag and your time for reading this letter.

B.A. Green, Kent

You're not the only one who finds this confusing – we're absolutely stumped! With a Mega 2, you have plenty of RAM for *Fastcopy* to duplicate the disk in one session and not need to stop part way through. It is also very difficult to understand why you can't format a disk from the desktop. There's a £15 cheque available for the first reader who can come up with a suitable explanation – and comments like "there's a serious system problem" don't count...

Vic Lennard

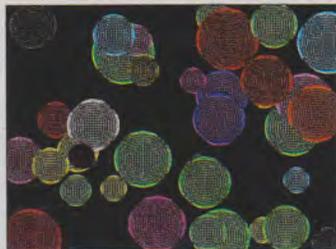
Here we are again
– your letters, my
replies and a £25
cheque flying
out the door to
someone...

LETTERS

SHAREWARE BITES BACK

I read the letter from P. Fletcher (May issue) with some concern, and I thought I would respond to it by trying to correct some of his errors. I should say in advance that I have never released any programs as shareware, so I have no personal axe to grind here.

Firstly, he says that shareware authors appear to be greedy, asking £5 to £20 for "trivia" like alternative



Class act – utilities such as Steve Pedler's *Dark Lord* screen saver vastly enhance a basic Atari computer.

GOT SOMETHING TO SAY?

ST Review is your magazine and putting pen to paper gives you direct contact with us. As editor, I read every letter that you send and carefully select the ones for publication. I receive far more letters than can be printed, so make yours interesting if you want to see it in these pages!

It may simply be that you have a constructive criticism about an article in *ST Review*, or that one of our columnists has inflamed you with his honesty. Whatever the reason, drop a line to me, Vic Lennard, at:

Points Of View,
Atari *ST Review*,
Europa House,
Adlington Park,
Macclesfield SK10 4NP.

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file selectors. When I wrote *Dark Lord*, my extensible screen saver, it took me some 6-8 months. This was not months of solid work of course, just when I could find the time to fit some programming in, but I guess that the amount of work involved was well over 100 hours in total. Now, if I asked a fee of £10, which is over the odds but it's a good round sum, that works out at about 10p per hour, or less. Hardly greedy I think, and after all no-one is forcing Mr. Fletcher to pay anything; if he doesn't like a shareware program, it's cost him nothing and he just removes it from his collection.

He says that shareware authors don't have to write "popular manuals". I don't know what a "popular" manual is, but who does he think writes the documentation for PD and shareware programs? A commercial program may have its manuals written by a specialist writer, not the programmer at all, and the distribution is handled by the software house. A shareware author usually writes his own manuals, then has to find some way of distributing the program, either by uploading to BBSs or sending it to PD libraries, who may or may not include it in their catalogue!

He says that file selectors and the like are "trivia". Well, I would suggest that anyone using a bare machine without any add-on "trivia" is

seriously missing out. The addition of software such as replacement file selectors, screen accelerators, RAMdisks, replacement desktops, screen savers, mouse accelerators and so on turn a basic machine into a classy system. Another point is that commercial software houses are highly unlikely to produce such small programs nowadays, with the market state as it is. Mr. Fletcher will have to rely on shareware and PD authors to provide them.

He criticises the "exorbitant memory requirements" of "too many" shareware and PD programs. If you want capable software there is always an overhead and, generally, the more the program can do, the more memory it is likely to use. He should look at the memory requirements of *Windows* programs for the PC if he really wants to see exorbitant memory (and hard drive) usage!

His comment about "unsolicited" software is nonsense – that looks like an attempt to justify non-payment of shareware fees. He says that he is in favour of "crippleware" but thinks that this would not improve registrations. In fact, all the evidence is that the opposite is true – this markedly increases registrations for the full version.

What really concerns me about this letter is that it is a very similar viewpoint to that which is often used

to justify piracy of commercial programs – "It's far too expensive, I'm never going to pay that much." In no way am I accusing Mr. Fletcher of pirating software by the way – just pointing out that the attitudes are similar. Mr. Fletcher had better get used to the idea that the future production of Atari software depends to a great extent on shareware and PD authors, as the commercial software houses have, with a few honourable exceptions, left the Atari scene. Now is not the time to alienate authors with comments like this.

Steve Pedler, Newcastle Upon Tyne

There certainly appears to be a lack of sufficient respect for shareware programmers, especially as there are some superb shareware programs available. I have a feeling that this argument is going to run for a while... Drop me a line.

NOT RECOMMENDED

I would like to congratulate you on your excellent magazine which I enjoy reading. Can you explain to me why there are only three Atari magazines as compared to about six Amiga magazines. The situation is even worse when you take a look at the games shops – Atari software

ST FORMAT REPLY

I read with interest the open letter to *ST Format* you printed in your May 1994 issue. This letter contained a significant number of inaccuracies but the pettiness of trawling through them would only be matched by the pettiness of my going through *ST Review* and pointing out all the poor quality aspects to your magazine.

As far as our readers are concerned we produce a far better magazine than you – we have more pages, more relevant features to *ST* owners and indeed more readers. 25,536 more readers, in fact. We invite your readers to judge for themselves which is the better magazine by taking a look at *ST Format*. The June issue goes on sale on Tuesday 3 May and includes huge features on video, desktop publishing and file management, all directly relevant to *ST* owners. We believe they won't take long to discover which magazine is the one they prefer.

Paula Richards, Editor

It is difficult to credit any editor with the feeble nature of this reply. The last line of my letter asked for a response to be "based on fact" and yet the only defence to the serious points raised is that there were a "significant number of inaccuracies" and that to

delve further would be "petty". Such a response is sufficiently damning in itself.

ST Review is the enthusiast's magazine, offering a host of tutorials, thorough, accurate reviews and interesting features. With over 20 writers, it has an unmatched breadth of experience – and unlike ST Format, we do not rely on a technical editor to write between half and two-thirds of the non-games side of the magazine. The three "huge" features in the June issue of ST Format are a perfect example – a total of 19 pages penned by just two writers! The 15-page multi-tasking feature in this issue of ST Review offers the wealth of experience of seven authors.

According to ST Format's recent survey results, nearly 60 percent of its readership use their ST primarily for games. This clear market direction accounts for ST Format's higher number of readers even though such games coverage now appears to include three-page reviews of compilations!

Time will tell – although it's worth noting that within days of writing the above letter, Ms. Richards left ST Format for a PC magazine...

Vic Lennard, Editor

WHAT CAN WE DO TO HELP?

I've been using Atari machines for quite a few years now, starting off with a 1040STFM, going via a Mega ST and a MegaSTE to a Falcon030 4/80.

I've been wondering for a while – have I spent my money “on the wrong horse”. Should I change to another computer platform and sell my hardware as soon as possible to get any money back at all?

No! I will not change to another platform. Why? First of all, I have a computer capable of doing all that I want it to. I have the relevant software to do all the work I need. The system is fast – at least, fast enough for me – is very easy to use, and I've had no trouble so far.

One important question remains however. We all need a bit of support to get our computer up and going. I have started a user group in Norway to deal with that problem, offering free 'phone support, a huge PD collection and a monthly newsletter. It all seems to work fine; the number of members is increasing.

But this is not enough. We also need the glossy mags, especially *ST Review* which is my personal favourite among the three English, one German, one American and one Dutch magazine I read every month.

I am a little worried about your magazine. The number of pages is decreasing, especially the advert pages. How important is this for the future of the magazine? Is there anything we, the readers, can do to secure the magazine's future, or does it simply depend on the number of advert pages?

Please let us know if there is anything we can do to improve the situation. We want to fight for the future of our beloved machine; will it help if I or other readers start sending in tips and tricks? Tell us!

S. A. Jensen, Norway

Quality treat – current German software, such as DA's Picture, is among the best ever seen on Atari computers.



occupies only one tenth of the total shop floor. Even the sales assistants are not keen to sell you Atari products – not that there are many Atari peripherals to sell! I wonder what the Atari management has to say about this?

I have an Atari machine but I regret owning it. I will not recommend an Atari machine to any of my friends without first telling them of the disadvantages like lack of support for Atari products.

Thank you for listening. Please keep up the excellent work and the free bits – I am sure you will not run out of subscribers.

Boon Tee, Sheffield

Why are there more Amiga mags? Because the Amiga computer range is far more diverse and a greater number have been sold! And while the Amiga is certainly in decline, it has a far higher level to fall from.

As far as the Atari management is concerned, the ST is a closed issue – especially as the TOS development team are currently working on the CD-ROM side of the Jaguar. The most we will see in the future is the occasional manufacturing of a number of machines to satisfy demand. The issue of the

Falcon is a little more complicated, but it is clear that any available money is being spent on the manufacture of the Jaguar and development of its peripherals.

There are still a number of companies that actively support the peripheral side of the ST – just have a look at the adverts in this issue. Most of these sell hard drives, monitors, second disk drives, memory upgrades, CD-ROMs, modems and so on. There are also a number of software publishers and distributors in the UK, including 16/32 Systems, CGS, Compo, HiSoft and System Solutions. While much of the current software is coming from Germany, who cares as long as there is a decent English translation? Long may the German market prosper!

I get a distinct feeling that your comments are borne out of frustration – and you are not alone. But I, for one, do not regret the day I bought my first ST, or purchasing a Falcon a year ago. Atari computers remain among the most user-friendly, especially if you happen to have a number of decent system utilities on board. Rather than sit around bemoaning the decline of the ST, why don't we grasp some of the new software with both

Thanks for the letter, especially the voicing of your concern over the future of ST Review. To allay your fears, while the number of advertising pages is decreasing – which accounts for the total number of pages in an issue – this aspect is secondary in importance to the number of copies of ST Review that are sold each month. If readers keep buying the mag, we'll keep producing it; if the number of readers falls too low, then ST Review will disappear. That's a cold fact of life.

Part of ST Review's problem is in its distribution, something over which I, as editor, have no control. As of this issue, ST Review should be more freely available in John Menzies as well as W.H. Smiths. If you can't find us and don't wish to subscribe, then simply ask your local newsagent to place an order with our distributors – their information is given on page 4 – which you can then cancel whenever you wish. However, according to our latest figures the number of you subscribing to ST Review has increased dramatically. If you want to get the issue a week before it appears on the street, then consider subscribing – £8.99 a quarter is good value for money.

How can you, the readers, help us? Continue to buy ST Review! If there are any particular aspects that you like or dislike, write to me. If you're having problems buying the mag, then drop me a line. In many respects, ST Review is your magazine and depends on your input for its direction.

Keep sending in questions for our experts and letters for these pages. A couple of issues back, I asked for your hints 'n' tips and offered £10 for each one we print. Enough of you have written in to run this for a few issues, but I would prefer some more before we start this as a regular series...



hands – starting with Mag!X, reviewed in this issue...

VOICE OF ATARI

It took Ofir Gal's editorial (“Come in Atari wherever you are...”) in February's edition of *Atari ST Review* to open my eyes. His comments are well founded and believe me, someone at Atari is listening. I thank him for his frank comments and will use them as a tool to make improvements on the way we handle our customer support. I have not been with Atari long enough to fully grasp the problems in the past, but I can assure you that I will go forward to ensure that these problems do not occur again. I hope you find the attached useful and welcome any suggestions you may have to make further improvements.

Jim Jackson, Manager of Quality Assurance, Atari Corporation

In Mr Jackson's attached, three-page letter, he explains that he

has been employed by Atari Corporation for a year during which he has put together a team with the single goal of supporting the customer, primarily on the Falcon. He contacted American and Canadian dealers and informed them that they could contact his team directly.

He goes on to say that he made the critical mistake of underestimating the size of the “loyal European Falcon base” and that it took Ofir's February editorial to open his eyes.

Where Falcon problems and queries are concerned, we now have an avenue that is worth exploring. I will personally be contacting Mr Jackson concerning various hardware issues and will be happy to pass on any readers' queries.

It's nice to know that people at Atari Corporation read ST Review in enough depth to spot a half-page column, and have enough respect for the magazine to respond in this manner.



We hear you – Atari Corporation now has a Falcon support division that reads ST Review...

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