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ST

REVIEW

ISSUE 29

AUGUST 1994

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AUGUST 1994



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COVER FEATURE

RAVE NEW WORLD

PAGE 33



Entertainment as we know it is
changing at a frighteningly fast
rate – just go to any games
arcade and you'll see the results
of today's technology. But what
of tomorrow? How will our leisure
time be linked to our use of
technology?

This issue of *ST Review* looks
into the future. Find out about
Virtual Reality, where you
become part of your computer
system, on page 34 and
Multimedia, that much mooted
mix of graphics and sound, on
page 36. The current and future
Consoles are viewed on page 38
while **Communications** is
investigated on page 40.

After reading our nine-page
section, just sit back and wonder
how you will figure in the future
of entertainment...

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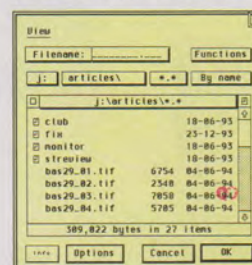
Your questions – and *ST Review*'s panel of experts'
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88 LETTERS

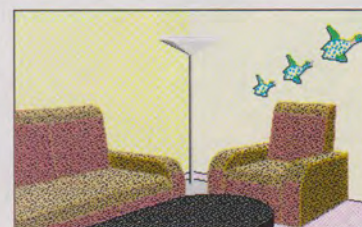
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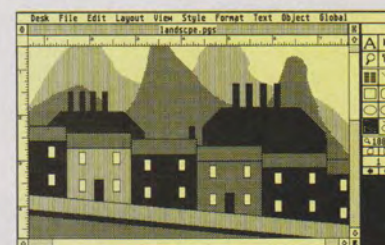
Missed any of our issues? Order them from here...



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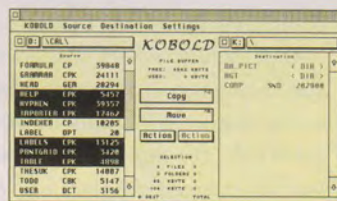
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The latest PD and shareware for your computer.



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All the best adventure games in Games Galore – page 52.

Cruisin' for a bruisin' – or a corpse on page 55.



ON THIS MONTH'S COVERDISK ART SPECIAL!

... with exclusive demos of *EZ Art Professional*, an excellent low resolution paint package for the ST, and *Rainbow*, a superb art program for the Falcon. See pages 18 and 23 for our tutorials...

EVEREST

... the latest version of the excellent German text editor!

QUERG

... an absolute killer of a draughts game – and exclusive to *ST Review*!

Plus see page 14 for...

DA Calc – work out musical delay times
Resimed – edit resource file images
and three more utilities!



SEE YOU AT THE SHOW

What does "entertainment" mean to you? The latest game on your computer? Cinema on a Saturday night? Cricket on a Sunday afternoon? Whichever your poison happens to be, you can be certain of one fact: entertainment as we know it is certainly going to change. In the course of putting together the **Future Of Entertainment** section in this issue, the authors and I were quite amazed at how computers could end up ruling our lives.



Virtual reality, where you effectively become part of the game you're playing, is becoming big business; if you get the chance to try the new Virtuality 2000 machines in a games arcade, don't miss the opportunity. You'll be surprised at how good the texture-mapped graphics are, especially if you've tried its predecessor and were as sorely unimpressed as I was.

Processor power is now at such a level that 24-bit true colour graphics can be made to flash past our eyes at breakneck speed – in much the way that a real landscape does when you're travelling in a car. While there's still a way to go before we can be completely convinced by what we see on-screen, our cover feature will certainly give you some food for thought.

This issue's cover disk is rather special in that it has something for everyone. For kick off, there's a couple of good demos: **EZ Art Professional**, possibly the best paint package ever to appear on the ST, and **Rainbow**, a Falcon-specific true-colour art package. Even better, the full packages each cost less than £30 – and you can buy **EZ Art Professional** through our Offers pages for a fiver off! There's the latest version of **Everest**, that superb German text editor, and the best version of draughts that I can ever recall seeing on the ST in **Querg Draughts**. Add another five utilities and you have one very full disk.

Elsewhere in the mag you'll find the first, exclusive preview of **Arabesque 2** and a company profile on Overscan. Interestingly enough, Overscan is continuing to grow in a market that is shrinking – or so we're being told. Perhaps we should start to question where the "rats leaving a sinking ST" comments are emanating from...

I'd like to welcome Ian Waugh inside the **ST Review** covers. Ian has been writing the MIDI section for **ST User** for many years but will now be using his high level of expertise and knowledge to help all budding **ST Review** musicians!

Finally, if you're an Atari enthusiast don't miss the forthcoming Atari Shows in Bristol and London on the 30th and 31st July; full details are on pages 30 and 31. All the latest software will be there, you'll have the chance to win a Jaguar and also be able to meet me face to face! I look forward to chatting with lots of you.

Vic Lennard, Editor

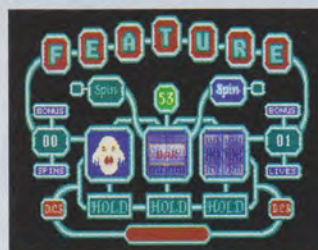
WARPZONE GO BONKERS!

Warpzone PDL (0272 553758) is moving into software distribution with **Stark Raving Bonkers** for the ST, programmed by Dave Cobbledick of Dunces Cap fame. As has come to be expected from Dave, **Stark Raving Bonkers** is a brain teaser that comes on two disk and makes heavy use of sampled sound. Comprising of ten mini-games, the implementation is unique to say the least.

With the exception of the first two games, the others are arranged in four pairs. When you complete a game, you choose which of the four pairs you wish to play, but the computer randomly decides which one of the pair you land up with! Warpzone is billing it as the brain teaser to beat all brain teasers but with two more Dave Cobbledick games in the pipeline, this could soon change! **Stark Raving Bonkers** is available now at £8.99.

Speculator promises a blast from the past for former Sinclair Spectrum owners. Compiled by Warpzone, the kit features a PD disk containing the Spectrum emulator along with an English translation of the text. Also included are a couple of extra programs that allow you to load a program directly from a Spectrum tape into your ST, save Spectrum programs to an ST disk, and fast-load Spectrum games from tape. If that's not enough, there's a host of Spectrum games supplied on disk, ready to use. Most important of all, the lead used to connect the tape recorder to the ST is supplied in the kit. **Speculator** is out now for £9.99.

Any budding artists out there who fancy a tutorial package could do worse than look at **Degas Art**. This comes on two disks and contains over 70 hand-drawn screens, ranging from basic shapes to completed pictures. In addition, it features a number of on-screen tutorials that give a step-by-step guide to helping you create your own work of art. The package is aimed at **Degas Elite** users but is equally appropriate for anyone wishing to explore the world of computer graphics. **Degas Art** is out now at £9.99.



Totally mad – Dave Cobbledick's first commercial venture is likely to turn you Stark Raving Bonkers!



Non-techie Speccy – now you can enjoy all the delights of the old Sinclair Spectrum on your ST.

FACE TO FACE

At long last **Interface** is available in the UK! The resource editor that has become the standard in Germany can now be purchased from Compo (0487 3582) in the UK. The latest German version (2.3) is available now and an English translation is currently under way; those who decide to purchase the German version will be entitled to a free upgrade to the English docs when they become available. **Interface** costs £49.95.

Epson's latest range of printers incorporate the new Epson "standard" known as Escape T2 which supports scalable fonts. The fonts themselves are built into the printer and can be accessed through software. Escape T2 is a standard feature on the Epson Stylus, LQ570 and LQ100, although these models behave identically to the "old" Escape T standard unless addressed by appropriate software. Compo has just released a disk that allows Stylus and LQ570 users access to the in-built scalable fonts with all versions of **Write ON** and **That's Write**. The "Epson Stylus Support Disk" is available now for £14.95. A separate version for the LQ100 (which uses a different set of internal fonts) is under development and will be available soon.



Pro tool – Interface is responsible for the look of many current German programs.

ON THE UP

The Jaguar is finally available in the UK! Trade distributors SDL flew in about 1,700 units and Atari has promised regular supplies from now on, leading to wider distribution for the peak selling period in September. In addition to SDL, rival distributor ZCL are expecting their first consignment later this month. Rumbelows will be one of the first High Street chains to stock the Jaguar, where it is soon to appear in their Games Arena stores. In addition, a number of mail order catalogues will be featuring it in their Autumn/Winter editions.

Despite the positive signs coming from both Atari and the trade, demand will continue to outstrip

Jaguars start to appear in the UK as software support continues to grow...



Blood and more blood – Doom should be available before Christmas and promises to be a best-seller!



firms. Doom was converted onto the Jaguar in a record three weeks and ID Software intends using its skills to port more titles from the PC in the coming months.

JAGUAR INSIDE

Jaguar software could soon be running on PCs thanks to a deal between Sigma Designs and Atari Corporation. Atari has licensed Jaguar technology to Sigma so that it can be incorporated into PC cards with Sigma's ReelMagic full-motion video capabilities. The result will be that any PC owner with a CD-ROM drive who purchases the forthcoming Sigma card will be able to play any CD-based Jaguar game without the need to actually own a Jaguar. The new card will of course offer all the benefits of Sigma's existing MPEG controller which, combined with the

The CD market is a major opportunity in 1995.

Peter Walker, Atari UK.

supply for some time. It seems that not even Atari could have envisaged the current level of demand for the product and the major opportunity presented to them by it. In response to this, components are now being sourced from several different suppliers and a second manufacturing facility is under serious consideration with an official announcement expected soon. A three-year plan for Jaguar distribution throughout Europe is currently being finalised and details of this, along with other Jaguar news, is expected at the Chicago CES which takes place as we go to press.

The CES is traditionally the place where Atari makes its big announcements. This year's event appears to be no exception with a number of new products set to be unveiled. In addition, Atari is to hold a series of meetings at the event where it will be

showing a wide range of software, some of which will be available now with the remainder still at the development stage. The software will be both cartridge and CD-based: Atari's Peter Walker commented that the company sees the CD market as "a major opportunity in 1995" but are "taking a cautious view" with regards to CD at present as they are very proud of what has been achieved with cartridge-based software.

NEW GAMES

The latest development news is that top programming team Bullfrog has tied up a deal with Ocean to produce Jaguar conversions of *Syndicate* and *Theme Park*, both of which are scheduled for a November release. *Syndicate* is already a big hit on the PC and *Theme Park*'s release on that format is imminent. Ocean also has



I'm converted – Syndicate is one of a growing number of prospective Jaguar titles that have been transferred from the PC.

its first Jaguar title, *Soccer Kid*, pencilled in for around the same time.

Another big one looming on the horizon is ID Software's *Doom*, also a conversion from the PC. It is a "15" rated title with blood and guts spurring everywhere and promises to be a big seller on the Jaguar! The title is being published by Atari itself and because of this it won't come under ELSPA's scrutiny classification-wise; their jurisdiction only covers UK

Jaguar's real-time 3-D graphics side, should prove attractive to PC developers and end users in their own right. More importantly, the deal represents an excellent opportunity for Jaguar software developers to capitalise on an already established market, something which may be enough to lure new developers into supporting Atari. The product will cost around \$500 with availability before Christmas.



Roll up – third party games like Theme Park will be making their way onto the Jaguar before the end of the year.



On the ball – Ocean's Soccer Kid will add a football theme to a rapidly growing list of prospective Jaguar games.



Mean machine – will the Medusa finally be coming to the UK?

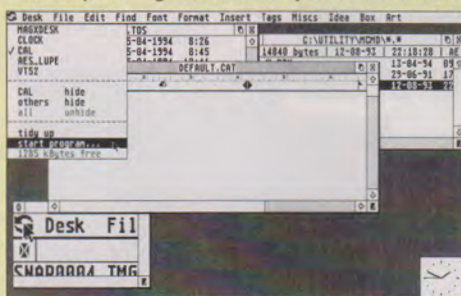
What's in a name – looks like the Behne Brothers will have to change some text for the next MagiC upgrade...

Mag!X is MagiC!

Mag!X, the German multi-tasking system distributed by System Solutions, has had a name change. Apparently *Magix* is trademarked by a PC company which has asked the Behne Brothers to change the name of its similarly-sounding product. The name will now be *MagiC* – note the upper-case "C" at the end of the word. If you look through this issue, you'll find the product mentioned in various places with three different spellings – *Mag!X*, *Magix* and *MagiC*! We'll get it right from now on...

System Solutions is also stocking the new AV-type hard drives. These guarantee consistent data throughput for both reading and writing without interruption from the internal calibration process that continuously takes place. With AV drives, this occurs in the background. The latest 1Gb Micropolis units retail at £899 including cables for either a Falcon or TT. Tests show that the latest version of *Cubase Audio* (1.1) works well with such drives, even on a 4Mb Falcon.

The Medusa may finally arrive in the UK. The high-end 64MHz 68040-based TT clone is already generating a lot of interest in Germany, despite its £3,200 price tag. No-one at System Solutions was prepared to confirm



or deny its impending distribution as we went to press, other than to say that the new version of *NVDI* for Crazy Dots works on the Medusa!

A 64MHz 68040-based machine running with *NVDI*? Now that's what we call power!

IN THE SPOTLIGHT

Spotlight '94, held at the end of May, was an event dedicated to users of both Atari and Amiga computers – or at least that's how it was billed. In reality, there was much more available for the Amiga than for the ST. The previous year's show was an Amiga-only affair and went down very well. This time around both computers were supported, but many Atari owners felt let down with fewer stands dedicated to the ST (see *Letters* page).

Regular show goers like System Solutions, Titan Designs, CGS Computerbild and Warpzone all decided to stay away. However, Compo, 16/32 Systems, HiSoft and a few others did go and the consensus of opinion was that it had been worth their while. HiSoft's David Link commented: "a brilliant show with a good standard of customers" while Chris Keir of First Computer said: "This two-day show has been more profitable for us than many of the larger exhibitions where we have to compete with distributors' retail arms".

DISC COUNT!

Canadian software company Corel Corporation, hosting a recent London press conference, claimed to be the world's leading CD vendor with over 200 titles in production. The company, which developed the leading PC-based graphics package, *CorelDRAW!*, now intends to branch out into games and education titles as well as continuing to expand its acclaimed *Corel Professional Photos* series.

Corel is one of the fastest growing companies in the industry and it clearly sees CD-ROM as the technology of the future. With another 100 titles under development and more planned, few companies are in a position to argue with its claim to be number one.

The *Corel Professional Photos* series is a budget-priced collection of PhotoCD discs, each with 100 images on a common theme. There are presently 142 titles in the collection though as the company is adding a title to the list every single day, it's a little hard to keep up! Titles range from straight-forward ones like *Underwater Life* and *Auto Racing* to more obscure ones like *Religious Stained Glass* and *Native American Ruins*.

The value of these discs is that they have all been taken by professional photographers and are all royalty free. This means you can incorporate them in your documents or montages without having to fork out huge fees or facing a court case! Programs like System Solutions' *Photo Show Pro* support the Corel discs directly but as the discs are in ISO9660 format rather than true PhotoCD format, they can be read on any CD-ROM drive attached to an ST or Falcon using software like *Studio Photo*, *GEMView* or *DA's Picture* which has just had a PhotoCD module added.

Each disc comes with a printed reference guide so you can load the right image every time. Available from 16/32 Systems (0634 710788), discs cost £29 each including VAT and postage.



An image from the English Country Garden collection of Corel CDs.

LOTS OF ROM...

Two new Atari-based products have recently been announced by Silicon Systems (081-898 4121), the most interesting of which is definitely the 2Meg ROMDISK. This device plugs directly into the cartridge port and can hold up to two megabytes of data, overcoming the normal 128Kb limitation of the cartridge port. Software can be programmed into the cartridge using Silicon Systems' ST EPROM programmer or you can send the programs you want placed into the ROMDISK on disk to Silicon Systems who will transfer them for around £10. Cost is £69.95 including the EPROMs. ROMDISK cartridges for user-programming are available for £39.95.

The other new product is the ROMPORT Expander (£59.95) which allows several cartridges to be connected simultaneously. Security dongles can be plugged into it so users of dongle protected software such as *Cubase* and *Notator Logic* can have software blown into the ROMDISK and the dongle plugged into the ROMPORT Expander.

IN BRIEF

● **HiSoft has gone into production with both *Papyrus* (as featured on last month's cover disk) and *Twist 2*, a quality new database. Both products will be readily available as you read this. *Master Phone* for the Falcon is still under development but expected soon, and *Truelmage* will also be out in a matter of weeks.**

● **The latest technological breakthrough in CD technology has come from IBM which claims to have developed a method of storing up to ten times as much data on CD than is currently possible. This would mean over twelve hours of full motion video using MPEG compression techniques or up to one million pages of text! The new technology uses non-standard CDs and is still some time away from reaching the market. Among other uses, it could open up interesting possibilities for interactive games on the Jaguar...**

● ***Head To Head* is about to have a third dimension added to it. The popular games challenge show programme, which is currently being repeated on the satellite station *Children's Channel*, is set to start a new run in July and will be presented by Bad Influence's Violet Berlin. The series will comprise of 100 3-D shows, broadcast twice daily. You'll need 3-D glasses to watch the programme!**

System Solutions

The DeskTopper

NEW. A solid metal case to replace the plastic top of ST(FM/e) and Falcon computers. Only **£69.95**
FreeKeys - separates the keyboard from the computer **£39.95**
DeskTopper & FreeKeys **£99.95**
 Please phone for more information.

CD-Rom Systems

Falcon System: Sony CD-300 Drive, SCSI II Cable, ExtendoS **£239.00**
Complete ST(FM/e)System: CD-300 Translator, ExtendoS **£279.00**
ExtendoS (CD-Rom Driver) **£29.95**

CD Rom Disks

Lohrum Vol 1 (PD/Shareware) **£29.95**
 " Vol 2 (PD/Shareware) **£29.95**
 Gemini (Atari PD/Shareware) **£24.95**
 Clip Master Pro (Clip-Art) **£34.95**
 Midi files and .Mods (Music) **£TBA**

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**
NEW 15" & 17" IDEK Monitors **£ Call**
 Clarity 16 **£99.95**
 Cubase Audio (New V1.10) In Stock
 FDI - Falcon Digital Interface In Stock
 FA-8 Falcon Analog In & Out In Stock

Communications

Comms Software
 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**

NEW - Exchangeable SyQuest Drives
 105Mb, 14.5ms Drive, inc. cart **£399.00**
 105Mb Cartridge **£59.95**
 270Mb Drive: Available soon **£ TBA**

Specials

The Jaguar & Games are now in Stock
 T28 Mhz Accelerator **£189.95**
 1.44Mb Floppy Drive Kit **£79.95**
 The Translator **£69.95**
 HD-Driver Software **£19.95**
 ICD Link II **£89.95**
 ICD Pro Utils **£39.95**
 ST(fm/e) Tower **£189.95**
 Falcon Tower Kit **£159.95**
 Falcon 030, 32Mhz, 4Mb, 60Mb Hdd, M/Tos, S-Gdos, Works **£795.00**
 As above, 120Mb Hdd **£895.00**

To order and for further information telephone or write to:

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 Windsor Business Centre,
 Vansittart Road, Windsor, SL4 1SE
 Fax: 0753-830344

or come to our London Showroom at:

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 London, SE22 8RS
 Tel: 081-693 3355 Fax: 081-693 6936

All prices include VAT
 For small items under £50 please add £3.50 P&P
 Large items over £50 add £10 courier charge

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

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



MiniS - Hard Drive System

The MiniS Hard Drive System comes with drive capacities ranging from 40Mb 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 ★ Internal Power Supply 100-240v
 ★ 2 Year Warranty ★ Small (2.5x6x8.5in) (WxHxD)
 ★ Dual SCSI port ★ Device Number Switch ★
 ★ Now with HD-DRIVER FREE

	TT/Falcon	ST(FM/e)
40Mb	£229	£199
127Mb	£229	£269
170Mb	£259	£299
270Mb	£339	£379
340Mb	£399	£449
540Mb	£599	£639
1.0Gb AV 10ms	£899	£939
1.7Gb AV 10ms	£1199	£1239

Please add £20 to ST(FM/e) if the ICD Link II 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
Falcon 030, 4Mb Memory with PowerUp2 fitted	£659.00



MagiC - Multitasking Operating System

"It's like running an accelerator and getting the multitasking thrown in for free." ST USER, Feb. 1994

MagiC is a full TOS replacement, a very fast disk filing system; has accelerated serial, midi and printing routines, and is, of course, a true pre-emptive multitasking system. MagiC Desk, a replacement Desktop and a powerful command shell have been included. MagiC runs on all ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a

useful working system. The Falcon version is expected later this year.

"If you want a multi-tasking system that works simply and reliably, then MagiC is for you." ST Review, June 1994.

MagiC (Intro price)	£69.95	£59.95
MagiC and NVDI	£199.95	£89.95
MagiC and Kobold	£109.95	£99.95

NB: Excellent with Calamus SL. Compatible with Notator Logic, but not with Notator SL and not yet compatible with Cubase.



NVDI

NVDI replaces the Atari display routines. Screen updates with NVDI are 3-10 times faster. Works with all TOS versions on all Atari ST, MegaST, TT and Falcon 030 computers.

Cubase and Notator compatible. 'Compatibility is remarkable and we have yet to find a program that is not compatible with NVDI'.

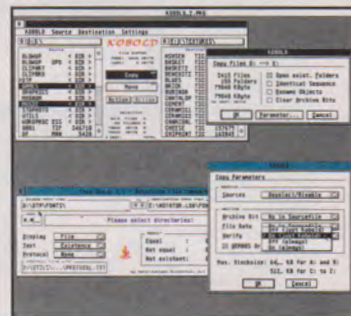
ST Review Issue 16, August 1993.

NVDI version 2.5	£49.95
NVDI & Kobold	£89.95

Kobold

Kobold is a high speed file manager. It's unique handling of the Atari file system gives unrivalled speed when copying, moving and deleting files. Copies 1000 files, (10Mb) in 45sec, (GEMDOS 5:35min) Use Kobold for Backups, Formatting Floppies, Move/Copying, Updates, Timed Jobs, etc... It also includes a script learn function to automate repetitive functions. Can be run as an .ACC or .PRG

Kobold 2.5 (Intro Price) **£49.95**



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ATARI
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NEWS UPDATE

COMMERCIAL

Report by Ofir Gal

Hot on the heels of the review in this issue, HiSoft (0525 718181) has announced *Diamond Back 3.03*. This fixes some SCSI2 related problems that can cause incompatibilities with some tape back-up drives. Only a minor upgrade, it's available at the usual price of £5 pounds.

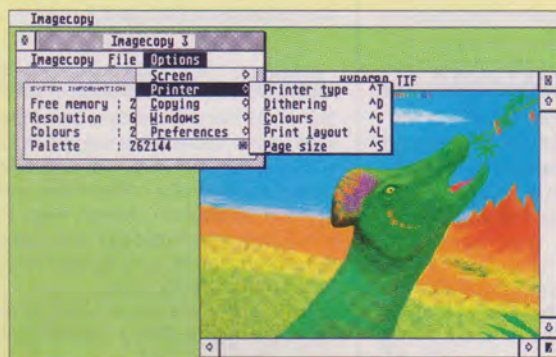
DA's Picture from CGS (081-679 7307) is now at version 1.10. The main improvements here are in the block functions which now support rotation with anti-aliasing facilities. Contact CGS for price details.

Imagecopy 3 is finally here! New features include Calamus Raster Graphics (CRG) and JPEG support, an improved user interface and lots more – you'll have to read our review next issue. *Imagecopy* can now run in the background, printing, displaying or converting multiple files, and a new slide show feature is also included. Upgrades from version 2 are £10 from the FaST Club (0602 455250).

Gasteiner (081-345 6000) has just upgraded its hard disk utility, *ST Manager* to version 4.00. New features include a 15 per cent improvement in data transfer rates and an auto-partitioning option.

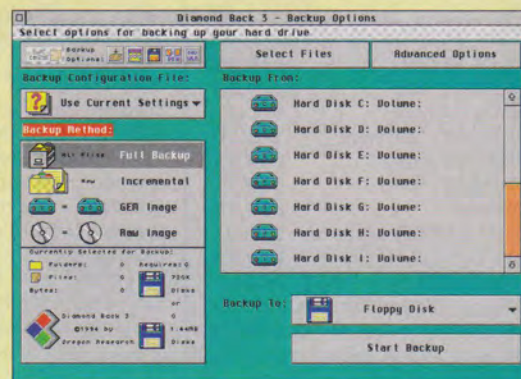
Finally, that ST stalwart System Solutions (081-693 3355) has upgraded its *NVDI* driver for the Crazy Dots graphics cards – the new version supports 24-bit true-colour graphics. Also new is *ICD Utils 6.5.5* for the recently released ICD Link II. And guess what? In stock is the latest version of *Cubase Audio* for the Falcon – v1.10 supports user selectable sampling rates. Well if anyone was going to have the latest *Cubase* update, it would be SS...

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

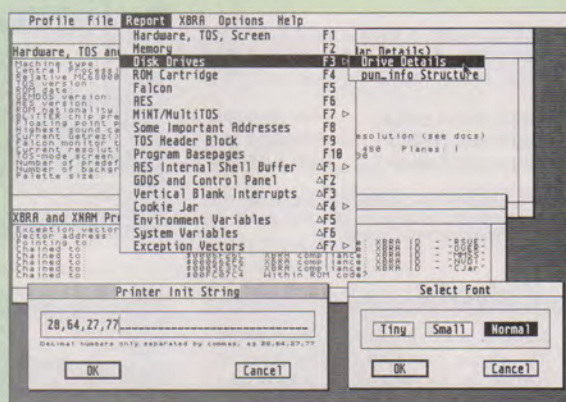


Top copy – *Imagecopy 3* now offers JPEG support and a much improved user interface.

It's back – no sooner do we review *Diamond Back 3* than a new version is available! Well that's product support for you...



Inside info – Profile 2 boasts a GEM front end and even more ST stats!



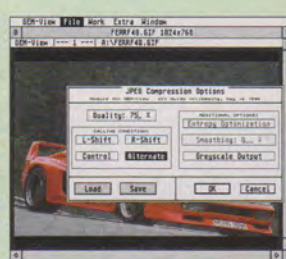
PD AND SHAREWARE

Report by Nial Grimes

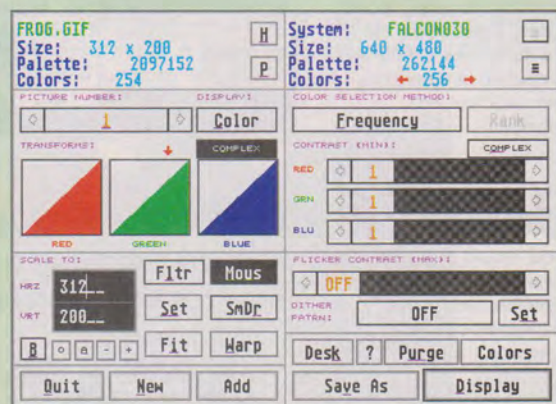
Have you ever wondered exactly what's going on under the bonnet of your ST – what AES version you have, how much RAM is free, what cookies are installed? *Profile 2* (available real soon now folks) is a program designed to give you all this information and much more besides. It's excellent for programmers and those who are just curious about the goings-on inside their ST. The main improvement that this latest release has to offer is a totally redesigned interface. It's out with the boring old text screens and in with some beautifully designed dialogue boxes – it really is a work of art.

Fans of the superb picture viewer *Speed of Light* will be pleased to learn that version 3.1 is now available. This is a huge upgrade to the previous release and unlike version 3, which slipped out a couple of months ago, this one is actually official. On a similar note, the JPEG saving module for *GEMView* is finally beginning to appear on bulletin boards. Installation is simple and it works very well, although there are one or two restrictions at this early stage. The main niggle is that it will only deal with true-colour pictures – in other words, you can use it on an ST or TT, but only through the conversion dialogue box.

And finally, *WinX 2.3* is rapidly approaching release. The most significant addition this time is the ability to reduce windows to a title bar – it may sound strange, but is wonderful for maintaining a clutter-free desktop. As usual, *TOS 2.06* is recommended.



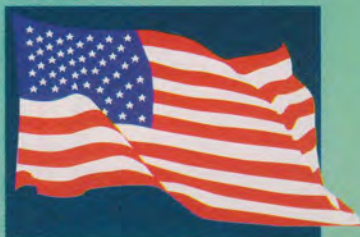
Small object of desire – a JPEG saving module for *GEMView* will be landing in a PD library near you soon!



Faster than light – JPEG display and improved image processing effects make *Speed of Light 3.1* an essential purchase.

AMERICAN PIE

Bye bye
Bob Brodie...



Atari's Director of Communications, Bob Brodie, has resigned as of June 4th. Bob had been with Atari for the past five years, first serving as the Manager of User Group Services. Bob was one of the most visible people at Atari, as he attended numerous Atari Computer Shows and hosted the monthly *Dateline:Atari* on-line conference on GEnie for the past two years. No details have yet been released as to who will be taking over Bob's duties at Atari.

Atari has exclusively licensed Jaguar technology to Sigma Designs of Fremont, California to produce IBM-compatible PC cards incorporating the Jaguar 64-bit technology with Sigma's ReelMagic™ full-motion video capabilities. Exact details of the configuration of the Jaguar PC card have not been announced, but rumors are circulating that it will require a 16-bit ISA slot in an MPC2-compliant multimedia PC and use a standard double-speed CD-ROM drive as cartridge games will not be supported. The same CD games that will run on Atari's upcoming CD-ROM add-on for the Jaguar will run on the Jaguar PC card. The card will also function as a ReelMagic MPEG card, bringing full-motion video capabilities to the Jaguar. The card is expected by the end of the

year at a list price of less than \$500.

Atari has also reached an agreement with Wavefront Technologies to make their *GameWare* the exclusive graphics and animation development software for the Jaguar. Atari will utilize *GameWare* for internal development and Wavefront will offer the package at a special price to authorized Jaguar Developers.

A recent Electronic Engineering Times article quoted Atari officials as saying that the design of a second generation Jaguar will be completed this fall. The new chipset will contain over 1.25 million transistors, a half million more than the current Jaguar chipset, and is expected to perform polygon drawing operations ten times faster than the current machine. The article also indicated that Atari was working with several other companies in developing the next generation Cable TV box, based on Jaguar technology.

Atari is running a special summer Lynx promotion, where 60 Lynx titles are available from as low as \$14.99 to \$29.99. The price of the Lynx II console has also been reduced and has been seen selling in the \$50 price range by several dealers.

Finally, chro_MAGIC Software Innovations has announced the Multi-Sync Gizmo (\$24.99) monitor adapter for the Falcon030. The adapter allows you to connect a Multi-Sync monitor to a Falcon and features a switch to toggle between RGB and VGA modes, allowing greater compatibility with Falcon screen video enhancers such as *ScreenBlaster* and *BlowUp030*. 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.

A month in the life of a retailer...

As you know, I'm an Atari computer dealer, so I have a lot of contact with all kinds of Atari users. These range from the hi-tech power user through to the plain "once in a while I use it as a typewriter" person, programmers, musicians, journalists, university professors, students, lawyers, games players – the lot! So I usually take some time to talk with the customers and find out about their interests and the way they use their computer. Very often it is possible to give them some tips or to tell them about a program that might be helpful or interesting for them.

Since we also sell makes of computer that use MS-DOS (fortunately not very often!), in the last year my job has moved more and more towards psychiatry. What is the problem? Well, the most common question I am asked is: "Should I buy an MS-DOS/Windows computer?" What can I tell the people? I can recommend an Atari as it is easier to use and has 90 per cent of the software they'd ever need, but if they have problems, I'm the one that gets it in the neck!

On the other hand, if I agree with them and recommend a PC-compatible, I have to explain that they will have a lot of problems, need hours and hours of counselling, always have to keep buying the latest version of the operating system, programs, graphics cards, drivers, a faster computer... and I get complaints again! So whatever I recommend, I get problems.

I started to explain the above scenario to my customers and added that there are even more advantages to buying an Atari. For instance, you will never find another computer platform that has such a close relationship with the software developers. I only work in a computer shop and visit the computer fairs, but even I know at least half of the German Atari programmers and perhaps 20 per cent of the international ones. But I don't know

TOP MARK



a single programmer of any of the larger *Windows* programs, and have never spoken with them concerning my wishes or ideas for the program. The oldest 260ST can be upgraded in memory and speed to be faster than a MegaSTe which is more than enough for any home purposes. Yes, this is

slower than an Intel 486, but as soon as you run *Windows* you lose all of the speed advantages – and you need at least 8Mb to run a humble word processor!

Perhaps it is little wonder that Atari sales here in Germany are getting better – slowly, but surely.

What's new over here? There's an interesting new item called Sound Lifter, a board that replaces the Falcon's sound input system (Codec) and connectors with a professional quality product. It also provides a second audio input/output that can be selected through software or hardware. These analogue-to-digital and digital-to-analogue converters drastically improve the sound system. Cost? The board is selling in Germany for DM299 (about £120) or DM450 (about £180) ready installed... 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.

PEAK PERFORMER

There are as many ways of handling text as there are programs to choose from. Everest carefully avoids treading on the toes of other applications by not attempting to provide in-depth word processor support, an approach that makes it the ideal text editor.

Many so-called text editors haven't been updated to take advantage of the latest developments. In contrast, Everest bristles with the latest features, making it the natural choice for the demanding Atari text user.

The basics are covered in depth in *EVEREST.DOC* on the disk, so let's have a look at a couple of smart features that make Everest so special...

FILE LISTS

Using a File list, it's possible to return to Everest with all the files, windows and cursor positions exactly as you left them. The details are stored in a *.LIS* ASCII file and Everest automatically looks for, and loads, *EVEREST.LIS* if present. Several **.LIS* files can easily be set up for different tasks.

ABBREVIATIONS

An abbreviation file allows commonly used words, phrases or commands to be expanded from text shortcuts that

Recently awarded five stars in Short Cuts, we're delighted to offer you an exclusive opportunity to try out the very latest version of Everest. Joe Connor, who runs the UK support, does the honours...



you define. Such definitions are stored in a *.KRZ* ASCII file and Everest automatically looks for, and loads, *EVEREST.KRZ* if present. Several **.KRZ* files can easily be set up, stored and used when needed.

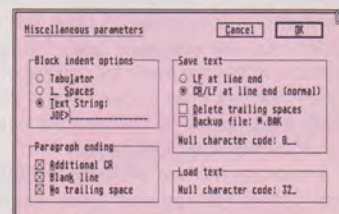
For instance, let's say that you have an abbreviation file with Atari as an abbreviation for Atari ST Review. Typing Atari followed by hitting the <Esc> key results in Atari ST Review appearing on-screen. If there are no other lines beginning with the letter "A" then A followed by <Esc> will do the trick as well, otherwise Everest searches the list in alphabetical order and uses the first expansion found. Another way to work is to use the

State of the art! Fast, compatible, multi-tasking friendly and support for all the latest facilities including WinX, the Clipboard and GDOS fonts.

"=" character. The line *JC =Joe Connor* will expand JC followed by <Esc> to Joe Connor. Programmers will find the option to position the cursor in an expanded abbreviation useful. The line *writeln(~);* will

expand w and <Esc> to *writeln()*; with the cursor positioned between the brackets. Line feeds can also be added into abbreviation files which opens up lots of possibilities – a simple key combination can be expanded into a complete name and address or programming sub-routine.

Press <Shift>+<Help> to display the keyboard command and mouse help screens. If you need more help, the documentation covers each feature in depth with plenty of examples.

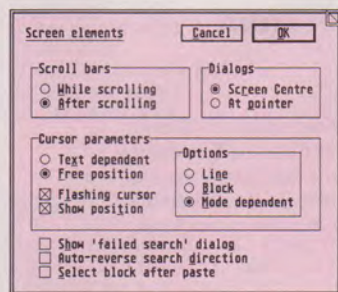


Pasted blocks can be formatted using the "Block indent options" – ideal for comments and programming use. Other options allow tweaking of ASCII file formats.

AT A GLANCE...

Is your existing editor left at base camp? Everest offers these facilities...

- Runs in high or medium resolutions
- Compatible with all Atari hardware systems
- GEM compliant and multi-tasking friendly
- Enhanced GEM interface with WinX and Clipboard support
- Alternative monospaced GDOS fonts can be used if GDOS or an alternative is loaded.
- Handles files over 300Kb without problems
- Active UK support with frequent updates



Setting the "After scrolling" option increases the scrolling speed by not updating the scroll bar during scrolling.

MORE FOR LESS

If you find the shareware version of Everest useful, you should register to obtain the full package, which includes:

- Personal key to remove the shareware opening screen
- Master disk containing Everest and other supported shareware programs
- Access to UK support and update service

Your personal key will also allow you to unlock future versions of Everest 3 at no extra cost. To register your copy in the UK just fill in your details and forward a cheque or postal order for £9, made payable to Joe Connor, to:

STR Everest Registrations, Joe Connor, 65 Mill Road, Colchester, Essex CO4 5LJ

Please write clearly – your code-key is based on your name!

Please send me the registered version of Everest. I enclose a cheque/postal order for the sum of £9 made payable to Joe Connor.

Please deliver my goods to:

Name _____

Address _____

Postcode _____ Daytime phone _____

All the menus, displaying everything you could ever need from a text editor.

ALL THE BEST...

... utilities and extras are on the ST Review cover disk!

QUERG DRAUGHTS

EXCLUSIVE • BY JOHN WHITE • MEDIUM RES.

Learn how to lose gracefully...

Run the program with a double-click on *DRAUGHTS.PRG* in medium resolution. On the left is the board and any text instructions are placed on the right. To make a move, click once on one of the black pieces with the left mouse and then click again on its new position. The piece moves and the computer quickly make its reply but as the game progresses, the computer takes longer to "think". Multiple jumps are made by clicking on each empty square the piece has to pass over. If you attempt to make an illegal move, the program pops up an alert box and allows you to try again.

Several menus are available including a built-in help facility. You can start a new game at any time or even switch sides. If you think the computer is not playing well enough, you can increase its allowed time for each move resulting in better performance. If you find that you always lose, decrease the time from the default five seconds. As usual, there's more information in the *read_me* file.

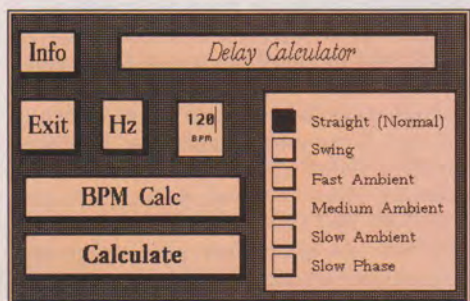
DELAY CALCULATOR V1.2E

SHAREWARE • BY CARL LOFGREN • HIGH/MEDIUM RES.

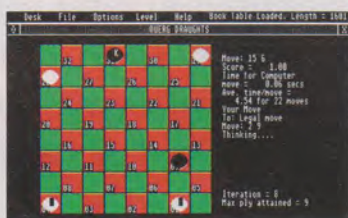
A useful tool for all musicians...

The *Delay Calculator* is designed to help musicians convert musical tempi to time in milliseconds as well as some other musical calculations. The program can be run as a desk accessory or a stand-alone program. Copy *DELAY_CA.ACC* to your boot disk and reset the system, or rename it to *DELAY_CA.PRG* and double-click on it from the desktop.

The most basic function lets you convert tempo in beats-per-minute to time – useful for digital delay units so that an echo effect accurately matches the music. Enter the desired tempo in the BPM box and click on Calculate or hit <Return> on your keyboard. A small box will appear giving the exact setting for the echo. Another useful function is the BPM



Get your musical maths sorted out with the delay calculator.



Rats – lost again!
See if you can beat Querg Draughts...

calculator: press the "BPM Calc" button and "OK" the dialogue box that appears. Tap the <spacebar> rhythmically several times and then press the <Esc> key. The *Delay Calculator* will tell you the tempo at which the space bar was tapped. Since the program runs as a desk accessory, you can also use it alongside your favourite MIDI sequencer.

MAGIC FIX

PUBLIC DOMAIN • BY OFIR GAL • ALL RES.

Make HiSoft languages MagiC-compatible...

Due to a slight programming error in *MagiC*, *HiSoft BASIC 2.10*, *Lattice C 5.6* and *DevPac 3.10* crash under *MagiC*. This fix should only be used if you are having problems with these programs and use *MagiC V2.01*. Simply drag the file *MAGIX.RAM* onto the program file *MAGIXFIX.TTP*. The program modifies the *MagiC* file so make a backup of *MAGIX.RAM* in case of problems.

CALAMUS FIX

FREWARE • BY VON HARALD SIEGMUND • ALL RES.

Calamus S/SL can be multi-tasking friendly...

If you use *Calamus S* or *SL* under *MultiTOS*, *Geneva* or *MagIX*, you can use this small fix to make *Calamus* more multi-tasking compatible. Just copy the file *CALPAT.TOS* into the same folder as *CALAMUS.PRG*, run it, press <Return> once, wait till the fix is applied and press <Return> again.

RSD TO LST

PUBLIC DOMAIN • BY TERRY KING • ALL RES.

Convert K-Resource header files to GFA BASIC...

With *Rsd to Lst*, you can convert header files produced by *K-Resource* into a *GFA BASIC* format. Double-click on the program and select the .H file

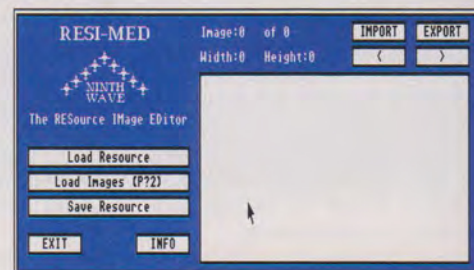
from the file selector. The program then produces a *GFA.LST* file ready for use in your programs.

RESIMED

PUBLIC DOMAIN • BY TERRY KING • MEDIUM RES.

Import Degas images into your resource files...

This utility allows you to import *Degas* pics into resource file images created by *K-Resource* or other resource file editors. Intended for use by programmers, there are full instructions on the disk.



RESIMED will give your icons a new lease of life by importing Degas images into your resource files.

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 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:

P.C Wise Ltd,
Dowlais Top Business Park,
Dowlais, Merthyr Tydfil,
Mid Glamorgan CF48 2YY.

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.

Ladbroke Computing



**33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP**

Ladbroke Computing International are one of the longest established home computer dealers in the U.K. We have developed an extensive customer service policy which involves testing of all hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

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How to Pay

You can order by mail Cheques/Postal Orders made payable to Ladbroke Computing. Or give your credit card details over the phone.

Delivery

Postal delivery is available on small items under £40 (Normally £3, phone for details). Add £7 for courier delivery. Next working day delivery on mainland UK subject to stock (£20 for Saturday delivery).

Open Mon-Sat 9.30am to 5.00pm.

Ladbroke Computing Ltd trading as Ladbroke Computing International.

Fax: (0772) 561071

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(0772) 203166



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

Star

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
Panasonic KX-P4400 Laser £499.99
Seikosha OP104 £479.99
New Star Laser

(phone for details) £459.99

Add £3 for cable. Add £7 for delivery

Data Pulse Plus

- Very quiet, no fan necessary
- Dual SCSI port
- Internal Power Supply
- Device Number Selector
- 2Mb PD software free
- Free HD Turbokit

The Data Pulse Plus range of drives features a full metal case with integral PSU ideal as a monitor stand.

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.

Monitors/TV's

Dataview Mono ST £109.99
Screen Beat Speakers £12.99

Quality Micro monitor with Sound Limited Offer
The Dataview Monochrome monitor comes complete with our custom designed adaptor. The adaptor incorporates a small beeper and also a 2.5mm output for better sound reproduction. The monitor/adaptor combination is fully compatible with all ST high resolution programmes and includes a tilt/swivel stand.

Multisync Monitor

Microvitec 1438 £289.99
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.

Dataview .31 SVGA power management £199.99
This high quality SVGA colour monitor has power management features.

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).

ST-SVGA adaptor £19.99
Falcon-Composite £9.99
Falcon SCart £9.99
Falcon-ST Mon adaptor £9.99
SCART STE cable £9.99
SCART STFM cable £9.99

Scart TV

(Requires SCART Lead)

Philips 15PT161A/05 TV £209.99
15" FST SCART input TV with Fastext, On screen menus, 60 channels, remote control, CVBS input, headphone socket. While stocks last.

Modems

2400 Baud Voyager £69.99
2400 baud pocket modem, MNP 2-4 error correction, MNP5 data compression
14400 Baud Pegasus Fax Modem £159.99
14400 Baud Modem, Auto Dial, Auto answer, Lifetime limited warranty, MNP 2-4 error correction, MNP 5 data compression, S/R Class 1 & Class 2 commands, Group 3 S/R fax modem (compatible with Straight FAX™)
"With reduced call rates there's never been a better time to invest in Communications"

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.

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
 - 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
 - 8 Channel 16 bit, high quality. Stereo sound sampling
- FALCON 1Mb RAM No HD £499**
FALCON 4Mb No HD £699
FALCON 4Mb 64Mb HD £799
FALCON 4Mb 127Mb HD £899
FALCON 4Mb 209Mb HD £999

Legend Trakball

Ergonomically designed Trak Ball. 320Dpi resolution, 2 microswitched buttons. The Legend Trak Ball is very easy to use. Unlike normal Trak balls the LEGEND is operated with the thumb freeing the fingers to click buttons
ONLY £29.99

3.5" External Drive

Zydec 3.5" External Floppy drive. £59.99
Includes own external power supply.

Eclipse Mouse

High quality 300 dpi mouse with microswitched buttons ST/AM. £11.99

Marpet Upgrades

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
512K SIMM'S £7.99
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	£260
Data Pulse +290Mb	£360
D/P + 230Mb R/W Optical	£890
CD ROM Drive	£180
<i>Phone for further details on CD ROM</i>	
<i>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 2	£89.99
SCSI Cable (Falcon)	£29.99
230Mb R/W Optical disk	£39.99
ICD PRO Utilities	£39.99

Atari STE Packs

1040 STE Curriculum £199.99
2Mb 1040 STE £254.99
4Mb 1040 STE £309.99

Atari Jaguar Console

Jaguar with Cybermorph £249.99
Phone for games cartridges

Repair Services

The Only ATARI Authorised Repair Centre in the UK

Our Atari trained technicians can repair ST's at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure its safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day.

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
1Mb internal drive	£39.99
TOS 2.06 + Switch STFM	£65.00
Courier Pickup	£11.00
Courier Return	£7.00

PC Emulators

- Check configuration before ordering
- PC Speed STFM or STE (XT) £49.99**
AT Speed STFM (8MHz) £139.99

With various high-powered graphics packages appearing recently, with price tags to match, you wouldn't expect anyone to be too excited about a new release costing under thirty pounds. But a few hours with Floppyshop's *EZ Art Professional* reveals that it is something of a thoroughbred at a horsemeat price!

It has been considerably enhanced from its public domain origins to provide a proud owner with a considerable array of bit-image graphics power. Written in "all legal" code, it should run on any Atari model in low resolution although there is insufficient RAM for more than one workscreen on a 520ST. STe owners will be cheered to know that no advantages are conferred upon Falcon owners! Also, there's no need to run a 60Hz set-up program as this is instantly available at the click of a button.

Given sufficient RAM, up to ten workscreens can be selected, either directly from a Buffers icon or one at a time with the left/right arrow keys. Each has a fixed width of 320 pixels but individually adjustable heights of between 200 and 640 pixels. Each screen can also have its own palette and there are facilities to transfer pictures, palettes, blocks or images between them.

CUSTOM LAYOUT

EZ Art Professional has a fairly individualistic user interface, with not a single drop-down menu in sight. Instead choices are made from a rather sombre menu screen containing grouped icons depicting each of its numerous main functions. Most are immediately recognisable, but any strangers can be identified with the aid of a brief description displayed at the foot of the screen, an initially useful help that may be switched off when no longer needed. Left-clicking on an icon causes its dark-shaded background to turn silver; a second left-click invokes the appearance of a dialogue box, where relevant, from which to set

SUPER ART

It's a long time since an art package was designed specifically for the ST. Keith Berry takes a look at just such a program...



The menu screen is not as daunting as it looks – a description of each function is displayed bottom-left as the mouse pointer moves over it. Shaded Shapes are at top right.



parameters. Another unusual feature is that many dialogue boxes carry no "OK" or "Cancel" buttons – parameters are set as required and a right-click disposes of them. Any box carrying a small rectangle at top left may be moved around the screen to prevent it obscuring a view.

Another right-click leaves the main menu screen for the picture area, a blank screen uncluttered except for the mouse pointer and the display of its co-ordinates. You may return at any time to the menu by right-clicking, and it is a good idea to do so from time to time as the <Undo> key cancels every action in the current function since your last return. Keyboard shortcuts abound: pressing the <spacebar>, for instance, calls up the Colour Option Menu – yes, as it's a British package, "colour" is spelt correctly throughout!

For the program to be available to all Atari users, no tricks have been employed to produce more than the standard 16 colours, but imaginative use of mono fill patterns allows the combination of any two colours to be blended to give the appearance of many more. Additionally, the STe's extended palette is supported. To create your own palette the usual Red, Green and Blue sliders are



The Editor for 16-colour fills with spaces for your own designs. There is a similar facility for the editing and designing of two-colour pattern fills.

provided, as is a handy "H" slider to adjust the brightness of all RGB values simultaneously. One of five preset palettes may be selected from buttons, including sepia tones.

A "D" slider adjusts the speed of Colour Cycling when the latter is switched on. Two colours are shown

linked and this pairing may be changed by clicking on the From and To buttons and selecting new ones. This pair now become the end markers of the new Range. Left-clicking on Spread causes the intermediate colours to become steps between them in the usual manner for most graphics utilities, but Range in this context offers something new.

EZ SHADES

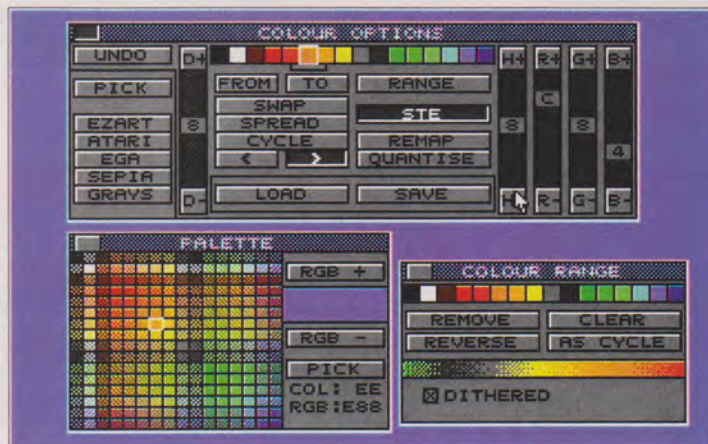
The Gradient fill, in which several colours, or shades of the same colour, blend within an area, have featured in several recent graphics utilities. However, *EZ Art Professional's* implementation as "Shaded Blocks" is probably the most versatile to date. True there is no fill as such, since the feature is confined to thirteen geometric shapes, but as one of these is a user-defined Polygon it

KEY FACTS

Product:
EZ Art Professional
Company:
Floppyshop
Contact:
0224 312756
Price:
£29.95

SYSTEM
Minimum Memory:
0.5Mb
Resolution:
ST Low only
Computer:
ST/STe/Falcon (in ST Low)

Composite screenshot of the three colour menus. The Palette at lower left shows the range of blends available from just sixteen colours!



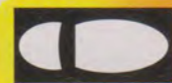
almost makes up for it. Until now, Gradient fills have enabled a colour blend to be performed once, either from edge to edge of a filled shape or outwards from a central point, and occasionally twice symmetrically to depict, for example, the shine along the centre of a tube. The "shine" in EZ Art's Shaded Shapes is governed by the Palette's Range dialogue box, and a look at the step-by-step on this page gives you an inkling of its capabilities.

A full range of drawing tools is available including single bézier curves with two-point control. The Airbrush, with widely adjustable flow and area, can be set to spray using the colour Range as selected in the Palette. As well as the familiar Smear, it also has a Prickle function that can turn a green oval into a gooseberry in seconds! In our review copy the Airbrush, when spraying at the edge of the screen, caused the program to bomb, but a call to Floppyshop revealed that this was a known problem and had already been fixed.

THAT'S A SWITCH

The X-Y Lock switch ensures perfect circles or squares, and while an Information icon is active, on-screen data shows the pixel dimensions of a figure being constructed, the ratio of a block to be rescaled, or the angle of a line being drawn. Other such "switches" include Grid-lock, Solid/X-Ray, Copy/Move, Measure (which plots the distance between any two points), a Slow/Fast mouse selector to aid drawing accuracy, a Colour Rotator and a Scroll Flip to move rapidly from top to bottom of a tall picture. For display purposes, a Scroll View function slowly and smoothly scrolls up and down a tall picture until stopped by a mouse click. Picture Preview compresses a large picture so that it can be viewed within the screen boundary, and even offers the option of replacing the original picture by the compressed one.

The Erase switch, which can be used with the drawing tools from a thin pen to an adjustable-sized roller, can be set to change only selected colours to the background colour.



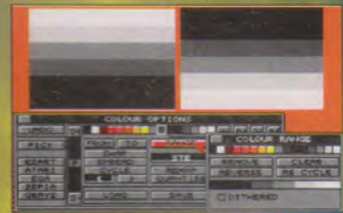
STEP BY STEP GUIDE

DIG THE SHADES, MAN!

One of EZ Art Pro's strongest features is its shade creation. Here, we look at a few of the possibilities...



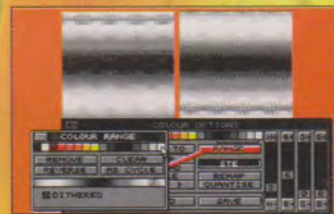
1 Some of the shaded shapes available in a dithered range of spread greens. The direction in which some of them are drawn influences the shading angle.



2 The shaded shapes at their simplest. The range from black to white was created using Spread and then two shaded rectangles were drawn in opposite directions.



3 The same exercise was repeated here, but this time the dithered option in the Colour Range box was activated to smooth out the steps.



4 Some of the shades in the Colour Range box were clicked on individually for this one to add them to the "queue" of shades in the indicator.



5 Here the range was extended to bring in more colours. You can clear the indicator and fill it manually if you wish; a feature worthy of much experimentation!

Blocks can be cut from an existing picture using the <Esc> key and a comprehensive array of block manipulation functions are provided, including Soften, X and Y-Shatter and two varieties of "Pixellation" – the enlargement of pixels to small blocks.

Text can be added using the fonts provided, or other .FON screen fonts, and can be rotated in 90 degree steps. A novel form of proportional spacing is possible. When a line of text is completed, the program waits for a box to be drawn around it: if shorter than the text line, its inter-character spacing is reduced to make it fit.

Loading and saving in a wide variety of formats is supported

SUMMARY

GOOD POINTS:

- Unrivalled shaded shapes
- Separate workscreen palettes
- Variable height pictures
- Lots of functions
- Easy to use

BAD POINTS:

- Rotations only in 90 degree steps
- No printing facilities

FINAL WORD:

"A paint package suitable for beginner or experienced graphics enthusiast alike. At this price, don't think twice – buy it!"

including Spectrum 512, affording the prospect of combining the power of two uniquely different utilities. UIS users or similar may be disappointed to find themselves compelled to use the program's own file selector though.

VERDICT

At review time, only a pre-production version of the comprehensive, well-written 60-page A4 manual was available but this is laid out clearly into sections with cross references. The contents list is conveniently organised but the addition of an index and individual page numbering would be welcomed.

EZ Art Professional is a thoroughly efficient graphics package at a very reasonable price. More to the point, it's great fun to use and is aimed at the majority of you with bog-standard STs.

As such, the package is wholeheartedly recommended.



WORKSCREEN BUFFER OPERATIONS



Up to ten workscreens are available. The upper dialogue box handles the overall range while the small one sets each screen size. The 60Hz monitor option affects all screens simultaneously.

PERFORMANCE

OVERALL

PERFORMANCE ✓✓✓✓✓✓✓✓✓✓
EASE OF USE ✓✓✓✓✓✓✓✓✓✓
DOCUMENTATION ✓✓✓✓✓✓✓✓✓✓
VALUE FOR MONEY ✓✓✓✓✓✓✓✓✓✓

90%

Getting started is very easy. Boot up in low resolution, copy the entire EZARTPRO.DEM folder to a blank, formatted disk, open the folder and double-click on EZ_ART.D.PRG. After the ST Review Exclusive Demo screen flashes before your eyes, you will see the main menu screen function icons. As you select each of them, a brief description appears in the lower left corner of the screen.

Left-click on one of the icons in the top row of the Tools and Modes to activate a drawing tool. Now right-click for the drawing screen in its default black with mouse pointer co-ordinates displayed at lower right. The permanent copyright message is a "feature" of the demo version, as is its restriction to a single workscreen and the disabling of the save function, but almost all functions are

active. Press the <Spacebar> for the Colour Options menu, left-click on one of the colours and right-click for the workscreen. Feel free to practice with each drawing tool in turn.

Some icons respond to a second left-click by displaying a parameter dialogue box. For example, the Eraser allows you to erase just selected colours – the full version allows the change of any colour to any other.

To import existing pictures, click on Load in the lower right corner of the menu for the custom file selector. Choose the button for the format of the required picture in "Filetypes" – .EZA for the three samples supplied in the PICS folder – and double left-click on the displayed filename. Press <Esc> to cut a block and then try out the range of Block Functions. There's lots of scope for experimentation...



Left-clicking twice on the Airbrush icon produces its parameter box. RANGE sprays the colours selected in the Colour Options box, USER waits for an ellipse to be drawn and PRICKLE is unique...

Loaded as described in the text, this is PLANET.EZA after an application of the PRICKLE Airbrush. Sweeping in a wider area brings more colours into the mix. Avoid screen edges in the Demo version to prevent bombs!



EZ ON THE EYE

Now you've read about EZ Art Professional, here's your chance to try it for yourself with ST Review's exclusive demo...



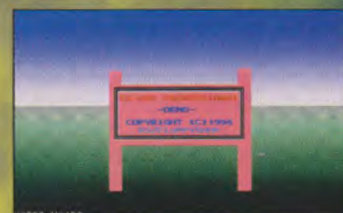
STEP BY STEP GUIDE

MOTHER OF INVENTION

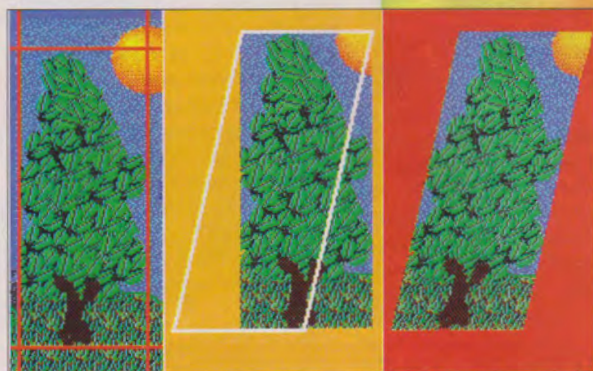
Even the copyright notice in the middle of the screen can be put to good use!



1 A shaded green rectangle drawn after setting up green and blue RANGES in the Colour Options box, using SPREAD and then setting DITHERED in the Colour Range. Now the Range has been changed by AS CYCLE to Blue...



2 ... to draw another shaded box for the sky. The Copyright box is permanently on our screen, so let's use it – the addition of three plain pink rectangles turn it into one of those advertisement boards that ruin the landscape!



This composite shows KIDHOUSE.EZA used to demonstrate the <Esc> cut, the guidelines of the Skew X block function and the final result. A dialogue box offers to "Undo" before the final paste.



3 Swapping pink and white in the Colour Box has tinted the sky's shading. Some solid filled ellipses and rectangles of contrasting shades have been added experimentally ...



4 ... so that the Airbrush PRICKLE can turn them into grass and foliage. Excess white can be toned down using the Zoom. For the trees on the horizon, SMEAR can be used for a softer effect.



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

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GAMES

S-GAM.3777 & S-GAM.3778 NETHACK GEM 3.13 - A GEM based version of the classic Unix Dungeons and Dragons game where you fight your way through multiple dungeons. Special price £3.50.

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UTL.4540 OCR - A Shareware OCR program. Highly specified and now in English. Many more programs on disk.

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STOP PRESS: OMEn

The latest multi-tasking operating system for all ST's and Falcons is finally here! This operating system runs on almost any computer on the market (although we only have the Atari version) and offers fast pre-emptive multi-tasking with low memory overhead. This version is COMPLETE but requires the full documentation in the registered version to get the most out of it. Be one of the first UK users to try out this incredible piece of software! Can you resist this 100% uncrippled demo at just £3.50? Ask for it by name.

FALCON 030

We were the first to support the Falcon and now have over 300 HD disks in our library. The Falcon catalogue costs £1 on its own or just 50p if ordered with other software. Falcon disks cost £2.50 each unless otherwise stated.

DEMOS

S-F.3931 & S-F.3932 THE HUMANS DEMO - A comical look at the evolution of man. RGB. Needs a hard drive. Special price £4.50.

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F.4447 THE ARRIVAL DEMO by Passion. RGB, needs 4 Meg.

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UTILITIES

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F.4351 THE FLOPPYSHOP ARCHIVERS COLLECTION - The latest versions of ARC, LHarc, ST Zip, Zoo, UnArj and Esscode along with easy to use shell programs to run them.

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F.4450 CD ROM, DARK LORD, GENEVA PATCH, MASTER BROWSE, MASTER PRINT, PGS_CFG, REVENGE DOCUMENT DISPLAYER V3.

F.4451 ACE FIX, RUN VGA, NVDI FIX, MAUS WINDOW, MOUSE KA MANIA II, MULTIBLOW 030, PEEKABOO, VECSHOW, VOL, VOLUME, VOLUME LABEL UTILITY, XLATOR.

F.4554 DMV BOOT, POVSHIELD 2.1, EASY DATA, PRIMA 2.1, TOCANTE, TRUEDISK 2.2, XTASK V2.0, SPECTRUM EMULATOR V2.07.

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IN PUBLIC

Talking telephone numbers...



I'm always suspicious of things that claim to revolutionise your life, but when it comes to communications, all of the promises have turned out to be true - if not for my life then certainly for my business. To be honest, I was a bit of a late starter with the whole comms "thang", but tempted by the thought of being able to work right up to a deadline I took the plunge and bought a modem, signing up for CIX - a popular conferencing system - at the same time. Reading through Ofir's comments recently has made me think just how glad I am to have made that decision...

In fact, it's hard to describe in such a short column how much a modem can offer a business - or just the average computer user for that matter. I suppose the most fundamental benefit is E-Mail; it's possible to order software from the other side of the world, enquire about updates, receive electronic magazines, and many other things, all across the wire. Not only that, but it's far quicker than normal mail too - often arriving within a matter of hours - and costs absolutely nothing, beyond the 'phone and BBS charges. With the help of FTP, up-to-date public domain can be grabbed remotely from any country in the world. Many authors upload the latest versions of their program to a local site as soon as they have finished working on it and the same program can be sitting on my hard disk minutes later.

On a more local level, CIX offers its own set of conferences. These cover just about every computer on the market and an answer to a taxing problem is only ever a few hours away. What's more, most of the new computer equipment I buy is sourced through the "vendor" conference and I'm even joined to "red_dwarf" for a little informal chatter about the Toaster, Rimmer, Lister and the Cat. It doesn't matter whether you are an Oric enthusiast, a gardener, a Roger Whitaker fan or something even stranger, there's usually a conference to suit - and if there isn't you can always create one!

Of course, the thing that puts most people off the whole idea of communications is the cost but, believe it or not, the impact on your wallet needn't be that crippling. In the case of CIX there's an off-line reader program that allows new messages to be downloaded all in one go and read at your leisure. The minimum charge per month on CIX is just under £7 plus your 'phone charges and provided you stick to cheap rate, the costs can be kept quite low. The hard part is fitting work in around an active on-line life!

Nial Grimes is a freelance journalist and avid communications freak. Allegations that he's been trying to obtain a free CIX account through promoting the service are totally and utterly untrue... allegedly!

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GET YOUR BACK UP!

Every hard disk owner is aware of the very real risk of losing data due to a failure of one kind or another. Yet while we all accept that backing up important data is essential, most of us do not because there is no simple way of doing so. There are several PD back-up programs, but these are either too slow or not reliable enough to bother with. *Diamond Back 3* is Oregon Research's latest attempt to fill the gap with a powerful yet easy to use back-up utility.

WHAT YOU GET

Like most HiSoft products, the program is accompanied by a high-quality spiral-bound manual of some 60 pages.

The main difference between the current incarnation and version two is a much-improved user interface. Previous versions were criticised for being difficult to use and the author has taken these comments on-board in producing an up-to-date and front end for this clever program. The new interface also supports multi-tasking under *MultiTOS* and *MagIX* and, to a lesser degree, *Geneva*.

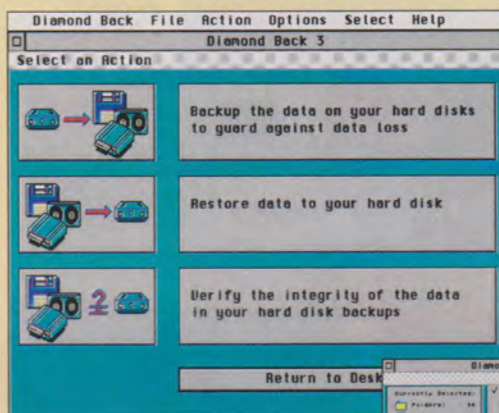
The other major enhancement is that the program now supports most SCSI tape drives including DAT back-up devices. Removable media such as the new *SyQuest* range may be used as a "save set". *Diamond Back 3* includes the powerful *Diamond Format* which is integrated into the main program. This provides a fast format mode and includes support for extended formats and high density drives.

There are three modes of operation. The first is used for backing up your data, the second is one you will hopefully never need – restoring files and the third allows you to verify the integrity of your back-up disks.

OPTIONS

The back-up options are the same as before only much more accessible. Many of you are bound to discover features that were previously hidden

A back-up utility is essential if you work with a hard drive. Ofir Gal takes his data in his hands...



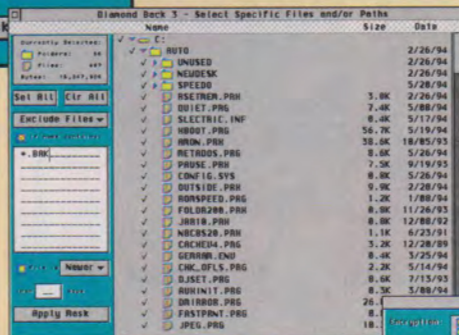
On first loading *Diamond Back 3*, you're presented with the obvious choices – backup, restore or verify.



Quality pack – *Diamond Back 3* upholds the HiSoft tradition.

KEY FACTS

Product:
Diamond Back 3.02
Company:
HiSoft
Contact:
0525 718181
Price:
£49.95 (£24.95 if upgrading from Diamond Back 2)
SYSTEM
Minimum Memory:
1Mb
Resolution:
Any except for ST low resolution
Computer:
Any



This tree-like display is used to quickly access the files and folders for inclusion or exclusion from a backup at a single button press.

system where files are copied selectively. The first step in a file back-up is to use the "Full Backup" option which lets you include and/or exclude whole directories or single files by using file masks.

Diamond Back supports both DOS style "?" and "*" as well as more complex Unix-style wildcards for the more experienced user. The destination can be a set of floppy disks, removable hard disks or a tape back-up device.

Once you have a full back-up, *Diamond Back* uses its "Incremental Backup" option to add new files or files that have been modified since the last back up. This method is incredibly fast, even with a floppy-based system, so much so that I now use it daily.

Various options are available when using the file back-up method, including file compression which is extremely effective and very fast, even on a standard ST.

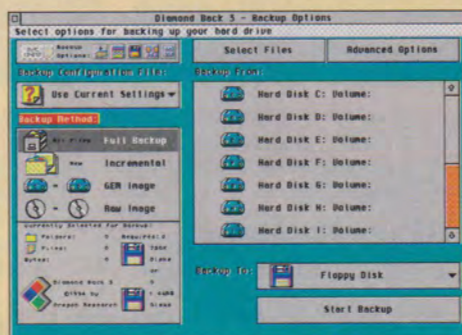


More advanced back-up options include the setting of destination folders, useful when backing up to removable media.

VERDICT

Diamond Back has come a long way since its first version and is now a mature application designed for both the casual and business user. The new interface makes it much easier to use, but I still have my reservations about the overall feel of the program.

It is still a little cryptic and while being the most powerful back-up utility around, I wish it had the slickness of programs like *Kobold*. That said, this is a top quality utility and a must if your files are important to you.



The main back-up parameters use colour or mono icons to enable options like file compression, password encryption and so on.

PERFORMANCE

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

OVERALL

81%

OVER THE RAINBOW

Rainbow promises Falcon true-colour graphics editing at an affordable price, but would Zippy, Bungle and George approve?
David Nilson
takes a look...

Traditional computer art is hell! Whereas all normal painters rely on a myriad of shades to bring life to their work, digital artists are forced to compromise and spend half their time struggling to compensate for a minuscule colour palette. Or at least, that was the case until the Falcon arrived, with its glorious true colour graphics mode and speed aplenty. And now here to fulfil the software side of the equation is *Rainbow*, a true-colour paint package written specifically for the Falcon.

TRUE BLUE

Rainbow is wildly different from any other art package seen on the Falcon. Instead of binding itself to stringent guidelines, it kicks out the familiar GEM interface right from the start and replaces it with a colourful custom alternative. Scattered around a large central view screen are a selection of control panels.

Towards the left are the drawing tools themselves and here lie the standard-issue line, shape, spray, fill and sponge tools. They work predictably well, although the inability to draw solid shapes is rather disturbing.

Three colours can be held on the



The mobile zoom magnifies the area around the mouse pointer – handy for dealing with some of the smaller dialogue buttons.



KEY FACTS

Product:

Rainbow 1.0

Company:

JCA Europe

Contact:

0734 452416

Price:

£29.95

SYSTEM

Minimum Memory:

4Mb

Resolution:

RGB/VGA in true colour

Computer:

Falcon only



Larger pictures pose no problem to Rainbow and the view window can be easily repositioned.

Tools can be used blanket fashion or blended with existing colours for a more natural look.



mouse at any one time – one for the left button, another for the right and a third for when both buttons are pressed. Selecting your colours from the breathtaking range of 65,536 shades falls to the colour picker. This allows colours to be mixed through RGB sliders, or simply grabbed from a box full of smoothly blended shades.

In common with several ST packages, a constant mini-zoom is held on-screen, and the picture can also be doubled to allow close-up

editing. A third option is a rather nifty "mobile zoom" that turns the mouse pointer into a useful magnifying glass. This works throughout the program and can also be helpful in dealing with some of the smaller interface buttons.

Rainbow runs on VGA or RGB monitors and has been trained to extract the very best from both varieties. Overscan manages to squeeze a few extra pixels and smooth hardware scrolling is used to access any portion that can't be seen.

And this sophisticated speed does not end at the scrolling; the whole program charges along at such a

lethal pace it's hard to believe that it is actually running in true-colour! The telltale "LOD" file, no doubt packed to the brim with DSP code, speaks volumes...

Neatly hidden beneath the art package is a "photo studio" that offers several image processing effects. At a basic level, you can adjust the brightness and contrast of an image as well as the colour intensity for each of the RGB components. Slightly less useful is the "noise" button, used to roughen the image. Thankfully, <Undo> works with all operations in the photo studio, so any disastrous mistakes can be corrected easily. All of these settings are adjusted through some rather small percentage buttons and in fact, the whole interface feels just a little bit Lilliputian. It's not so bad if you happen to own a Tabby graphics tablet, but with a crotchety old mouse, it's a wee bit tougher.

VERDICT

The only serious problem with the program is a really evil copy-protection system. Every time the program loads you are forced to enter "Word X from section X.X" of the manual – highly annoying. Apart from that, *Rainbow* is really rather good. It provides a reasonable selection of tools at an affordable price and is extremely fast.

Version 2 promises to fix most of the remaining deficiencies and will be available as a competitive upgrade in the not too distant future...

The photo studio allows a range of simple image processing effects to be applied to any picture in memory.



PERFORMANCE

EASE OF USE

✓✓✓✓✓✓✓✓

DOCUMENTATION

✓✓✓✓✓✓✓✓

EFFECTIVENESS

✓✓✓✓✓✓✓✓

VALUE FOR MONEY

✓✓✓✓✓✓✓✓

OVERALL

71%

This month's cover disk comes complete with a Falcon colour sensation. David Nilson dons the Judy Garland wig and dives headlong into the vivid world of Rainbow...

with the right mouse button over either the RGB or VGA icon, depending on which monitor you are using. The best setting to use is "full overscan" which will spread the picture into the border. Please be aware that some of the settings (look out for the asterisks) can do serious damage to your monitor. If the picture becomes unstable, switch the machine off immediately, wait for ten seconds and then reboot.

This first stage has already demonstrated the fundamental principle of using *Rainbow* – the left button selects and the right button configures. Try clicking on a few of the tools and you'll see plenty more examples.

Enough theory; let's get a little bit artistic. The square in the middle of the screen is a window onto your picture. By default it contains the *Rainbow* title screen and you can navigate your way around the page by clicking the "situate window" button.

To draw, just click on one of the red buttons to the right of the view-screen and follow your nose within the picture window itself.



COLOUR INSPIRATION

No doubt you will soon tire of using the default black pen and it's here that the three strips of colour at the bottom of the screen come into play. By clicking on these bars you can define the shades that are held on the mouse; a left-click defines left-button colour, a right-click defines the right-button colour and a mixture of the two can be used by pressing both buttons. The shaded square at the top of the screen can also be used to pick a colour if mixing seems a bit too much like hard work. There are ten different panels to choose from and the "mobile zoom" is useful

A few extra pixels can be squeezed onto the screen with the help of the video dialogue box – use full overscan for the best results.

to get a closer look at the colour you are selecting.

You have now mastered the basics of *Rainbow*, so pick up your mouse, get yourself in a creative mood, and enjoy the flexibility that only true-colour can afford...



If you run out of space for a picture, simply add a few extra pixels by using the "redefine size" dialogue box.

BRING ME SUNSHINE!



STEP BY STEP GUIDE

A WORLD APART

Proper colour blends at last! Let's redefine our galaxy with a little help from *Rainbow*'s block facilities...



1 First load up the demo picture on the cover disk and click on the "Cut" button. To define the area you want to copy, click once at the top left of the block and a second time at the bottom right.



2 Right-click on the paste button. Change the mode to "Ignore background colour" and the "Source picture number" to one. Move back to the main picture window by prodding the "minus" button at the top right of the screen.



3 At last, you are now ready to lay something back onto the screen. Select the "paste" button and when the green box appears, click where you would like the block to appear. A second left click confirms the paste.



4 Time to experiment with the paste settings a little. By using "blend", a block can be laid over the existing picture without causing too much disturbance – notice the third galaxy that has been blended over the ship.

TECH TALK

There's life in the old dog yet...



Last month I started talking about the need to standardise the GEM interface so that all programs use the same keyboard shortcuts and a similar design. My aim was not to block creativity, but to simplify the use of GEM programs. If all programs supported the same keyboard shortcuts, it would be much easier to learn new programs.

In Germany, systems have been developed that allow for various useful system functions. One of them is *ST Guide* a hyper-text help system that runs as a desk accessory. It uses very little RAM and is capable of displaying on-line help for other programs. The help system it provides is neatly organised, with a table of contents and index; just click on the subject you want and the relevant help text appears on-screen inside a GEM window. The program is Freeware so that everyone can use it and an English translation is currently being prepared by Joe Connor. Establishing the use of *ST Guide* is another example of where a common standard would help.

I followed up my column by starting an Internet mailing list. This allows interested parties equipped with a modem to join the discussion. The response from programmers around the world has been simply overwhelming. There is plenty of enthusiasm and a real desire to improve matters. Top programmers from America, Germany, UK, Holland and other countries have joined the discussion and a solid idea of a standard user interface is developing. The authors of *Mag!X* and *The Atari Compendium* are also taking part in the discussion and even Atari's own programmers are showing interest.

In addition to standardising keyboard shortcuts, various ideas including *ST Guide* help support and other, even more innovative, concepts are being discussed with very positive results – as well as some fierce arguments. What this will mean to you at the end of the day is programs that will be easier to learn and a more friendly overall feel to the system.

This is all good news, but there's more! Eric Smith, author of *MINT* has announced that a new version of *MINT* will be distributed freely in a matter of weeks. This is a change of policy on Atari's part, because previous upgrades were only available to programmers. This will allow *MultiTOS* users to upgrade to a more stable version. It is not yet clear if the new version of GEM (v4.10) will be released as well; current versions of *MultiTOS* use GEM v4.00 which is notoriously slow and buggy. The developers of *Mag!X* are also working hard on some major improvements and Falcon compatibility. Things look pretty good to me...

Ofir Gal would like to thank Yat Siu for helping to set up the mailing list. If you have Internet access you can join the list by sending a message to majordomo@world.std.com with the contents "subscribe gem-list" followed by your Internet address. Alternatively, email Ofir at ogal@cix.compulink.co.uk.

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- MPD1738 – *H-Mec 2* – Pacman clone for the STE.
- MPD1862 – *Utopos 1.5* – Demo version of this great shoot 'em up. (STE 1 meg.)
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Issue 3 of *ST Handbook* the printed magazine for the PD market is now available from us at £2.50 inc. p&p.

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We shall be at the Atari Users shows in Bristol and London on July 30/31 helping to run the OFFICIAL GAMES CHALLENGE organised by MERLIN/ST HANDBOOK (in conjunction with Europress). Your chance to win a Jaguar and lots of other goodies!! Further details available from ourselves on request. We look forward to meeting you and giving you the chance to find out about us.

Obsession

the game of the 90s will be here very soon, for all STE (1 meg users). Don't miss it!

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Old fashioned – but what the Micromarc lacks in looks it more than makes up for in performance.



**INSIDE
INFO**

If you're thinking of making the step up from a dot matrix, inkjet printers are the ideal choice unless you have particularly heavy duty requirements or need the kind of resolution and quality normally associated with professional DTP.

The 300 by 300 dpi of most inkjets is twice the resolution of a nine-pin printer and though lower than a 24-pin dot matrix, the way in which the ink is sprayed onto the paper rather than hammered, makes the dots much finer. The end result is a print quality that is only marginally poorer than a laser.

Inkjets are also very easy to run and maintain. There are few moving parts, which makes them very reliable, and no messy toner cartridges or inked ribbons. Add the astonishingly low noise levels with no background hum like a laser and it's easy to see why inkjets are in such demand.

There seems to be a new inkjet printer at every turn! This month, Andrew Wright checks out the print quality of the latest from Texas...

Texas Instruments has been working hard to get into the printer market of late and the Micromarc proves that it has something to say. Its base model Deskjet competitor offers a good performance, especially where speed is concerned.

It features HP Deskjet emulation with a maximum resolution of 300 dots per inch but the 300 characters per second printing speed makes it almost twice as fast as the Deskjet in letter quality mode and 25 per cent faster in draft mode. The speed is achieved by using 128 nozzles on the cartridge instead of the normal 50 or so. Interestingly, the maximum resolution is used for both letter quality and draft modes though draft mode uses noticeably less ink.

In terms of styling, the Micromarc is way behind the times and looks more like a dot matrix printer than a dot matrix printer does! Paper is fed in from the top, turns around and comes out again in the same direction. Although this gives the printer a conveniently small footprint, the high paper feed angle adds to

KEY FACTS	
Product:	Micromarc
Company:	Texas Instruments
Contact:	0234 223122
Price:	RRP – £250; Typical – £200
SYSTEM	
Minimum Memory:	0.5Mb
Resolution:	Any
Computer:	Any



A right smoothie – Micromarc does a good job of reproducing the apple's grey tones.

LEAVING ITS MARK...

Letter Gothic, Courier and Dutch SWC (Times). Various sizes are available for portrait and landscape modes and different paper sizes are accepted too, including A4, legal and US letter sizes. Up to 100 sheets of 80gsm paper can be placed in the feeder and there is even a setting for envelopes and thick card, which can be fed through the front of the machine.

VERDICT

Cartridge life is claimed as being 1,100 pages and the street cost is roughly equivalent to that of a Deskjet ink cartridge, making it far from cheap. On the other hand, it won't break the bank and you do have to pay for the high quality 300 dpi output somewhere.

The overall print quality doesn't match that of the new Deskjet 520, with some banding being present, though it is definitely much faster, in both text and graphic modes. With a low RRP – expect a street price nearer £200 – this looks like a good buy despite its dated looks.

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

KEY FACTS

Product:

Kobold 2.5

Company:

System Solutions

Contact:

081-693 3355

Price:

£49.95 (introductory)

SYSTEM

Minimum Memory:

0.5Mb

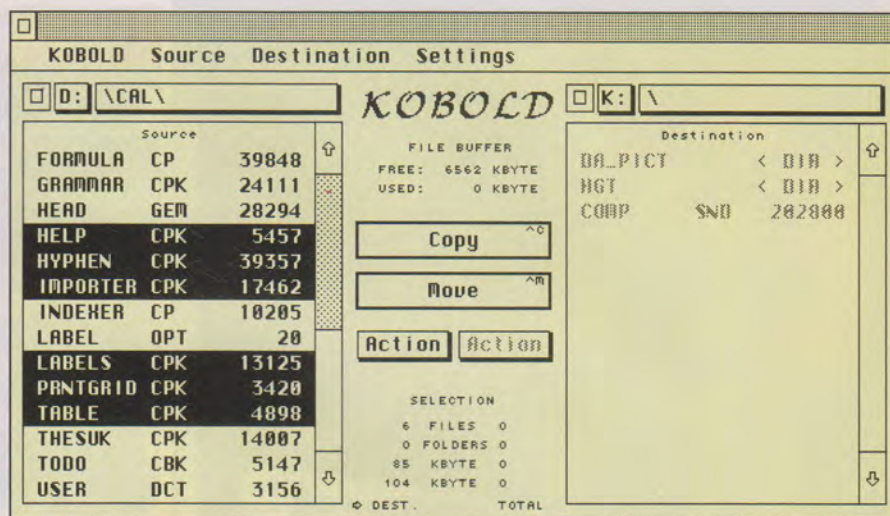
Resolution:

Any except ST low resolution

Computer:

Any

Kobold uses an up-to-date GEM interface, featuring pop-up menus and keyboard shortcuts. The program can also run as a desk accessory.



FLYING FILES

System Solutions continues to support top German programs by bringing *Kobold* v2.5 to the English speaking side of the channel. With a price tag of nearly £50, this file utility may seem a little pricey – but there must be a reason why it has won over the Germany market and is supported by programs like *Gemini*, *Two In One* and *Ease*...

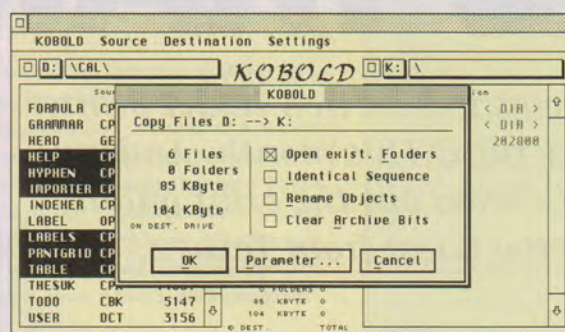
WHAT IS KOBOLD?

Described in the dictionary as a goblin or elf, *Kobold* has to be the fastest file copier available for the ST. However, describing it purely as a file copier is rather misleading because *Kobold* is much more than that as you'll see in a moment.

The main display resembles archivers like *STZip*, with two scrollable file lists and several buttons at the centre. *Kobold* can run either as a stand-alone program or a desk accessory, making it very useful on a standard ST system.

Basic operation is straightforward: select the files you wish to copy on

Is any file management utility worth fifty pounds? Ofir Gal thinks so...



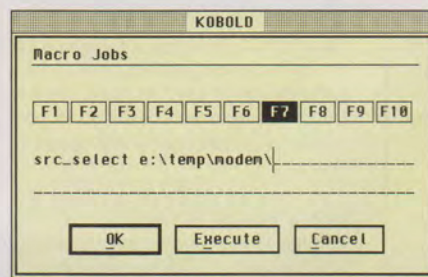
Copying files of folders is simply a matter of selecting 'em, setting the destination and clicking on the Copy button.

WHAT'S ON OFFER?

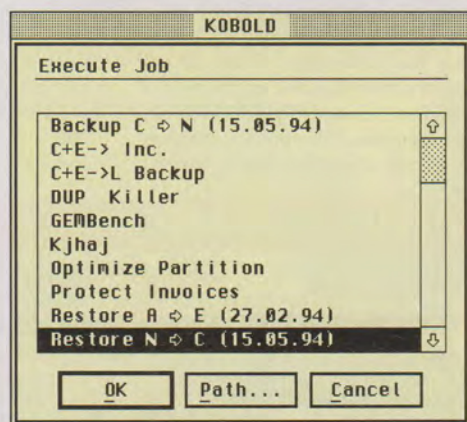
As a properly written GEM application, *Kobold* works in any resolution except ST Low. This includes overscan, graphics cards, *MultiTOS*, *Geneva* or *MagIX*. The program has the latest user interface widgets such as pop-up menus, keyboard shortcuts and user-configurable function keys.

In addition to copying, *Kobold* supports all other file-related operations such as move, delete, format, rename, create folders and can even change file attributes like write protection. All operations can be used on single or multiple files and every feature is well thought out,

the left, the destination on the right and click on "Copy". Those of you who tried the demo on our June cover disk (issue 27) will already know how fast *Kobold* is at copying files. Depending on various factors and the operation being carried out, *Kobold* can be up to ten times faster than the desktop or other file utilities when it comes to moving files around.



The ten function keys can be assigned various functions from selecting the source path to complex tasks.



Pre-recorded jobs can be started from this dialogue box. Jobs are just as easy to create...

BACK-UP FACILITIES

Although *Kobold* does not claim to be the ideal back-up tool, it can certainly be used as one. Creating back-up jobs is a fairly easy affair. When a file is created or changed, *TOS* marks it using what is known as the Archive bit. *Kobold* can look for files marked in this way, select them and then copy them to another hard disk partition, or to a series of floppy disks. This facilitates both full and incremental back-up options.

Kobold does lack some features found on dedicated programs such as *Diamond Back* – for instance, you cannot compress files on the fly and there is no tape drive support. Nevertheless, *Kobold* can still be used as a capable back-up tool, especially if you have a removable SyQuest or Magneto-Optical drive.

SHAPING UP...

How does *Kobold* perform? A good question – and one that this table goes a long way to answering.

Task	Desktop	Kobold
Format a double-density floppy disk	100	74
Copy 100 files (2Mb) on hard disk	24	9
Delete 100 files (2Mb) on hard disk	11	1
Copy 8 files (450Kb) from hard disk to floppy	68	53
Delete 8 files (450Kb) on floppy	12	3
Copy 50 files (150Kb) from hard disk to floppy	120	24
Delete 50 files (150Kb) on floppy	51	4
Clear floppy disk	N/A	2

All times are in seconds. All operations were performed with system verify on.

supporting almost anything you can think of – for instance, formatting disks can be performed in the background and includes support for high and extra high density (2.88Mb) disks. Esoteric media such as removable drives or CD-ROMs are also supported.

Files can be selected subject to certain conditions being satisfied. You could set *Kobold* to automatically select all files with the extension .DOC that were created after a given date and then copy them to a floppy disk for back-up purposes. Indeed, clever use of this feature makes *Kobold* a perfectly capable hard disk back-up utility.

Floppy-only systems are catered for by using a temporary buffer. If you want to copy files from one disk to another, files are temporarily copied into the buffer and then copied back to the destination disk. An end to tedious disk swapping!

GET A JOB!

If you work with a hard disk and need to regularly copy files for back-up purpose, or do other repetitive and boring operations such as deleting all files with the extension .BAK that some programs insist on creating, *Kobold* not only does these operations very quickly but also automatically!

Bringing together the best of both worlds, *Kobold* marries the ease-of-use of a graphic user interface (GUI) with the power and flexibility

of a command line interface (CLI) – enter “*Kobold* Jobs”.

There’s a *Record Job* facility where every action you make is recorded and then stored in a disk file. All jobs are then available from a friendly dialogue box.

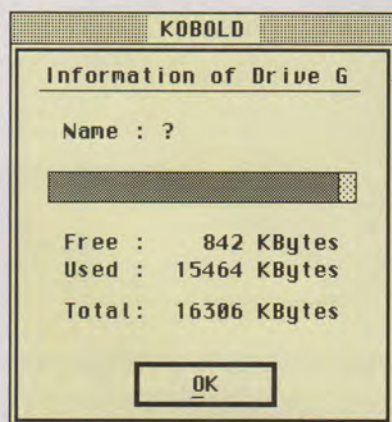
A job may be as simple as formatting a floppy disk to a complex sequence of actions such as selecting all new files on partition E, deleting all .BAK files and then copying the rest to a series of floppy disks, prompting you for each floppy with an alert box.

Jobs can be configured to work in the background if running under a multi-tasking system or as a desk accessory. As a job file is simply text, it can be edited with a text editor or word processor.

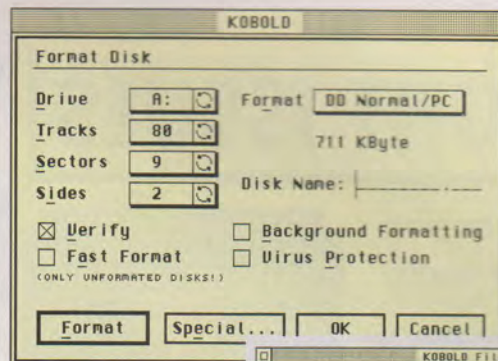
The text resembles a simple programming language with commands like *SRC_SELECT* for selection of the source path and its counterpart *DST_SELECT* to set up the destination path.

There is a wide range of commands to support display of alert boxes from within a job and even add sound effects! For most purposes, there is no need to edit a job file and *Kobold* comes with a few sample jobs to get you started.

The package also includes several utilities that can start jobs daily at a given time or whenever you power up your system. *Kobold* is clever enough not to touch files that are currently in use if the job is run in the background.

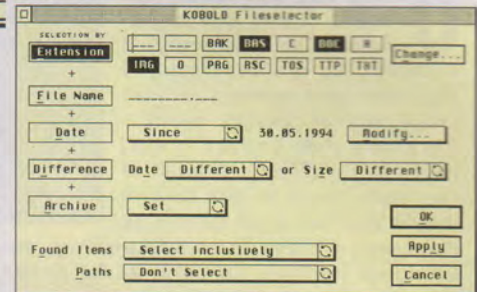


Kobold displays disk statistics instantly, unlike the desktop which takes a while...



Formatting options cater for almost every conceivable situation: double, high and extra density, standard and extended formats and even virus protection boot sectors!

Kobold selects files according to specified conditions – yes, you can find all files with a .DOC extension that were created or modified after May 30th and are larger than 10Kb if you need to!



SUMMARY

GOOD POINTS:

Very fast
Easy to use
Highly compatible

BAD POINTS:

Backup facilities could be improved

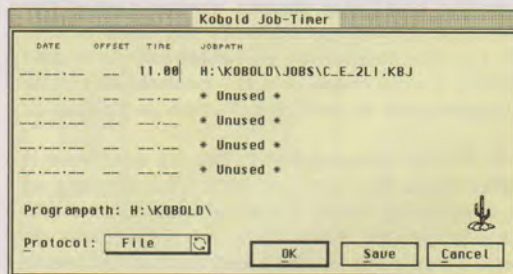
FINAL WORD:

“The ultimate management tool, combining the ease of GEM with the facilities of a powerful file processor.”

VERDICT

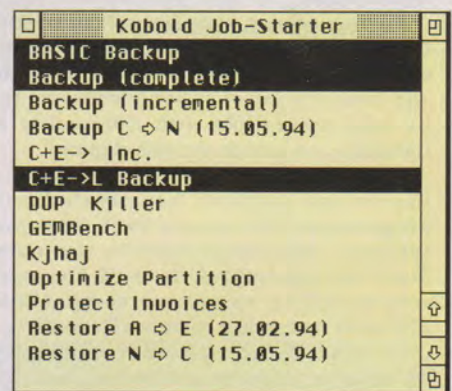
Kobold is simply a joy to use. It is very fast, reliable and doesn’t take much getting used to. If you use the replacement desktops *Gemini* or *Ease*, or a multi-tasking operating system, you can install *Kobold* so that all desktop file operations are automatically handled. A quick glance at the table on this page clearly shows how the desktop is out-performed.

In a way, *Kobold* is the NVDI of file manipulation. Highly recommended stuff!



The Job Timer desk accessory can be used to automatically start jobs whenever you wish – ideal for unattended back-ups.

With the Job Starter desk accessory, several Kobold Jobs can be started from this menu.



PERFORMANCE

OVERALL

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

92%

WRIGHT ISSUES

Don't mention
the war...

On my way back from the recent D-Day commemorations in Normandy, it occurred to me that two of the main protagonists in that tragically necessary event – Germany and the US – still have their differences. Most of the hurt caused by the Second World War has been healed by time and a greater understanding, not to mention baser economic motives. Certainly as far as the current generation is concerned, the war is over but many people in the Atari world are voicing concerns over the apparent divergence of US and German software.

It's all to do with distance, rather than differences, I might add. Take screen accelerators for example. *NVDI* is the preferred choice in Germany where you probably won't find an Atari without it. Over the pond, it's Codehead's *Warp9*. When I recently reported a problem with some US-developed CD-ROM software and *NVDI*, it was obvious that what most of us would consider a vital utility wasn't sitting on the said developer's hard drive.

Even now, some months later and no doubt after feedback from the Europeans, *NVDI* support isn't likely. *NVDI* takes a few liberties with the Falcon's true colour display and the Americans don't approve. The end result is likely to be that German software will always work with *NVDI* while US software might well not.

There's more. In the stars and stripes corner comes the *Geneva* and *NeoDesk* combination, while in the land of the Bundesbank and the autobahn we have *MagIX*, *Ease* and *Kobold*. *MultiTOS* doesn't even come into it – probably because it's the software alternative to self-flagellation or rolling in barbed wire!

On the face of it, it's an unequal fight. The US user base is considerably smaller than the German one. The amount of notable software emanating from Germany must be twenty times that coming from the States but the Americans do have one advantage. They have *NeoDesk* and a lot of followers world-wide.

Having seen a late beta test version running alongside *Geneva*, I can confirm that it adds more power to your Atari's desktop than you will ever have thought possible. My worry – and that of a lot of eager purchasers-to-be – is whether it will be fully compatible with the quality software coming from Germany, on which we still depend.

Dan Wilga, the Gribnif developer responsible for both *Geneva* and *NeoDesk*, has pointed out that it is up to the programmers to ensure that their multi-tasking operating systems and enhancements are compatible with Atari's *MultiTOS* guidelines. It isn't the application developer's responsibility to ensure compatibility with the various different operating system alternatives.

Let's hope they get that message on both sides of the Atlantic; a software war is the last thing we need now that Atari appears to no longer have a research and development team for TOS...

Having recently been hailed as the Alf Garnett of the Atari world, Andrew Wright wishes it to be known that he is reluctant to be associated with such a mild-mannered, tolerant character...



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NEW BEGINNINGS

Arabesque is back – with a vengeance! Manfred Bäcker gives his first impressions...

The original *Arabesque*, developed by the now defunct German company Shift, was intended to bridge the gap between vector and bitmap graphics. The program offered a good selection of bitmap tools plus the ability to convert a vector graphic into a bitmap and modify it. Coupled with a user-friendly interface, *Arabesque* won many friends around the world.

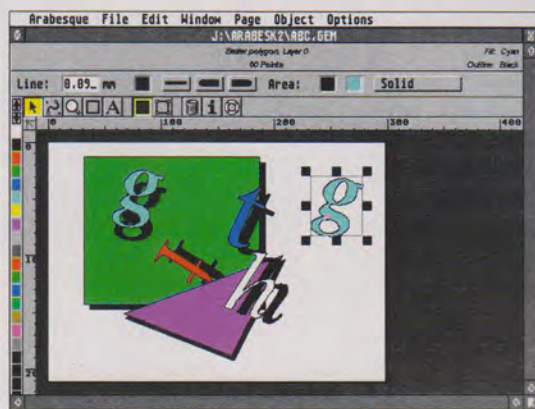
The follow up, *Arabesque Pro*, increased the functionality but some limitations remained: no colour, no MultiTOS capability, no scalable font support and limited block functions. But a reworked *Arabesque 2* is close to release and, of course, *ST Review* has the first, exclusive preview!

CHANGES

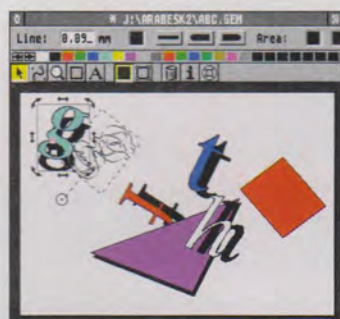
System requirements have changed. Any screen resolution can be used, from ST low through to true colour graphics cards. Internally, *Arabesque 2* works in true colour and uses dithering techniques to display according to the monitor being used. Colour values can be assigned from a palette or manually through either RGB or CMYK values, a feature important to DTP users.

Any Atari computer can be used subject to a minimum memory of 2Mb. Forget about GDOS: *Arabesque* supports scalable fonts through *SpeedoGDOS*.

To gain more space on-screen, the tool bar, scroll bars and info bar can all be deactivated. Also, redraw speed can be improved by reducing the display precision and by using outlined objects during rotations.



Hasn't the user interface changed! *Arabesque 2* now sports classy, coloured 3-D icons.



To rotate a group of objects, click on them, set the centre and just drag to position.

FUNCTIONS

All the typical functions are here, such as line, circle, arc, box and text, but let's concentrate on some specialities – such as the Poly editor. With this tool you can join and split lines, change anchor points and the type of bézier curve making it very easy to create unique logos or modify existing complex objects.

The style sheet function is also impressive. Imagine that you've finished a project and then discover that all text boxes with a 20 percent grey shade look too dark on the printout. Instead of changing each individual box, you can define a style sheet that consists of the definitions for line style, width, colour, ending, fill pattern and colour, text colour and style... and a unique name. Any

changes to the style sheet are immediately reflected in the relevant objects. Of course, styles can be saved and loaded.

Multiple copies of any object can be created through the Duplicate function and any copy can be scaled, rotated, moved or changed in colour to create a smooth blend.

Using *SpeedoGDOS*, *Arabesque 2* can resize vector fonts without loss of quality. Text can also be converted to a vector outline which means that text effects are unlimited. As for bitmaps, various formats can be loaded and handled but not edited. However, the program's modular



Objects can easily be copied and pasted between two open documents.

design means that no Software is already working on such a module with the intention of also porting it to *That's Write 3* to replace its current, limited editor.

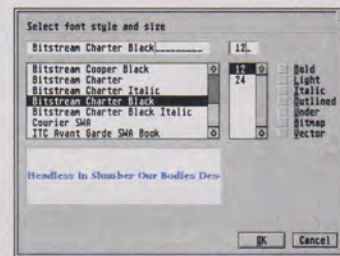
EASE OF USE

Arabesque 2 is designed to provide fast results. All functions can be mouse or keyboard operated and while the 13 predefined Atari shortcuts are supported, *Arabesque 2* also has its own "SysKey" mode for custom creations.

The on-line Help function is also useful: a click with the right mouse button or a press of the <Help> key activates a pop-up menu with different options. Clicking on an object more than once skips through them.

Overall, the program is very user-friendly and the various import and export formats, to which other modules will be added, allow for file exchange with almost any other Atari, PC or Mac application.

With additional support for *SpeedoGDOS* and multi-tasking, *Arabesque 2* has the potential to be the ultimate Atari graphics package. Due in the late Autumn, we'll keep you posted...



Speedo fonts are chosen from this box – but what the test text means is anyone's guess!

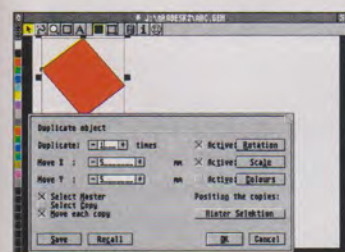
IMPORT AND EXPORT

Arabesque 2 supports graphic formats compatible with almost any existing DTP program or word processor on the Atari, Macintosh or PC. Bitmap formats are displayed in a frame and scalable while vector types can be loaded normally or merged.

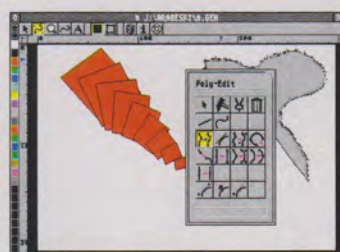
Some formats allow for solid colours to be dithered or vice versa – helpful when working with less flexible programs.

Import Formats: CVG (Calamus Vector Graphic), GEM (GEM Metafile), NMD (nol Metafile), IMG (mono GEM Image), X-IMG (colour GEM Image), EPS (Adobe Illustrator PC/Mac EPS), AOB (old Arabesque Object), MPT (Megapaint Vector), TIFF (separate PC and Mac formats), TGA (Targa), BMP (Windows Bitmap), PCX (PC-Paintbrush), PBM (Unix portable bitmap), PI? (Degas), PAC (STAD)

Export Formats: CVG (Calamus Vector Graphic), GEM (GEM Metafile), NMD (nol Metafile), IMG (mono GEM Image), X-IMG (colour GEM Image), EPS (Adobe Illustrator PC/Mac EPS)



Creating rotational effects is a doddle. Set the amount of movement and the number of duplicates...



... and watch them tumble! Then use the Poly Editor to manipulate bézier curves. Love the hammer and pliers...

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the latest issues of *Atari ST User*
and *Atari ST Review* at the
shows, before they will be on
sale in the shops!



FOR MORE INFORMATION

Who's there

The leading ST publishers and dealers attending include:

- Atari Workshop – renowned as the ST hardware specialists. They've promised to bring along enough hard drives so that they don't sell out this time! Also, see *Cubase Audio* here.
- Best Electronics – Mr Atari, Brad Koda, will have every spare part imaginable along with some delightful Atari memorabilia.
- Black Scorpion – your first chance to see their latest product, *Dextrous*.
- Calamus User – all your questions about the best-selling Atari DTP package answered.
- Caspian Software – play the new *Rock 'n' Roll Clams* game!
- CGS Computerbild – Digital Arts' number one international distributor! *DA's Layout*, *DA's Vector Pro*, *DA's Picture* and all the rest...
- Compo Software – the biggest Atari specialist apart from Atari. Compo expect to have *That's Write 3*, *That's Address 2*, *Musicom 2*, *TrakCom*, *NeoDesk 4* and lots more – including upgrades for your computer carried out on the spot!
- Furst – see the revolutionary *SMS2* operating system first hand.
- Go Direct – get back issues and the latest copies of the magazines here along with all of *ST Review's* cover disk support products. You can even meet *ST Review's* editor!
- Goodman International and Merlin PD, two of the top Atari public domain libraries.
- HiSoft – check out *Papyrus*, *TrueImage* and the *MasterPhone* Falcon voice mail package at the London Show.
- JCA Europe – see *Calamus* and the stunning new Falcon-specific *Rainbow* art program at London.
- Titan Designs – it's rumoured that there will be stocks of the *Graffiti* Genlock available...

WIN A JAGUAR

Not only will you get the chance to see Atari's mind-blowing new games console, you can also win one! Everyone who comes to either Show can enter for free! Just play a game of *Obsession*, a brand-new STe-only pinball game. The highest score at the end of the two days wins the Jag! Co-sponsored by ST Handbook and Europress Publications, this really is the offer of the year – and the perfect reason to come to the Shows.

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- Exit the M4 at Junction 19 and take the M32 to Bristol
- Turn left at the last set of traffic lights on the M32
- Under the underpass, carry straight on until you reach the flyover
- Do not go over the flyover but keep it to your right
- Bear right immediately after the flyover
- Follow the road round and the hotel is just on your left

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RAVE NEW WORLD!

The face of computer entertainment is about to change forever. Virtual reality, multimedia and communications point towards a future of total interaction and unrivalled graphical realism. Joined by CyberDude, Graeme Rutt and Nial Grimes, step into the future of entertainment...

Computer games are entering a new dimension. Technologies that have taken years to develop are finally reaching maturity. Within the space of the next few years, virtual reality will begin to live up to its name and the massive capacity offered by CD-ROM promises improved sound and untold benefits for education. Linking these technologies together is the much touted information "superhighway", a vast global network of computers that could soon be used to link games players around the world.

At the heart of this new dawn sits the Jaguar, Atari's new wonder-console. Along with games such as *Alien vs Predator* and *Club Drive*, Atari is in a better position to push virtual reality into the home than any other manufacturer and already has

plans to produce the needed headset. But they are not alone in their battle for the top spot – Sega, Sony and Nintendo also intend to monopolise the impending explosion of virtual reality.

No matter what the outcome, the next few years promise to revolutionise the way computer games are viewed. Only one question remains – how much of this brave new world will filter into your homes and how does your ST fit into the picture? The next few pages will answer that question and, with the help of our unique neural link-up, CyberDude will explain the computers of the future first-hand...



Cyber Speak

Here at *ST Review*, in our first on-line session with our Sirius Cybernetic's Temporal Modem, we came across this dude: he won't give his name due to some temporal law, so we'll call him CyberDude for want of a better name. He's cool. He's told us all kind of stuff about future technology, but won't give any dates – another law – but what he has told us is very interesting...

So, dude, tell us a little about yourself... what's your name, what do you do?

"No names, man. No names, but I can tell you my conception age. I'm 54 standard and a professional games player on a straight million a year."

You get paid to play games? What, you test them?

"No, I play them. I've read my histories man, you guys like, work, right? We don't do that any more. Can't see a lot of point to it. I play games, professionally – it's quite strenuous but I don't mind. It's the overtime that gets on my butt."

Err, right. What kind of games do you like most?

"Dunno – mainly action games: adventures, racing, fighting, flying, role-play stuff. I find war games tedious and platformers are a waste of time."

Okay, it's nice to know some things don't change.

"Huh?"

Nothing, forget it. Now, dude, how'd you fancy answering some questions on specific topics?

"Yeah, I don't mind, man. Let's do it..."



VIRTUAL VISIONS

After almost twenty years of continual improvement, two-dimensional games are reaching the end of the road. Players now want to become part of the game and virtual reality can afford that level of interaction.

Most people's perception of virtual reality is lodged somewhere between the surreal world of *The Lawnmower Man* and *Red Dwarf's* "Better Than Life". But virtual reality does exist – and we can expect to see it in the shops within a matter of months, driven by Atari hardware...

BETTER THAN LIFE?

The basic idea of VR is to place a player inside the game itself. With headset in place, stereoscopic 3-D images are fed to the eyes through miniature screens, headphones providing the audio sensations. The headset monitors movements and updates the screen as you look left, right or behind. The scale of improvement over traditional games is like comparing Scalextric with taking part in a Formula 1 grand prix race!

VR games promise just that. You could take part in a motor race, learn to fly a plane or get involved in a role-playing adventure full of characters acted by other people. And in cyberspace there is no gravity, no fatal crashes and no speed limits!



Imagine being able to explore a building before it's even gone beyond the planning stage – you can with VR.

Entertainment is spearheading the explosion of this new technology, but imagine being able to visit places like the Taj Mahal, or taking in the sights at the Louvre from the comfort of your own living room. Children could study Egyptian life, visit Pharaoh's palace and witness the building of the Pyramids first hand – assuming experts can decide how it was actually done!

THE HARD FACTS

How does the vision of total immersion games relate to the tangible VR we have today? No doubt you've seen *Virtuality* in amusement arcades, and the latest "2000" series includes texture-mapped graphics and special VR seats.

Look at the recent progress made by conventional 3-D games by comparing ST titles with *Alien vs Predator* on the Jaguar. Similar polygon graphics are hidden underneath, but a little texture-mapping turns them into a passable imitation of reality. Add a VR headset and raytracing and virtual reality takes one more step towards genuine reality.

VR in the home is currently limited by safety considerations, the main problem at the moment being the headset itself. The two liquid crystal displays buried in each headset may be effective, but nobody knows the long-term effects of shining them into the eyes at close range. For this reason, manufacturers are shy to unleash the projects they have sitting on shelves at laboratories around the world. Sega certainly have a headset while Atari are working on a similar project for the Jaguar.

The safety deadlock may finally have



Virtuality 2000 offers a great deal more than its predecessor including texture-mapped graphics and a sit-down system.



Virtual reality is not just limited to games. Softline has already released a shopping arcade on CD – next stop cyberspace?

SYSTEM SUPERIOR

The most innovative operating system on the horizon is *Taos*. Not only does it boast some incredible modelling software, but it's also the first true multi-platform operating system: programs written on one *Taos* platform can be loaded and run on another totally different system unmodified. Ports are planned for a number of different processors, including ARM, DEC and Intel with Power PC and 680x0 versions under consideration.

Apple are also rumoured to be working on 3-D routines for their next operating system upgrade and back in PC land, 3D Studio continues to rule supreme.

If you can't wait for the next generation of operating systems, there is an alternative: fire up your ST and find a copy of *Ramworld* or *The 3D Construction Kit*. These virtual world builders are remarkably powerful and if you fancy a little more realism, the *Persistence of Vision* raytracer is worth a look.



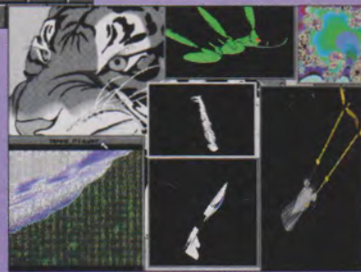
Autodesk's 3D Studio is the PC's premier modelling system. Similar results can be achieved with ST programs such as POV.

3D Studio is used to design many modern CD-ROM games – in the future, realtime rendering of this quality may be possible.



The first clutch of software releases for Taos are very 3-D oriented – long may it continue.

One day, we could all be running the Taos operating system and with a promise of total compatibility, it won't be a bad thing.



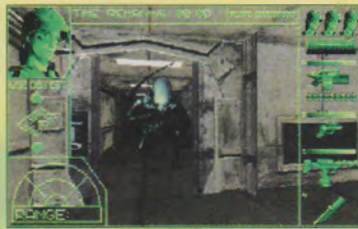
The days of the conventional computer game are numbered – the future belongs to virtual reality. Nial Grimes dons the headset and floats effortlessly through the next few years in cyberspace...

been broken thanks to Forte which has just released the VFX1 headset for the PC. While the price tag of a little under £700 removes it from mass appeal, it might just mop up any safety issues and clear the way for mass production.

A BRIGHT FUTURE?

The technology shows an enormous amount of promise. It may seem hard to imagine a future where conventional games are redundant, but cast your mind back to the days of the Sinclair Spectrum and you'll see how far things have already come in just ten or so years.

Today's systems can be considered the Sinclair Spectrums of virtual reality. The Jaguar can – and probably will – support a headset, but just around the corner lies an even more powerful generation of hardware capable of blurring the line between games and reality. See you in cyberspace!



Texture mapping, as seen in Alien vs Predator, can turn dull vector graphics into realistic environments.



Sega certainly has a pre-production VR headset...



SHOW ME!

If you are interested in the potential of VR for entertainment and business, you will not want to miss the *Virtual Reality User Show*, which will be held in London's Novotel this September. Last year's event was the best attended VR show in Europe and this time around the organisers have promised an even more impressive line-up, with lectures from the industry's major players. Contact The VR Centre on 081-995 3632 for more details.

With many thanks to The VR Centre and SoftImage for their help in the production of this article.

Cyber Speak

Virtual reality, the thing with the headsets and the gloves. I bet that's developed a bit...

"Hasn't it just! Yeah, man. VR is the central interface to most of our games but not all. VR isn't suited to a lot of stuff but it's widespread and used by just about everyone – from kids in nursery class to games players. Oh, and you can forget about the headsets."

How's that?

"Well, man, it's like ancient history. We moved from that rubbish to the physical link ages ago – that's like electrode based. The electrode sends sense response straight to your central cortex and receives your movements in much the same way. There's talk at the moment of the mental link – no electrodes or connection of any kind – brainwave interfacing."

Gulp! I wonder what they meant by "uneven road surface ahead".



ST GOES 3-D!

The ST can still boast some pretty good 3-D games. Perhaps the most popular form is the good ol' flight simulator ranging from the passive *Flight Sim 2*, to the more aggressive *Falcon* or *F15 Strike Eagle*.

Take on Darth Vader in Domark's *Star Wars* and its sequel, *The Empire Strikes Back*. Although the graphics are wireframe only, they are unbeatable for atmosphere and must rank among the best arcade conversions in history.

There's plenty of action on solid ground as well. Microprose *Grand Prix* is enough to keep any budding Nigel Mansell out of trouble for a few months and *Hard Drivin'* follows closely behind with its impressive stunt track.

But the crowning glory has to be *Interphase*. This surreal trip into a future world where computer games have been replaced by programmable dreams has to be the most involving experience on the ST. The plot is a mixture of *Total Recall* and *The Lawnmower Man* – just priceless!



You want surreal? You got it! Interphase is the closest you can come to virtual reality on the ST.

Interesting, dude. What's VR like though, what quality?

"Pretty good, man. The best machines run at half a billion PPS..."

PPS?

"...polygons per second, which give almost photographic quality pictures. Real-time ray-tracing, naturally and all the senses are covered. You can see, feel, hear, taste and smell mostly everything. The VR-interface coder's are pretty good at what they do."

I'm drooling dude. I wish we knew how long we'll have to wait for this...



MIXED SENSES

Let's face it – multimedia is a natural thing. Our minds don't like to work in monomedia so we naturally combine our senses. Why should our computer use be any different?

With multimedia, information is no longer dry – you can look at a picture of the Great Pyramids while reading about them. Its use in education alone is astounding. Children realise the homogenous aspect of our world better than adults and like to hear and see while they learn.

For entertainment, multimedia is awesome. The best games have always been multimedia experiences and this isn't confined to games: musicians, artists and movie makers are all getting in on the act too.



ON DISC

CD-ROM drives have led to fast, affordable multimedia. A disc offers 650Mb of storage, enough for 80 minutes of music or several thousand images. Single-speed drives are quite slow – 10-20 times slower than a hard disk – but double or even triple speed drives are now being common.

Prices are falling rapidly and this seems set to continue on the back of quite remarkable sales. Seven million CD-ROM units are already in circulation and projected figures suggest that this will double in the coming year.

A large percentage of discs contain various forms of data – text files, GIF and JPEG pictures, MIDI format songs, MOD tunes, bitmap and vector clipart – and these can be used on any computer system.

Interactive databases include dictionaries, encyclopedias, atlases, film guides and the like. In conjunction with VideoCD format, we're now seeing musicians as diverse as Peter Gabriel and Iron Maiden taking advantage of CD-ROM technology to further their art.

Games are ideal for CD-ROM technology with graphics and music sucking up bytes like there's no tomorrow! They range from simple shoot-'em-ups to complex maze-type adventures.



An Atari multimedia game! Dragon's Lair on laserdisc connected to an Atari. Sadly, this technology was never developed further.

CD-ROM FOR YOUR ATARI COMPUTER

System Solutions (081-693 3355) offers a full CD-ROM kit with the Apple CD300, a double speed drive with phono and mini-jack headphone outputs for audio. The software, *Extensos*, is compatible with both the High Sierra and ISO9660 CD-ROM formats and supports single session PhotoCD disks. While *Extensos* cannot be used to play back standard music CDs, Systems Solutions are expecting an upgrade to the software which will support both music and multi-session CDs.

TT Kit:	£234.95
Falcon Kit:	£259.95
ST/STe/Mega Kit with Translator SCSI Adaptor:	£299.95
ST/STe/Mega Kit with ICD Link 2 SCSI Adaptor:	£319.95

Their quality – as with all games – varies from poor to amazing.

"I own an Atari so what use is all this CD nonsense to me?" you may ask. Well a CD-ROM drive can be attached easily to your computer. All you need is a SCSI adaptor (not required on a Falcon or TT), a cable and some driver software. There is a vast resource of data of great use to almost everyone, and at least five discs of Atari-specific material, like programs and GDOS/Calamus fonts, already exist – a German firm is planning on publishing one every month!



Macintosh multimedia – in this futuristic game you travel around the tunnels trying to create World peace.

GET THE PICTURE?

PhotoCD, where photographs are developed onto CD, can be used on an Atari pretty easily. Naturally, if you want to see them at top quality you need a display that can show either 256 colours or true colour. Interactive CDs and

VIDEO VIBES

VideoCD is a spin-off from the arrival of CD-based game consoles. As the name suggests, this is an attempt to use the standard compact disc to hold video and audio. Indeed, on the surface it seems like a very good idea. CDs don't deteriorate and as the picture is stored digitally, a perfect freeze-frame is guaranteed every time.

However there are problems with VideoCD. Despite the huge amount of space saved through compression, one disc is still only capable of holding 90 minutes of full motion video; fine for sitcoms, but less useful when it comes to feature films. Additionally there's the simple fact that compact discs are read-only – you can't record on them! This being the case, it's questionable whether consumers will junk their VHS machines in favour of something less flexible. The technology certainly has potential for games players, but the man in the street will probably wait for digital video cassettes – a standard for which has just been agreed.

VideoCD will be available on the Jaguar either as a part of the CD unit or as an add-on cartridge. Falcon owners can already play similar MPEG files through a public domain utility called *MPEG-Play*. Be warned though – it's slooowww!

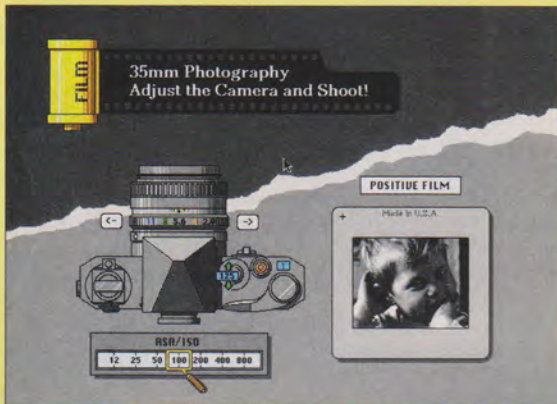


The Falcon can display MPEG video files with the help of a public domain utility – a faster player is expected from Brainstorm in the not too distant future.

Fast animation is even possible on the ST with a little help from Movie 100. You'll have to buy a Jaguar if you want VideoCD though!



Combining graphics, sound and data is all part of today's information superhighway. Graeme Rutt goes looking for clues...



This is a presentation package with sounds, graphics and text linked together. Changing the camera setting changes the picture – neat!

games use computer-specific programs to display data – mainly IBM PCs and Macintoshes, but some enterprising Atari programmers are working on front end programs for various interactive databases. This will be very useful, but don't expect to see many Atari computer-based CD-ROM games.

Atari consoles are an entirely different matter. The Jaguar, with its high resolution 16.8 million colour graphics and CD-quality sound, is the perfect platform. Atari already has a CD-ROM system for the Jaguar – Jeff Minter is currently working with one – that will be launched in the US in late Autumn this year. The price tag will be an extremely attractive \$200. Based on a Philips double-play drive, it will be compatible with as many standards as possible; MPEG II (for real-time motion pictures), PhotoCD, Karaoke + Graphics, as well as the many Jaguar-specific titles that will appear...



Myst is another point and click game. Beautiful graphics, but is it really pushing the technology to its limits?

EDUCATED GUESS

The potential that CD-ROM holds for education is truly staggering. Whereas traditional games are limited in scope by the minuscule floppy disk, CD-ROMs are capable of holding hours of speech and thousands of frames of animation!

Broderbund's *Living Books* are on the leading edge of educational software development. They guide the player through a story with the help of spoken dialogue, sound effects and vast quantities of cartoon animation. Each story is presented graphically and children are taught to read without even realising that it's supposed to be hard work! Clicking on any part of the game screen produces some sort of response and it is a real learning experience. Titles like *Putt Putt* and *Peter Pan* are slightly less educational, but once again, the sound and animation bring the games to life.

Even when you do see the latest generation of educational titles running from CD-ROM though, you can't help feeling how closely related they are to software that made a debut on the ST. The *Mini Magic Storybook* may look primitive when compared to *Living Books*, but the idea is precisely the same: information presented with the help of sound and graphics. As nice as games like *The Rabbit and The Hare* are, given the choice between buying a £1,200 PC or £150 ST, I think I know which machine offers better value for money!

Cyber Speak

Okay, dude, what does multimedia mean to you?

"Everything and nothing, you know?"

No...

"... Well, like everything is multimedia, really. Name me one thing that you do with one sense, man. You have those CD-ROM things, right?"

Yeah, do you?

"Not any more, we have mass storage for sure – you know, for private stuff the 'net police shouldn't be aware of. But like, most information retrieval is done across the 'net and when you have VR, well that's the ultimate multimedia experience."

How did I guess... the 'net again. It looks like we have differing views on what the term "Multimedia" means.

"Looks like it, man. But you've gotta see that it's just caused by your technology – it's limited, your network connections are like, slow. Until they get a bit faster you're stuck with those little silver platters. Multimedia is so natural to us we don't even use the term! Do you guys talk about "sound and graphics" games? No way."

I see your point, dude. What about non-games use, though – information retrieval?

"Yeah. We have that, man. I can pull up the Apollo moonshot, listen to the Blue Danube or ask for a cool wind to be blown across my body while reading War and Peace."

Wow...



Broderbund's Living Books speak the story and allow the player to interact with the scenery.

The Mini Magic Storybook can provide a taste of CD-ROM educational software on the ST – sound and animation in perfect harmony.



CONSOLE YOURSELF...

Who would have thought that a machine designed by Atari could create one of this century's fastest growing industries. It all started way back in the late seventies when a revolutionary games system called the VCS hit the market. While there were other consoles available at the time, Atari's system stole the market with classic games like *Pacman*, *Asteroids* and *Space Invaders*.

1994 is another pivotal year in the history of games hardware. The one-time king of the console market, Atari, is returning to its roots with a vengeance and the Japanese manufacturers are also lining up their next generation consoles. So what will these machines of the not-too-distant future offer and how will the Jaguar fare in the conflict?



THE HARD FACTS

Games are certainly changing. Sega are promoting anything with "Virtua" bolted onto the front and most other manufacturers are clamouring to offer titles with the depth of interaction that only 3-D can afford.

In the arcade, the plain vanilla vector graphics used by games such as *Virtua Fighter* and *Virtua Racing* are slowly giving way to texture mapped replacements. You only need to look at the stunning realism of titles like *Ridge*

Racer or *Daytona GP* to get some idea of the bright (or should that be light-sourced) future for vector graphics. The advantage of the vector approach is that scenarios can be viewed from any angle – it's the difference between playing an overhead shoot-'em-up like *1943* and a flight simulator such as *Falcon*. Let's look at the hardware that is going to make that possible...



Atari has a number of coin-op manufacturers on their Jag developer list and shareholders Warner are keen to provide cartoon licences.

A COOL CATI

Leading the pack at the moment is Atari's **Jaguar**, with its twin RISC processors and stunning true-colour graphics. A CD-ROM is in the pipeline – developer units are already beginning to trickle through – and a number of publishers are hard at work on CD-only titles. The main problem at the moment is software – *Cybermorph* and *Tempest 2000* are mindbendingly good games, but the first third-party offerings are still one or two months away. However, there are now officially more than a hundred developers and included on the list are several coin-op manufacturers. Although the Jaguar's 64-bit technology doesn't make it inherently better than the emerging competition, the magical "64" could do a lot to persuade the consumer.

But Jaguar is not going to sit unchallenged. Perhaps the most impressive development is Nintendo's link up with Silicon Graphics to work on the **Project Reality** machine. SGI workstations were used in part to create scenes for *Jurassic Park* – the mind boggles!

Europe's leading console manufacturer, Sega, has two new machines in the pipeline. **Mars** is an upgrade for the Megadrive and simply transports the machine into the 32-bit generation. This fades in comparison with the

Jaguars are already being sold on the strength of *Tempest 2000* and the trend is likely to continue when *Alien vs Predator* arrives.



PROPHET OF DOOM

When it comes to computer games, nothing stirs up more attention than blood and guts especially as we've now entered the era of texture-mapped 3-D, where both savoury and unsavoury games can be represented with uncanny realism. With *Doom* and *Katsumi Ninja* among the first releases for the Jaguar, Atari find themselves in the middle of the controversy. We tracked down Darryl Still at Atari to give its stand on video game violence and moves by ELSPA to control the situation...



***Katsumi Ninja* on the Jaguar is set to put even *Mortal Kombat* in the shade.**

STR: Atari seems to have a much more liberal approach towards violent games than other manufacturers – do you control the content in any way or do publishers have a totally free rein?

Atari: When we set out with Jaguar we listened very carefully to what different sectors of the industry had to say. One of the biggest beefs from software publishers was the conditions of other manufacturers' license agreements, and while recognising that this is an important source of income, we were well aware that we could not be dictatorial in setting out the terms of publishing on Jaguar. Therefore we have left a lot of responsibility with the

publishers themselves. There is an ultimate clause in the agreement which allows us to disassociate ourselves with a product that we feel goes too far and in extreme circumstances we can stop production.

STR: What is your stance on ratings? Has Atari got any plans to place warnings on the boxes of games like *Katsumi Ninja* and *Doom*?

Atari: We are currently discussing in the USA associating ourselves with a regulatory body.

STR: How do you personally feel about an industry-wide rating system?

Atari: The problem with this is that we are an American company who will not be tied by rules of a body such as ELSPA; the Japanese companies have their own set of rules after all. It's a very difficult question, but I personally believe that the industry is mature enough now to self regulate in some form and hope it gets sorted soon.



STR: Thank you for your time.

The advent of texture-mapped 3-D means that games are becoming more and more realistic – a good thing when it comes to violence?

The console wars are hotting up. As Atari roll out the Jaguar in this country, promises of new systems are emerging from every quarter. Nial Grimes ploughs through the hype to reveal the future of games hardware...



Initial games on the Jaguar provide just a glimpse of its potential for 3-D graphics.

all-conquering power promised for Saturn. Based around two RISC CPUs, this machine should be able to carry arcade-perfect conversions of the *Virtua* games.

The dark horse in this electronic arena is Sony, with its PS-X system. Some truly jaw-dropping demos of the machine have been previewed in Japan and several arcade manufacturers have already signed up to develop for the machine. If current rumours are correct, this is the kiddie to look out for – in a couple of years.

Buried somewhere amongst the squabbling console rabble is the PC. Although not specifically designed for games, the speed of the 486 processor makes modern PCs more than a little capable when it comes to games. More importantly to Atari fans, a Jaguar card has just been announced for the PC. The Tom and Jerry chip set will become a part of the popular ReelMagic card and this will enable PC owners to run standard Jaguar CD games.

AND THE WINNER IS...

It's impossible to say with total accuracy which machine will win the console wars. In fact, there may not be a winner – the Amiga and ST survived alongside one another for years. And while Sony, Nintendo and Sega are busy promising the next generation of games hardware, Atari has actually delivered – you can go out and buy a Jaguar today.

Atari are not fighting their way to a new crown, but regaining one they lost in the early eighties. If they can achieve respectable sales on the current machine and push Jaguar-2 through the doors by late 1995, it's entirely possible that they will climb to the top of the heap.



Silicon Graphics workstations were used in the production of Jurassic Park and Nintendo is basing its Project Reality console on the same technology...

JEFF MINTER ON THE JAGUAR

"It was love at first byte. I was expecting quite a steep learning curve – the Jag's an advanced beast, a long way from yer humble ST, full of multiprocessor RISC tech and more copro's than you can shake a knobby stick at – but within two or three days I was up and away. It's just so nice to code. Everything does just what you'd like and is set up exactly how you'd like it to be. As for the speed, well, if coding your standard ST is like riding a push-bike, coding Jaguar is like being strapped to a cruise missile. It kicks. It burns. You try to slow it down and it just keeps going. It does extremely, deeply naughty things to bitmaps of all sizes. It never runs out of

colours. One cannot foam at the mouth or rant dementedly enough about this hardware. We are talking full-on, all out, X-rated technolust here."



Jeff Minter's first attempt at programming the Jaguar is Tempest 2000.

Cyber Speak

What hardware do you use at home?

"Probably not as much as you think, man. I've got the one terminal which is used for just about everything. It's got the physical link, I was talking about, the cable interface – all that stuff."

Let me get this clear – your gaming console is really a terminal that plugs in to the cable network?

"Of course, man. Everything is cable based."

Even the games?

"Yeah. The games are uploaded to your terminal, pretty instantaneously, and you play them. No cartridges or any of that stuff. If it's multi-player the host computer controls the movement and works out where everyone is – who's killing who, that kind of trip."

I was going to ask about this. How many of your games are multi-player?

"All of them."

Huh?

"All of them, man. Who wants to play on their own? You can be stalking down an alleyway at midnight, man and like a real person can be hiding in the shadows waiting to pounce. It's unnerving, it's real."

It sounds it, dude. Mind if we skip to the last topic?

"Go for it, man."



LET'S COMMUNICATE

Communications. Modems and stuff. Telephone lines. Text. Boring, right? Wrong! Currently, comms can be an absorbing and entertaining hobby but in the future it will be much more than that – data communications will be as commonplace as a telephone is today.

The scope of comms is vast. There's something of interest to almost every computer user whether you're a gamer, hobbyist or professional. Let's take a look at what it offers now and what the future promises...

ON-LINE GAMES

One of the first on-line games was *Colossal Caves*, an experiment in artificial intelligence by programmers at The Massachusetts Institute of Technology. This spawned both the Infocom/Level 9 spate of text adventures and *Essex MUD*, the first true multi-user game (MUG).

In a MUG you play a persona of your own making. You move around the game map, using commands like "north" and "south", trying to work out puzzles. At the same time there are other personas trying to get to the puzzles before you do, fighting with you (or against you) and generally interacting.

Graphical multi-user games are arcade games with more than one player. They use special graphics terminals, written for specific machines, that hold all of the graphics information and the host machine co-ordinates movement between the players.

The UK's biggest MUG company is called *On-Line* which offers a number of games ranging from dog-fighting in WWII fighters to wandering around a maze casting spells and fighting orcs! One of them, *Air Warriors* is a graphical game.

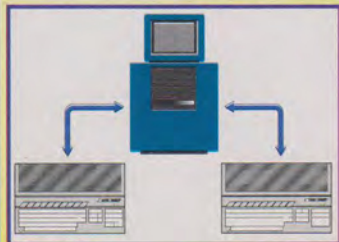
Of course, you don't need to pay out large 'phone bills and time charges to play graphical games in multi-player mode. Many standard computer games, such as *Populous* and *Falcon F-16*, can be played by two people on different computers. The Jaguar games console will be able to do a whole lot more; its communications port is ideal for this.

INTERNET

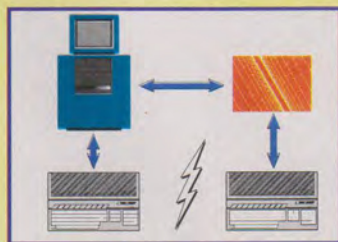
Dedicated systems are limited to those people who decide to call them up. Enter the global network *Internet*, a huge number of accessible computers. Although funded by academic institutions and companies who need to exchange data, it's used by real people who want to exchange ideas, chat or even play.

Subjects covered are highly diverse and there are plenty of ways of getting to the data behind the subjects. You can obtain files from different sites, much like downloading from a BBS, search for files through filename or subject and even use various menu systems to browse the whole *Internet*.

Using the real-time chat facilities, where you "talk" using the keyboard is great fun. The thrill you get by talking to a guy in Sydney and a girl in Manhattan is difficult to describe – you feel so *connected*. *Internet* even has it's fair share of MUGs (several hundred in fact). Getting into the *Internet* in



Whether it's a multi-user BBS or a games system like *On-Line*, many users each call the same host system. This can cause congestion at popular times!



Systems with leased lines (right) have a direct connection to the *Internet*. Otherwise you have to use an access system (left), like *CIX* or *Demon*.

INTERNET ACCESS

CIX offers an extremely complete service that will work for anyone with an ANSI terminal (most Atari terminal programs support this). You can transfer files, search for them and even use *WWW* with a simple terminal. *CIX* has time charges of £2.40 per hour (cheap rate) and £3.60 (peak) as well as a joining fee of £25. You can join *CIX* on-line by dialling 081-390 1255, with your credit card in hand. Alternatively, you can speak to them on 081-390 8446.

Demon (081-349 0063) is a far less expensive system. It costs £12 to join and has a flat monthly fee of £11.75 with no time charges. However, it is impossible to connect to *Demon* using a standard comms terminal. You need software that makes your machine act like an *Internet* site, and the software isn't very good on an Atari – it's *TOS*-based and only caters for email, file transfers and telnetting (a method of connecting to an *Internet* site).

ON-LINE MULTIMEDIA

This is a fairly recent development, hampered even now by slow access speeds. In the future, as speeds increase, it will become more usable and commonplace.

On the *Internet*, the multimedia system is called the *World Wide Web* (*WWW*) and features hyper-text links between different pages of text (which can be on different sites) and links into graphics and even sounds.

You require a special terminal program to use *WWW*: *Lynx* on the ST or *Mosaic*. The former is entirely text-based – it can't display graphics or play sounds. *Mosaic* has a much better interface and can display graphics and sound. Unfortunately, it isn't yet available on the Atari, but there is a version in the pipeline.



Logged onto Lancaster University through the Lynx terminal program. Hardly a memorable experience though...



Are Estate Agents a dying breed? Certainly possible when you consider what Mosaic already offers...



... including a guided tour around Le Louvre in Paris!

How essential will a modem be for your future enjoyment? Carefully hiding his BT shares, Graeme Rutt starts dialling...

WHAT IS ON-LINE?

On-Line is a UK company that specialises in multi-user games and Mike Hodges, a director of the company, was quite open when asked about On-Line's current crop of games:

"We have *Air Warrior*, a graphical 3-D multi-player game, and *Federation*, a space trading game plus *MUD II* and *Lands of the Crown*, entirely traditional text MUGs. We run *Internecline*, a play-by-email game, where players send in turns, and *Space*, a graphical multi-user arcade game that uses ASCII graphics."

Where is On-Line headed?

"There are several games in the pipeline including *Populous*, *Isle of Kismet*, a fantasy role-player, and *BattleTech*, the game you may have seen in virtual reality arcades. These will all be multi-player graphical games."

What of Atari support?

"Not good, at least not for our new games. *Air Warriors* has an Atari graphics terminal but our programmers have stopped supporting it. Naturally all of our text-based games – including *Space* – are at home on any standard terminal but until sales pick up we won't be supporting the Atari range of computers."

And what about the Jaguar?

"We're interested in that. In fact, when it was first announced we called Atari but things didn't pan out. But yes, we're very interested in any new machine, especially one like the Jaguar with a comms port. There are problems – like the lack of a keyboard – but they can be solved."

The future of comms: how do you see it?

"Computer and TV entertainment will become much closer – eventually there'll be no divide. Cable providers are only scratching at the

surface at the moment. On the Internet you can already explore, talk and play. As access gets better and machines become more powerful, more people will get involved."

To get in touch with On-Line call 081-558 6114 (voice), 081-539 6763 (modem) or email at mike@mail.on-line.co.uk. Cost to play is £2 per hour.



Air Warriors is the original On-Line game with graphics – but the Atari version is no longer supported...

the UK is pretty easy through either CIX or Demon. Both have their strengths and weaknesses. In addition, *ST Review* will be starting a new series of Comms Coaching from the next issue where you'll be led through the global network, function by function.

THE FUTURE

Comms will definitely increase until it permeates into every household in the land – especially when the cable/telephone operators finally get their act together and create a proper data network.

There is talk of getting direct Internet access into any house that wants it.

You won't even need a telephone line or a modem, just a link between the cable jack and your computer's serial port. You may not even need a computer – just a graphics terminal with a keyboard would do! In time you'll be able to connect your Jaguar console/keyboard directly into a global network.

We'll chat, play, flirt, discuss, look, hear, learn and sometimes even work in Cyberspace.

As access speeds increase so will the quality of the data: true colour images, CD-sound, real-time movies, and arcade-quality games. All with the added oomph of being on a live system, interacting with other people.

Welcome to the future!

Cyber Speak

We've already spoken about communications but let's get specific. What is the net?

"It's the global network of computers. Made up of landlines, microwave relays, satellites, plasma links – anything that can carry a signal."

Fast?

"Yeah, mostly. It can sometimes get a bit sluggish when everyone's in VR."

How many people use it?

"Everyone. Terminal connections are built in every house and a basic workstation costs, like not much. It's used for everything: gaming, information, socialising, debating – it's excellent, man. I couldn't live without it."

Sounds great, dude. So you use comms for everything?

"Well, man, you're coming in at me from the wrong angle. We don't think of our computing time as being in little secular boxes like comms or virtual reality. All is one. It's an integral part of our lives. If I wanna talk to a friend I don't think 'hey let's boot up my workstation, get a comms link into the net, open up a VR gateway and talk'. I just think 'hey, let's talk' and then I go do it."

Well dude, thanks for talking to me. It's been great, but I guess you're a busy man, so I'll let you go now. Take care.

"Okay, man. You too. Wish me luck with my latest conquest – level 64 of *Tempest* 10,000 is getting to me. Seeyah soon."

[click]



Ever tried scanning but given up out of sheer desperation?

Or need some useful hints and tips? Then this short series of tutorials from Andrew Wright is for you...

Scanners are close to being an essential peripheral if you're involved in desktop publishing and graphics. With a simple hand scanner you can digitise almost any printed or hand-drawn image, save it as a graphics file and then import it into your favourite word processor or DTP program. Scanning isn't an easy subject to get to grips with, though, as the one thing left out of most scanner manuals is what to actually do with the images after you've scanned them, and how to get the best quality.

Over the next three issues we'll be looking at how to convert images from paper to screen and back again, ways of getting better quality images with a standard hand scanner and making the most of scanned images in your documents.

We'll look at a few alternatives too, including true greyscale/colour scanners and the flatbed variety, but for the most part we'll concentrate on the most popular choice for Atari

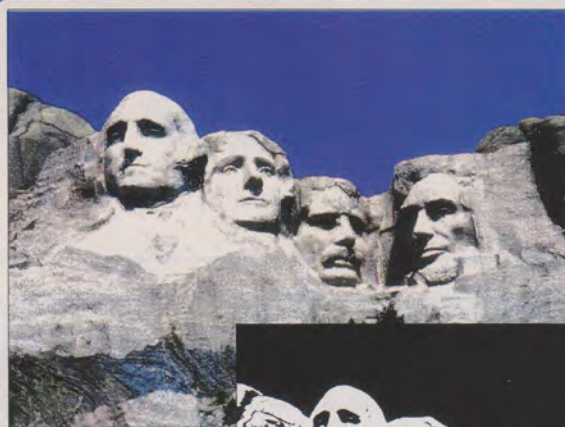


Figure 1: the before and after – scanning a colour picture with a mono scanner results in the posterised image on the right.



SCAN THIS



owners, the monochrome hand-held scanner. There are several on the market but most of them have very similar features. Invariably the difference between a best buy and an also-ran is the quality of the accompanying software, a topic we'll look at in more detail later.

HOW DOES A SCANNER WORK?

Even if the ins and outs of the technology leave you cold, it's important to understand how a scanner works, what it does and why. A hand-held scanner head consists of a charge coupled device (CCD), a photosensitive silicon chip made up of hundreds of tiny sensors that measure the intensity of the light reflected from the surface beneath and convert it into an electronic signal. The circuitry in the scanner sends information to the controlling driver software which then interprets this electronic signal into a standard bitmap image. This image is then displayed on screen and can be edited and saved in a widely usable format such as a TIFF or .IMG file.

Monochrome scanners register the paper beneath as either black or white. The result can be stored in a single bit of data, hence the term "single bit scanning". In clearly defined images, such as line art consisting of areas of black and white with no shades in between, a monochrome scanner is perfect for the job. It is only when you introduce various different shades that things start getting complicated.

For example, how is our black and white scanner meant to interpret an area of 50% grey? Does it treat it as black or does it treat it as white? If your scanner is in text or line art

mode (all hand scanners have this as an option), it will be forced to decide and its decision will be influenced entirely by the brightness setting you have chosen. Increase the brightness and it will treat 50% grey as white. Reverse the wheel, so increasing the darkness, and it will plump for black. The result is a posterised image just as in figure 1 above.

TRUE GREYS

True greyscale and colour scanners have much better – and more expensive – sensors that can measure the intensity of the reflected light in either 64 or 256 different levels, depending on the model. When working in colour mode, up to 256 levels of each primary colour (red, green and blue) are detected. Gasteiner's colour hand scanner for the Falcon can detect 64 grey levels for a total of 262,144 colours (64 reds, 64 greens and 64 blues). An Epson flatbed scanner, on the other hand, can read 256 levels to create a full 24-bit colour image (256 x 256 x 256 = 16.7 million colours).

Enough of the numbers; so where does that leave monochrome hand scanners? Not too far behind, in fact. Aside from the text/line art mode, single bit scanners usually have three different dither settings. In this mode the scanner interprets the image under the head in a different way. Neighbouring pixels are grouped together and an average

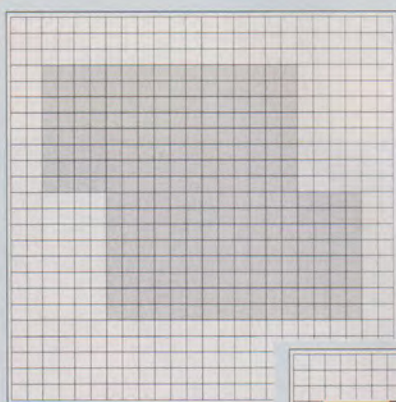


Figure 2: the image to be scanned...

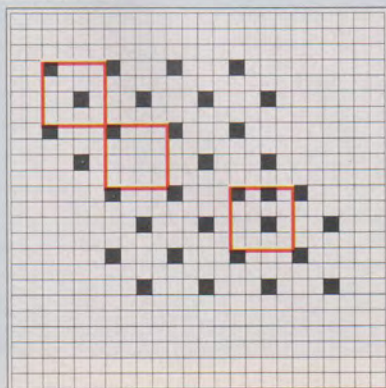


Figure 3: ... and how it's represented by dither patterns.



STEP BY STEP GUIDE

TO AND FRO...

Is there a difference between scanning with a true greyscale hand scanner and with one that creates the greyscales through software? You decide...



1 The colour original of the image (from PhotoCD).



2 Here's the image scanned using a true greyscale scanner...



3 ... then dithered in monochrome as a series of black and white dots...



4 ... and finally converted back into 256 greyscales via Touch-Up.

factors are inextricably linked. If you scan a two inch square drawing at the 300 dpi setting, you'll end up with an image approximately 600 pixels wide and 600 pixels long. If you print it out on a nine-pin dot matrix printer, it will end up almost twice the size because the dot matrix is only capable of 120 by 144 dpi. Those 600 dots will be strung out over four or five inches. Do the same with a 300 dpi inkjet or laser and you'll end up with an image exactly the same size as it was originally. Move up to a 1200 or 2540 dpi imagesetter and you probably won't be able to see it clearly without a magnifying glass!

Now this only applies to printing straight from a graphics-oriented program such as the scanner software itself or a paint package. If you import the image into a DTP program, the image is forced into a particular frame and when printed it keeps its size in proportion to the page.

In this case the resolution doesn't affect the output size – it affects the output quality. However, as this is



Figure 4: a 30% grey shade scanned at a fine dither setting...



Figure 5: ... then with a medium setting...

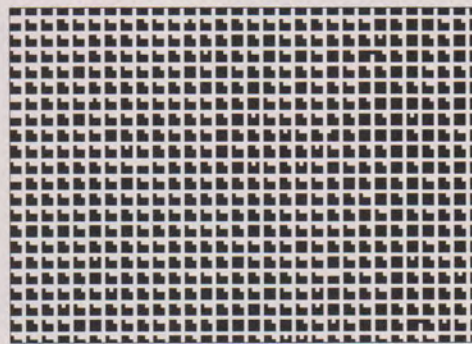


Figure 6: ... and finally, a coarse setting.

grey value is represented using a grid system. A matrix of 4 by 4 dots produces 16 different dot patterns and hence 16 different apparent grey levels in the final image. However, this does reduce the actual resolution of the image by a factor of four, meaning that a 400 dot per inch dithered scan is in reality a 100 dpi 16 pseudo-greyscale image. Some scanners (such as the Alfadata reviewed in last month's issue) use 8 by 8 grids for 64 grey levels but the trade-off is even less detail.

Figure 2 shows a hypothetical grey shape about to be scanned using a fine dither setting – we'll assume it's part of a photograph. Figure 3 shows how the image would look after being scanned and dithered by the scanner's internal circuits. Note that there are three different grid patterns present, which underlines the inherent inaccuracy of hand scanners. All it takes is a slight wobble and the scanner will interpret an area of grey differently.

Figures 4 to 6 show the same 30%

grey (from a professional scanner calibration sheet) reproduced using three different dither patterns from fine to coarse. Again you can see the slight tonal variations that are inevitable in scanners.

Of course there are good reasons why true greyscale and colour scanners are a little impractical on your average ST owner's setup. A four by three inch image, scanned in 256 greyscales, will take up around 1Mb or more of disk space and cause a lot of problems trying to load into a 1Mb machine! In addition, greyscales can't really be displayed on an ST. Power Computing's software shows 16 greys in low resolution but other software, such as *Touch-Up* and many image retouching programs, work only in medium or high resolutions.

There is a third approach, used primarily by Migraph's *Touch-Up*, which is increasingly being bundled with most ST scanners these days, and also by Powerscan, Power Computing's hand scanner.

This approach involves converting the dithered image back to a true greyscale by using software techniques to interpolate the dither patterns. It is surprisingly effective and can be a handy option in some circumstances. The step-by-step guide above shows the same image captured by different methods.

SIZE AND RESOLUTION

The main difference between a dithered image and a converted greyscale is in size, which is tied directly to the scanning resolution.

Resolution is determined by how finely the scanner can break down the image into individual elements or pixels. Flatbed scanners, such as the Epson GT6500, can scan at effectively 1200 dpi while most hand scanners have three or four options: 100, 200, 300 or 400 dpi.

This doesn't mean you should rush out and buy a flatbed. Resolution and size have another dimension in the nature of the printer, and all three

the main use for scanning, it leads on to some golden rules.

- If you intend to include a line art image in a document at more or less the same size as the original, scan it as close to the resolution of the printer as possible – in other words, 100 or 200 dpi for a nine-pin dot matrix, 200 or 300 dpi for a 24-pin and 300 for inkjets and lasers. If you want a larger image, increase the resolution; if you want a smaller image, decrease it.

- If you plan on scanning a photograph or other continuous tone image, go for the highest resolution you can as much detail will be lost by dithering and subsequent conversion.

Next month I'll start looking at some useful techniques...

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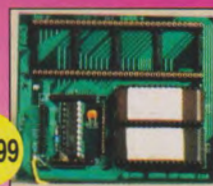
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
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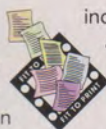
PART TWO: INKJETS AND BUBBLEJETS

In the second part of his printer maintenance series, Paul Rossiter turns his attention to pure ink...

As the prices of inkjet printers continue to fall, they become more and more attractive to the home user. As a result of Hewlett-Packard, Epson and Canon's aggressive marketing, millions of these beauties have been sold – and many thousands of happy ST users own one.

Solidly built, these printers appear to run forever, without trouble but a little care can help to ensure their longevity.

One of the main advantages of the inkjet over the dot matrix is that only the ink hits the paper. This is called "non-impact printing" and stops the



incredible noise of a dot matrix and also helps to prevent the paper being hammered to shreds when printing dense graphics.

As with everything electronic, prices continue to fall while the list of features continue to rise. Hewlett-Packard's new offerings once again put them at the front of the pack; Andrew Wright reviewed the new Deskjet 520 in the June issue of *ST Review* and declared it a "best buy". At around £200, it really is unbeatable – until the next model!

HOW DO THEY WORK?

There are two main ways that inkjet printers work: thermal or mechanical "drop on demand". High speed inkjets used in industry use a continuous flow electrostatic principle but fortunately these will not be encountered in the home. The results of both of these technologies are very similar, both having their own advantages and disadvantages.

INKJET: Hewlett-Packard brought this technology to the masses with its (now ancient) ThinkJet printer. The real rise in sales occurred when the Deskjet series was launched and has progressed from the original 150 by 150 dpi of the ThinkJets to the 300 by 300 dpi of the Deskjet 500 and so to the 600 by 300 dpi resolution of the 520.

One of the main features is a replaceable head and ink reservoir. In theory, when the ink cartridge is empty you simply plug in a new one and so all the critical parts are replaced. While this sounds fine, the cost is fairly high so there are many enterprising firms offering refill solutions to the avid DIY'er. As can be seen from the diagrams, the ink is



Wicking: when ink is placed onto a paper that consists of many small fibres, the ink travels along the fibres by capillary action. This is especially noticeable on laid papers and gives a "feathery" appearance to the print.

Bleeding: if the ink doesn't dry instantly it may spread over the surface, giving a rough edge to the print. This effect is more noticeable on shiny paper. The incredibly expensive special paper for colour inkjets shows this if black ink is allowed onto it...

Overspray: when the ink hits certain surfaces, very small globules can rebound and appear as small dots around the characters. The only cure is to avoid using that kind of paper!

HINTS 'N' TIPS

● Need to take screenshots? Use a PD utility or buy the excellent *Image Copy 3* from the ST Club (0602 455250). This will be enhanced shortly to incorporate the new 600 by 300 dpi resolution for the Deskjet 520.

● Check that you are using the best driver that your software has for the printer you are using. If you upgrade your printer, ask the software supplier for a driver upgrade to the latest version.

● For address labels, use cheap photocopier-style sheets of labels. These are readily available with varying numbers of labels on an A4 sheet with, typically, 100 A4 sheets costing £12 and giving 2,400 labels. Do not use label sheets where the backing paper is visible as they can easily peel off with dire consequences...

● Experiment with lots of different types of paper. Deskjets are notorious for splattering on certain paper stocks and for "wicking" into laid papers such as Conqueror. The most expensive is not always the best!

● The motor in a Deskjet is very

powerful – even 200 micron glossy card feeds in a treat where most lasers would just jam solid with such thick card. The glossy coating adds style at minimal cost.

● Try using *Protex* or *That's Write* for top quality, fast printing. The built-in fonts give the best possible results as they are optimised for the printer.

● If the print quality becomes patchy, clean the jets with a cotton bud dipped in alcohol. If this doesn't cure the problem, try standing the cartridge in a bath of alcohol.

● When storing cartridges off the printer, don't wrap the nozzles with sticky tape – use cling film instead!

● Don't try to cut corners by using very cheap refills – the misery is not worth the saving in cost.

● With the Epson Stylus printer, press *pause* before switching off. Otherwise it will do a purge when switched back on, using 25 per cent of the cartridge's ink!



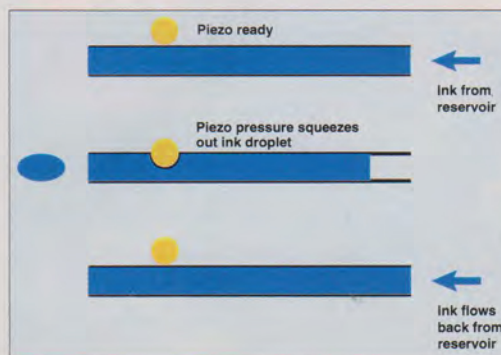
abcde
ABCDE

If your paper is of the woven variety, ink may spread, or "wick", giving a result like this...



A close up of an inkjet head; note the small jets along the top of the unit.

stored in a reservoir and fed along a very thin pipe to the outlet nozzle, this being exceedingly fine. To allow rapid printing, each cartridge contains around 50 of these nozzles arranged in two staggered rows, just like a dot matrix printer head. When a drop of ink is requested, a signal is sent from the control electronics and heats up a tiny resistor which instantly vaporises the ink around it. Due to the pressure increase, a precisely measured drop of ink is forced out of the nozzle onto the paper. When the ink cools the resulting suction re-fills the pipe ready for the next drop. This



A bubblejet printer works by using the odd distortion property of a piezo crystal.

cycle repeats thousands of times every second and each drop has to be the same to avoid changes in print quality.

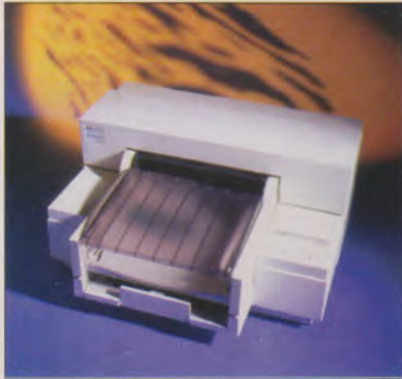
BUBBLEJET: The alternative method of forcing ink out is to "pump" it but how can such a small droplet be pumped out? The answer is with a tiny piece of quartz crystal. Many years ago it was found that if a piece of a certain mineral was deformed or squashed it gave off a small electrical signal. Similarly, if the same crystal is given an electrical signal it deforms in the same way – the crystal actually changes its shape. This effect is known as the "piezo electrical effect"; the diagram shows how this works

with the crystal simply pushing out a drop of ink as required.

In theory the piezo crystal should be more reliable and accurate than the thermal printers but as the whole head is so easily changed, there is no noticeable difference.

The larger bubblejets have a separate storage tank for the ink and a fixed print head. This results in much cheaper running costs but the head is very expensive if it fails or clogs up due to the use of cheap inks.

At present, the resolution of the bubblejets is 360 by 360 dpi usually allowing the same software drivers as a 24-pin dot matrix printer.



It's amazing what £200 can buy you – a brand-new HP DeskJet 520 for instance!

Refilling an inkjet cartridge always results in a little spilt ink...



REFILLING A CARTRIDGE

The ink used in these cartridges is not of the ordinary variety. It has to be able to withstand the heat produced in the head, be finely filtered so not to clog the nozzles, contain an anti-coagulant to remain liquid while in the cartridge and yet dry hard very quickly upon contact with the paper!

Many firms advertise refill services but be wary, as many are of very dubious quality. One recommended supplier is System Insight (0707 395500) who produce a free 32-page catalogue and can supply new cartridges, refill kits and paper supplies as well as advice.

Handled carefully, most cartridges can be refilled six or seven times before wearing out. This not only saves enormously on expense but also allows you to use coloured inks when refilling.

The photographic step-by-step shows the real-life exercise of refilling a black double-life cartridge using a System Insight Kit.



A typical ink refill kit. This one is from System Insight, a reputable supplier.

Make sure you work over a disposable cloth – ink drips no matter how careful you are!

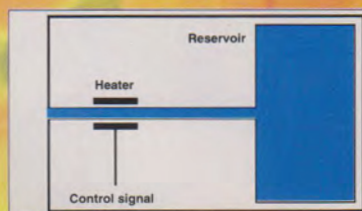


Here's the finished item, ready to go back in. Note the new red filler plug.

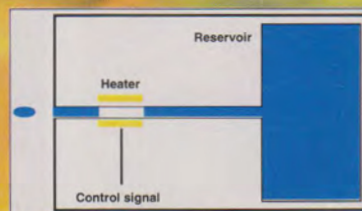


STEP BY STEP GUIDE

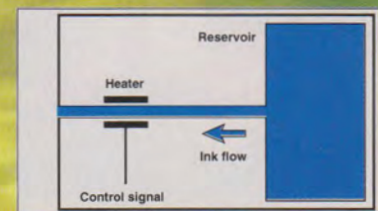
**THREE
STEPS
TO INKJET
HEAVEN...**



1 The diagram shows one of 50 jets currently awaiting to be called from your word processor.



2 A control signal is received, the heater is activated and out shoots a tiny globule of ink...



3 ... after which ink flows back into the fine tube from the reservoir to take up the slack.

GERMAN GEM

*Vic Lennard
interviews the
man behind
Overscan...*



*The boss – Patrick Jerchel,
proprietor of Overscan.*

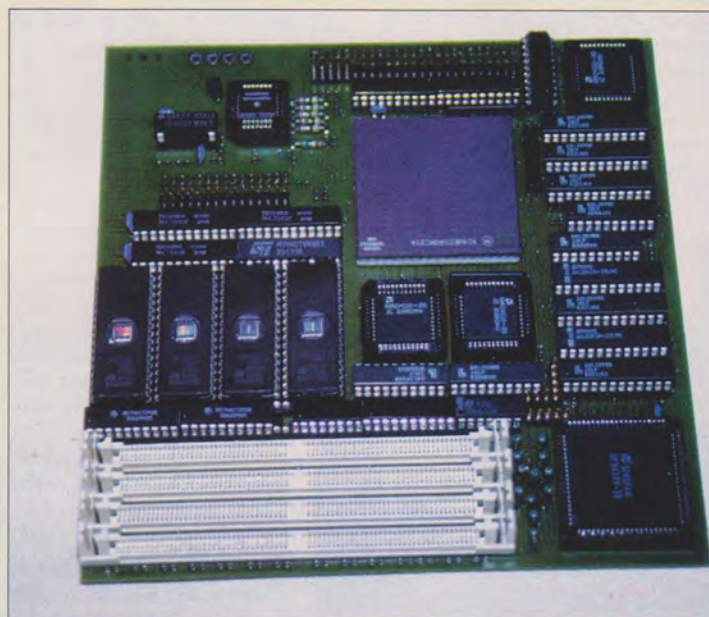
Next time you boot up your system, have a look at the black area around your screen. You'd be forgiven for thinking that this is a waste, and you would not be alone. But as you are probably aware, a modification exists to allow STs to make use of this area – overscan, created by the company of the same name.

While in Berlin recently, I managed to meet up with Patrick Jerchel, the proprietor of Overscan. The company was initially formed in 1985 as a way to help Patrick pay for his university fees while studying electrical engineering. For the first three years he wrote various different programs for institutes and companies and then spent a further two years working with modems.

In 1990, he met up with Karsten Isakovic and Stefan Hartmann. The latter two had come up with the idea of enhancing the video side of an ST so that it could make use of the redundant black area around the screen. But while they had modified the computer and written the necessary drivers there were still serious problems, including screen flickering. Patrick's involvement brought the project to fruition and the three of them became Overscan.

MOVING UP

Within three months, the overscan modification was complete and the job of selling it in the German marketplace began. Response was



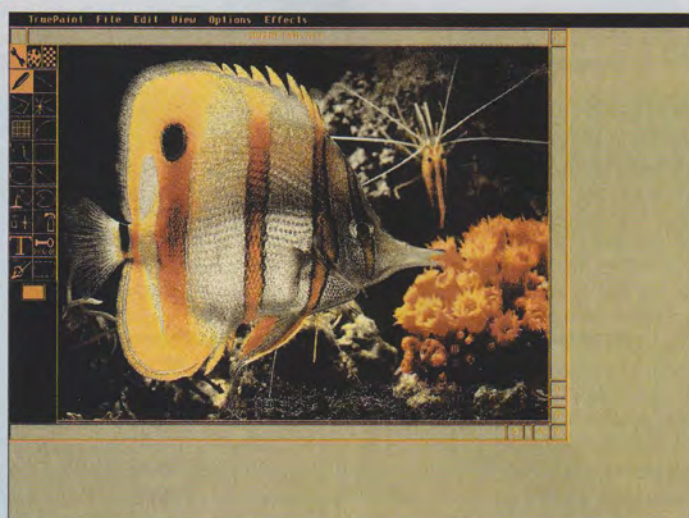
*Real scorcher – the Afterburner 68040-based
accelerator for the Falcon.*

overwhelming, with over 2,000 units sold inside a few months. "The fax machine was in my living room," laughs Patrick, "and the units piled up all over the place. The sales gave us the money to move the business from our homes into rented offices."

At this point, Overscan hired employees and started selling to dealers. The company changed dramatically. "At the beginning we sold 90 per cent of our products to

end users; within two years, we were selling 90 per cent through dealers," remarks Patrick.

The emergence of the TT in Germany led to a re-evaluation of Overscan's products, for here was a top-end platform with good market appeal. First up was a version of the overscan modification followed closely by an SM124 emulator for the TTM194 large-screen monitor and the VRAM030 memory manager. All helped to reinforce the German



Smallie – this is how a picture would look on a normal screen.



Tallie – and this is the effective result after overscanning it.

market's respect for Overscan as a developer and manufacturer. The genlock project that Overscan became involved in along with a French company was less than successful. "The older STs have very limited video modes – 16 colours and 320 by 200 pixels is simply not good enough for a decent genlocking product," Patrick expands.

ENTER THE FALCON

1992 was certainly an important year for Overscan. Stefan left the company to continue his work with the PC while Karsten became an employee. Perhaps more important was the addition of the Falcon to the Atari computer range which added a further bow to Overscan's business with the launch of its ScreenBlaster video enhancer at the CeBit Show. Developed jointly between Patrick and Ben Sommer, the original idea came from Richard Miller of Atari. ScreenBlaster has established itself as



Big picture – over 6,500 ScreenBlasters have been sold in the last year...

the video hardware add-on for the Falcon; over 6,500 units have been sold to date.

"If you think that there are only 14,500 Falcons out there, we have supplied almost half with a ScreenBlaster," he says. Only 14,500 Falcons? Isn't this figure at odds with that quoted by Atari a few issues ago? But Patrick won't get drawn into this line of argument...

The latest software for ScreenBlaster 2 has been written by the Behne Brothers (the company behind NVDI). This includes a much-simplified video generator, where only the x and y co-ordinates have to be entered on-screen, a test screen that can be centred via the mouse and a GEM-based resolution menu. "The original menu was TTY based and so was limited to 22 lines. A GEM-based menu is far more friendly and flexible," Patrick explains.

NEW PRODUCTS

Karsten's continued involvement can clearly be seen with Overscan's latest product *Overlay*. It's a video titler in essence, but its features go way beyond some of the more basic offerings that have been seen on the ST and Falcon.

"As a presentation tool for information systems, *Overlay* is very powerful. The Hypermenu module

Change me – ScreenBlaster 2 now incorporates a preset editor but you'll certainly need the manual and an understanding of monitors when the English version appears...

Choose one – ScreenBlaster 1 simply allows you to choose your monitor from the list.

OverLay

-

Animation

-

Presentation

-

Multimedia

Video titler – Overlay boasts support for graphics, vector fonts and animations.

can interact with the user by defining areas of the screen for clicking on. A click then moves on to another scene, or can start an external program like an address database. *Overlay* really is a full multimedia presentation tool," enthuses Patrick.

Perhaps the most interesting aspect to the program is that it is not Falcon-specific. Due to its modular construction, it can be run on any Atari computer from a 520ST upwards and supports all video modes from the three standard ST resolutions through to Falcon true colour and graphics cards.

As noted above, some products really do need the additional hardware in Atari's newer computers, with the enhanced Falcon video modes being very useful for graphics-based programs. "We started to design our own genlock when the Falcon came out and that will be finished shortly, after two years of development.

"Called FalcoGen, we've spent a lot of time and effort working on the quality side. At worst, the output

video signal will be *better* than the received signal! It supports the overlay bit and interlace mode, which some competitive products do not," clarifies Patrick.

Apparently FalcoGen will also support a form of "blue boxing", which allows you to hide the background of a still or animation so making it far easier to overlay graphics. Other features include a comprehensive keying facility, RGB and S-VHS input/output and VITC (Vertical Interval Time Code) input/output for synchronising to a video-based machine or having the Falcon act as the master. Powerful stuff.

THE FUTURE

Overscan's next product after FalcoGen will be the long-awaited Afterburner, the 68040-based Falcon accelerator. There isn't enough space here to go into details of the problems Overscan has had with this project, but suffice to say that the designer found serious errors

in Motorola's application notes for fitting a 68040 processor into a 68030-based computer! And if Overscan can provide a solution, Motorola are prepared to pay for it...

"We're working on other products for the future, but I can't talk about them," smiles Patrick, although he did let slip that Overscan is developing a chip to bridge between the family of Motorola processors and the newly-developed Intel PCI bus.

How positive is Patrick over the future of the Atari market? "The turnover of the company has increased each year since 1990, and the first quarter of 1994 has been better than the first quarter last year. We now have 10 full-time employees and another 10 part-time – and a 300 square metre office.

"From Overscan's point of view, the Atari market is growing – and the Medusa computer is a sign in the sky for all Atari computer users. The Afterburner will make the Falcon a very powerful machine. It compares well with a 486-based PC plus it has the audio system, DSP and a good video enhancer in ScreenBlaster.

"There are a lot of Atari developers and enthusiasts around the world. I believe that Atari computers have a very positive future..."

On his debut for ST Review, Ian Waugh looks at the ultimate set of MIDI building blocks...

HAVE A TWIDDLE!

It was only a matter of time. We've had drum patterns, guitar riffs, bass lines and jam tracks. Now here's a collection of instrumental licks and riffs in MIDI File format for you to cut, copy and paste into your own songs.

Actually, there's a bit more to *twiddly•bits* than that. It's the brainchild of Julian Colbeck, author of the Keyfax books and whose writing graces several music magazines. He's also a rather wizzo keyboard man having toured twice a year for the past umpteen years and played with Steve Hackett, John Miles and ABWH (Anderson, Wakeman, Bruford and Howe) among others. The interesting thing is, *twiddly•bits* was recorded not by Julian alone but by several of the famous musicians he's worked with.

The result is a collection of over 200, er, twiddly bits which are, to quote from the manual: "those interesting frills, fills, flourishes and licks that are often difficult to play but that nonetheless make the difference between flat amateurish music and music that sounds as if it has been arranged and performed by people who know what they're doing."

The patterns are divided into ten sections: Bass, Brass, Drums, Guitar, Organ, Percussion, Piano, Strings, Synths, and Woodwind. Each has further sub-divisions so, for example, the Bass section has Bends, Slaps, Licks, Trills, Riffs and Slide, and the Brass section includes Riffs, Licks, Falls, Rises, Stabs, Swells, Ends and Fast Runs. The patterns vary in length from a single beat to several bars.

Some of the files, particularly the Riffs and Licks, are pyrotechnical displays of musicianship that would be difficult for most people to play or even program. Other files have all the hallmarks of being recorded in real

KEY FACTS

Product:
twiddly•bits

Company:
Keyfax Software

Contact:
0491 579645

Price:
Vol 1: £19.95; Vol 2: £12.95
plus £2 p&p

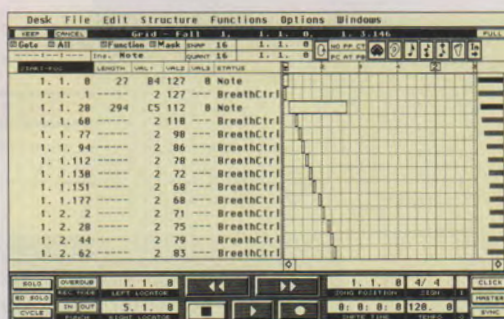
SYSTEM
Any ST/Falcon plus sequencer
software capable of reading
Standard MIDI Files.

time using MIDI instruments other than a keyboard. Some of the files in the woodwind section, for example, are replete with pitch bend, modulation and breath control data and I can't imagine anyone programming these from a keyboard!

The manual is extremely helpful – but with rather small print. It includes tips on how to use the twiddles and there's a short description of each one plus their start time. A Run Up, for example, may only be one beat long but you would naturally want it on the last beat of the bar. And so it is. The disk includes a *Cubase* arrangement of all the files making it very easy to try them and select the ones you like.

TAKE TWO...

Hot off the press comes *twiddly•bits Vol 2 – Gate Effects*. There are actually four Gate Effects on the first volume, so if you like them check out volume



The Brass patterns contain lots of Breath Control data...



TWIDDLY•BITS DEMO

Julian has put together an exclusive *twiddly•bits* demo for ST Review which you'll find on this month's cover disk (*TWIDDLY.MID*). It has been constructed from several twiddles and very cleverly arranged so you can listen to all the parts at once. Once you leave Ronnie Scott's, listen to each of the tracks on its own and then examine them in an editor to see the individual bits...

The *twiddly•bits Cubase* Arrangement makes it easy to examine all the patterns.



two. The files contain volume data that basically switches the channel's volume on and off in a rhythmic manner. It's similar to the sort of effect produced by a noise gate, typically to allow a synth chord line to groove in time to a drum track.

Some patterns also contain modulation and pan data so the sound modulates and pans around the stereo image. You can have

several Gate tracks running at once creating all sorts of cross rhythms and polyrhythms. If you're into Ambient and the like you'll love this although £12.95 may be a little steep.

twiddly•bits is the newest idea in MIDI files and there's currently nothing like it on the market. If you want to pep up your songs with some professional licks you'll find it invaluable.

Even if you could play it, could you compose a string pattern like this?



PERFORMANCE

EASE OF USE

DOCUMENTATION

EFFECTIVENESS

VALUE FOR MONEY

OVERALL

91%

DR. RAVE

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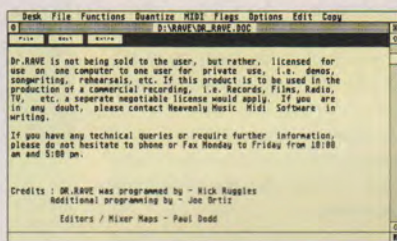
Crank the tempo up to 130 – or more if your CATs aren't too heavy – and let the beat control your body. New? Not exactly. The sort of patterns used in what we now call Rave, Acid, House, Club and so on, have been around for years. What is new is the sounds used to play them. We're talking analogue here. Reverb? Forget it!

Dr. Rave is a collection of 12 patterns, each around 40-50 bars long – full arrangements using eight or nine tracks. Everything is mapped to General MIDI, of course, and you'd be right to wonder how this stands up against Rave's requirement for analogue sounds.

The programmer, Nick Ruggles, has an excellent grasp of the music. The judicious choice of sounds such as Goblin, Space Vox, Saw and Sine Waves, Muted Guitar and Synth Bases played at low octaves gives GM as much of an analogue feel as it's probably possible to extract from the system. For instance, simple but effective plays such as using a pitch bend rise across four bars convincingly duplicates the VCOs (Voltage Controlled Oscillators) in synths of yesterday.

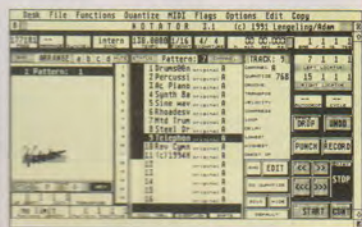
The patterns are varied and you could well select tracks and sections from several, loop

**Dr. Rave's
licensing message.**



them and join them together to create your own pattern. Which brings us to an interesting point which you'll see if you read the excellent on-disk documentation. You don't actually buy Dr. Rave but licence it for private use. If it is used on a commercial recording you need to negotiate a separate licence...

This approach is becoming increasingly common but surely the point of buying a disk like this is to use it on what will hopefully be a commercial recording. I'm sure the licence fee will be nominal, and I'm all for the programmer getting a share of the dues, but I wonder how prospective buyers view the situation. If any readers have any thoughts on this, we'd like to hear 'em.



GM's Telephone is used with the Steel Drum to create a weird bass line...

ST REVIEW COMMENT: "An excellent set of patterns that could be used in a wide range of modern music. The programming makes a GM instrument sound like a collection of analogue synths. Isn't progress wonderful?"

One of the tracks hammering out 1/16th notes!



From rock to rave,
drum patterns are
a popular item.
Sticks in hand,
Ian Waugh goes
looking for
the beat...

I GOT RHYTHM!

ROCKBEATS

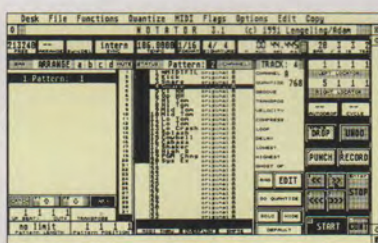
HANDS ON • £9.95 • 0705 783100

There must still be a large demand for drum patterns otherwise, presumably, MIDI file programmers wouldn't keep producing them! What does seem apparent is that most users prefer full-length drum tracks rather than one and two-bar patterns that they have to cut and paste to fit their song. And why ever not? If you're going to use someone else's grooves, you may as well use complete tracks.

Rockbeats contains 19 full drum patterns. Some are 32 bars long but others are well over 100 bars; plenty of material here from which to cut and paste. The arrangements are large, too, with several patterns having 18 or 20 tracks. If your sequencer only has 16 tracks, you'll be a few drums short of a full kit (moan... Ed).

As the title says, these are rock patterns and named as such although there are three with specific names called Country, House and Jazz. Most are fairly orthodox but there are some nice touches – interesting fills, the occasional

Some of the Rockbeats have more than 16 tracks...

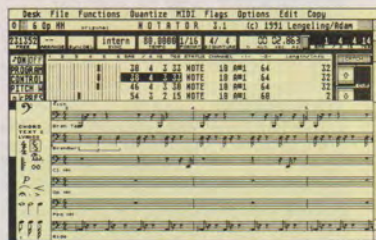


change in feel, the subtle use of Latin percussion and so on.

The parts have all been quantised to some degree and note lengths have been reduced to two clock ticks which shouldn't upset any modern instruments. The start times of the tracks I looked at were spot on the beat with the noticeable exception of the Jazz Rock pattern. However, the velocities look relatively untouched and this no doubt contributes, at least in part, towards the impression that the patterns were recorded live although I've no doubt they weren't. A tribute to the programmer's art.

There's an Info document for each pattern that shows the drum set used and the note number of the drums. Interestingly, the patterns are mapped to GS rather than GM which causes some problems – for example, the House pattern includes the "High Q" sound that you won't find on all GM instruments.

ST REVIEW COMMENT: "A well-crafted set of patterns, strictly in the rock vein. Use them as backing tracks, as an aid to songwriting or simply jam along to them. Very good value for money."



Start times in the Jazz Rock pattern are unquantised to produce a lazy feel.

GAMES GALORE!

Tina Hackett takes a trip down memory lane with a look at the best adventure titles of all time...

Many ST adventure games have been released over the years and while they differ greatly in terms of standard and theme, we are now seriously spoiled for choice!

Although ranging in styles from sombre atmospheric titles to comical games, the basic idea behind all of them is that you become the main character, taking control of his actions in order to complete the various tasks and objectives of the game.

Many adventures employ a simple point 'n' click control system that lets you interact with the environment by pointing the cursor to the relevant part of the screen and clicking the mouse button. Carrying out actions varies from game to game with two main methods: the "type in a command" style system and the "select from these presets" menu. A lot of debate has taken place over which is the better.

Don't confuse adventure games with their Fantasy Role Playing cousins, a totally different family in their own right! And for the purpose of this guide, we have only included the best of the "best of the rest" – there really are that many!

Lucasfilm, Delphine and Sierra are a few of the companies that have brought us many of the top titles. Here we dust down the classics of yesteryear and some of today's success stories to bring you this adventure games round-up...

THE SECRET OF MONKEY ISLAND

Monkey Island is so well known that it is perhaps unnecessary to even begin to go into much detail about it. An incredibly popular title, it is particularly notable for its stylish graphics and wacky humour.

For those of you who need your memory refreshed, here's the plot. You play the part of Guybrush Threepwood, a young man whose travels have taken him to the Island of Melee. His ambition is a strange one, namely to become a fierce, swashbuckling Pirate!

You direct Guybrush around the Island through a simple control system of clicking on the verbs and nouns placed at the bottom of the screen. Brilliant gags, both visual and textual, absolutely litter the game and the humour is really where the success of this title lies.

The puzzles are quite stretching, with many solutions being not all that obvious – even the most hardened of adventurers have been kept entertained for ages. Graphics are first class and top quality animations also make for an excellent and addictive adventure.

Hilarious repartee and cryptic puzzles have made *Monkey Island* a classic. Such high standards have made it the "role model" that many titles have tried to emulate.

Overall Rating: 81%

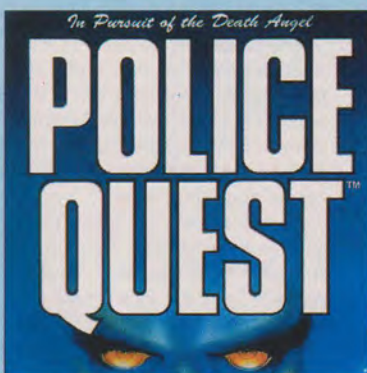


The game is packed full of puzzles and interesting characters...

Monkey Island is renowned for its bizarre humour!



POLICE QUEST



Carry out routine procedures – such as vehicle safety inspection!

Although perhaps not as visually brilliant as more modern adventures, this title had to be included here for its brilliant gameplay.

Police Quest lets you take on the role of a lowly police officer, Sonny Bond, with the object being to work your way to the top. Your ultimate aim is to go undercover and bust the notorious Death Angel and his gang who are wanted for various felonies from murder and drug trafficking to robbery.

Getting to the top isn't easy. You have to undergo all the routine duties of a Police Officer from handing out tickets to attending briefings. Procedures must be adhered to, even down to rules on personal hygiene and keeping a smart uniform!

In the course of your investigations you need to pick up vital clues. Reading newspapers, for instance, can provide crucial evidence to keep you hot on the crooks' trail! All these aspects provide for exciting and unusual gameplay and so, despite this game's rather antiquated appearance, playability is so addictive that everything else can be forgiven.

Control of your character is through the mouse and type-in commands and the "restore game" function is a great feature that prevents you from having to start from scratch each time.

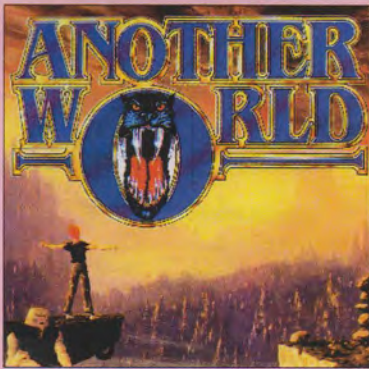
All in all, a brilliant, highly playable title with an unusual theme.

Overall Rating: 70%



Computers can provide essential information on criminals...

ANOTHER WORLD



The brilliant animated intro helps set the intrigue and suspense...

Creating the right atmosphere in an adventure game is very important and French Software house Delphine has set an extremely high standard with its moody title, *Another World*.

The animated intro sets the scene nicely, showing the young Scientist Lester Chaykin experimenting with sub-atomic particles. Suddenly his laboratory is struck by lightning, teleporting him into another dimension. This animation grabs your attention and the intrigue continues throughout the game. It's the intense mood of suspense that makes this title so exceptional.

You take on the part of Lester Chaykin and explore this new, alien planet, drawing upon all your resources and intelligence to survive. Progress is with caution as you discover aliens, sub-human creatures and various deadly animals that inhabit the planet.

As the game unfolds, it keeps you engrossed with its cinematic story line and eerie atmosphere. The unusual style of graphics is in keeping with the mood; panoramic backdrops, smooth scrolling and animation all make for a visually superb game.

The puzzles are set at the right level of difficulty, being fairly logical while at the same time quite taxing. A dramatic and stunning title, *Another World* will send a chill down many a spine...

Unusual graphics enhance the already eerie atmosphere.

Overall Rating: **83%**

LURE OF THE TEMPTRESS

Another adventure game that rates very highly in the mood stakes, *Lure of the Temptress* is a graphically brilliant game. You play the part of Diernot, and find yourself captured in the town of Turnvales' dingy dungeons. An apprentice sorceress has recently caused a revolt and the king has sent forces, including you, to investigate. You are met by resistance in the form of an army of grotesque creatures called the Skori and a battle ensues, killing the rest of the army. You receive only a bang on the head and raise from unconsciousness in this dungeon.

What makes *Lure of the Temptress* so different is that it uses a system called *Virtual Theatre* – all the characters you meet in the game actually exist as separate individuals. They continue with lives of their own, so to speak, and when they disappear out of sight they haven't actually disappeared as they would in a normal adventure but have gone somewhere else to reappear again later.

Lure of the Temptress still looks and plays far better than many more recent adventures, and with absolutely loads of puzzles to figure out, this is one title that has more than earned its place amongst the top adventure titles.

Overall Rating: **80%**



THE BEST OF THE REST

THE LEISURE SUIT LARRY SERIES • KIXX XL

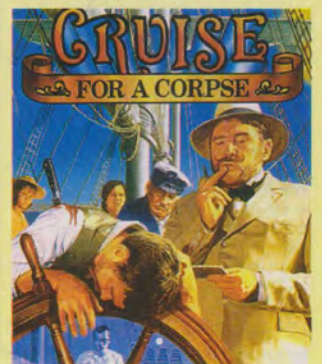
School boy humour for grown-ups courtesy of adventure game experts, Sierra. You play the Chauvinistic Larry Laffer in a quest for wine, women and song. Humour mainly relies on sex-related gags but it's great fun and a nice change from the more serious titles.



The Leisure Suit Larry series has proved popular with male adventurers!

CRUISE FOR A CORPSE • KIXX XL

Delphine's excellent "cinematic" adventure has been released on budget via Kixx XL. A full review can be found on this month's VFM page.



Cruise for a Corpse has atmosphere, slick graphics and taxing puzzles.

THE KINGS QUEST SERIES • KIXX XL

Although not exactly stunning in the graphics stakes these days, the Kings Quest titles still provide quite competent and enjoyable entertainment. Set in the days of yore, you play the part of a rather put-upon Knight!

BUYER'S GUIDE

YOUR CHOICE...

Decide on your ideal adventure with our at-a-glance buyers' guide for the definitive titles of this family...

Game	Company	Contact	Price	Machine	Memory	Graphics	Sound	VFM	Playability	Overall
Monkey Island	Kixx XL	021-625 3311	£16.99	ST/Ste	1Mb	8	7	8	9	81%
Police Quest	Kixx XL	021-625 3311	£16.99	ST/Ste	0.5Mb	6	6	7	9	70%
Another World	Kixx XL	021-625 3311	£14.99	ST	1Mb	9	8	8	8	83%
Lure of the Temptress	Hit Squad	061-832 6633	£14.99	ST/Ste	1Mb	8	8	8	8	80%

FaST Club

For users of Atari ST & Falcon computers

7 Musters Road - Nottingham - NG2 7PP
Tel: 0602-455250 - Fax: 0602-455305

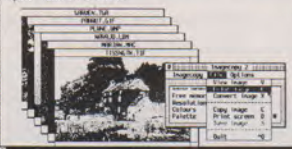
Software

- | | | | |
|---|-------------|--|--------|
| <input type="checkbox"/> Address 1.6 | £12.95 | <input type="checkbox"/> Imagecopy 1 (Mono) | £ 9.95 |
| <input type="checkbox"/> Astronomy Lab | £24.95 | <input type="checkbox"/> Imagecopy Colour | £14.95 |
| <input type="checkbox"/> C-Font2 | £ 9.95 | <input type="checkbox"/> Key Master | £ 6.95 |
| <input type="checkbox"/> CalAssistant | £19.95 | <input type="checkbox"/> Molgraph 2 | £24.95 |
| <input type="checkbox"/> CalAssistant SL | £29.95 | <input type="checkbox"/> Mouse Master | £ 9.95 |
| <input type="checkbox"/> Clip Art Catalogues (2) | £ 4.00 | <input type="checkbox"/> Mouse Tricks 2.15 | £ 9.95 |
| <input type="checkbox"/> TW Clip Art Catalogue | £ 2.95 | <input type="checkbox"/> Multiprint | £ 9.95 |
| <input type="checkbox"/> TW Clip Art Sets | £ 8.50 | <input type="checkbox"/> PageAssistant | £29.95 |
| <input type="checkbox"/> Catalogued Clip Art | £ 8.95 | <input type="checkbox"/> Redacteur 3.15 | £99.00 |
| <input type="checkbox"/> Easy Text Plus DTP | £19.75 | <input type="checkbox"/> Redacteur Lite | £69.00 |
| <input type="checkbox"/> Easy Text Pro DTP | £34.95 | <input type="checkbox"/> Redacteur Junior | £39.00 |
| <input type="checkbox"/> EdHack | £ 9.95 | <input type="checkbox"/> Trimfont | £ 9.95 |
| <input type="checkbox"/> Fontkit Plus 4.1 | £24.95 | <input type="checkbox"/> Ultimate Virus Killer 6 | £12.95 |
| <input type="checkbox"/> Fontpac Plus | from £ 6.95 | <input type="checkbox"/> Universal Item Selector III | £14.95 |
| <input type="checkbox"/> Fonty: Calamus Font Editor | £11.95 | <input type="checkbox"/> Warp 9 | £29.95 |
| <input type="checkbox"/> FontGDOS and Drivers | £ 2.95 | <input type="checkbox"/> X-Debug | £24.95 |

What a picture

- ☐ Imagecopy 2 £19.95

There is no better way to grab, view, convert and print images on your ST or Falcon. Supports 9-pin and 24-pin Epson compatibles, Cannon BJ, HP DeskJet and Laserjet mono and colour printers. Many more features - write or phone for specification sheets.



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Million colours) and runs on all fully GEM-compatible graphics cards.

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RORKE'S DRIFT

IMPRESSIONS • £7.99 • 071-351 2133

IN BRIEF: Change the date back to 1879 and to the setting of the Zulu Empire, take a chunk of real life history and you have *Rorke's Drift*. Telling the story of how the British took on the Zulus, you can re-enact the very same battle through this simulation. A great deal of work and research by expert wargame designers ensures the game is as close to the original encounter as possible.

The events centre on 22 January 1879 where the British Army, wrongly assuming they were taking on ignorant savages, were annihilated at their encampment at Isandhlwana. The 4,000 Zulu warriors then moved on to the British Outpost at Rorke's Drift where only a hospital and church stood. With a mere 101 able-bodied men, plus 36 with injuries, available to fight, a barricade made from mealie bags and wooden crates was built and the ensuing battle showed great bravery – eleven British Crosses were won. This is the point



Gameplay is long-winded
and sloooooow...

where you take over and replay the events that took place. You control the 137 men and decide on how they should act, from when to advance or retreat to when to fight.

Play is divided into two phases: command and battle. During the Command stage, you give your orders to the men. In the Battle stage the action takes place, the Zulus attack and the men carry out your instructions. Pressing the left mouse button allows you to go back to Command phase and issue further instructions.

ST REVIEW COMMENT: "*Rorke's Drift*, although providing quite a competent strategy war game, looks incredibly dated with its basic graphics and terrible accompanying sound track. ST games have come a long way since this and as the likes of *Cannon Fodder* have really raised standards, it's hard to recommend this despite its budget price.

"The gameplay provides a reasonable amount of entertainment and for strategy lovers it's definitely worth a look. But the sheer old-fashioned appearance of it all and the slow play makes it one for the true strategy fans with a penchant for real history war games."



Click on the map
to take you to the
area in view.

The smooth
flowing graphics
look absolutely
stunning.



CRUISE FOR A CORPSE

KIXX XL • £14.99 • 021-625 3311

IN BRIEF: Brought to us by Delphine Software, *Cruise for a Corpse* is a Cinematique point 'n' click adventure. Taking on the role of Inspector Raoul Dusentier you become involved in a dastardly murder while on a luxury Mediterranean cruise. In true Agatha Christie style you must investigate this crime through piecing together puzzles, and gather as much evidence as possible.

A fully interactive game, you can manipulate your environment establishing links with the evidence you find in the many areas of the ship. Each object found can be highlighted, so activating a list of possible actions.

You'll also need to question other passengers aboard to try and discover "who dunnit"! In dialogue mode you're given a menu of possible topics

you can talk about. Choose what you wish to discuss and watch their reactions.

Travelling around the ship is made easy through either clicking on the character and the spot to which you want him to go, or by the handy map feature where you simply click on the required room.

ST REVIEW COMMENT: "Although the game is at first extremely difficult, patience does pay off. The nice touches of humour add to an intriguing plot that will make you want to carry on playing until you find the murderer.

"The animated story sequence at the beginning and the fluid movement of the characters adds to the high quality visuals. The animations of the characters works brilliantly and the stunning graphics make this title an absolute must.

"A well thought out control system makes it easy to carry out your commands and the puzzles will keep you pondering for a long while.



"*Cruise For A Corpse* is an unusual, but extremely addictive, title that is more than worthy of being a member of your classic collection."

Interacting with
other characters
results in comic
touches...

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Bob Cat arrives to see his beloved Claudette being whisked away by the mad Scientist's men. Can Bob save old cutie paws? Four levels and hundreds of rooms...

ENTERPRISE



Sola III requires a continuous supply of six super-heavy atomic nuclei and relations with neighbouring star systems are poor. Can you locate the six elements and return them safely to Sola III?

STAR BREAKER



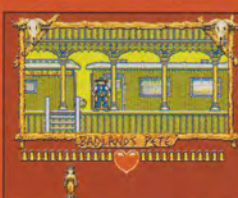
New Chicago has been overrun and a bounty is on offer to anyone who can clear the unwanted visitors. Your ship, the SS Star Breaker, changes course for New Chicago...

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PD SCENE

Leave it to Nial Grimes to guide you through the best on offer in the public domain...

KARATE CHAMPION

FLOPPYSHOP • DISK NO: GAM.4293C • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE (WITH BACKWARD)

IN BRIEF: Arcade games tend to fall into two categories these days – racers and beat-'em-ups. If you're not crunching through the gears at 200mph, you're fending off blows from an opponent the size of Mount Everest, and *Karate Champion* places you in this latter scenario.

The aim of the game is to climb through the ranks and defeat the world champion – E Suzuki. A total of eleven moves are at your disposal, ranging from a straightforward punch to the more exciting throw, which sends your opponent hurtling across the arena. The action lacks the speed or precision of *IK+* and most of the time, it's just a case of wiggling the joystick and hoping for the best. Digitised shouts add some excitement and the graphics are a little more convincing than *World Fighting Champ*.

ST REVIEW COMMENT: "The animation is reasonable and a good variety of moves are on offer, but *Karate Champion* can't hope to compete with budget commercial games like *IK+*. On the other hand, it is better than the original and the digitised sound effects add atmosphere."

☆☆



Marginally impressive graphics and neat sound effects make *Karate Champion* a reasonable PD beat-'em-up.

Here we have a mid-action throw – no, honestly, he's not walking on the ceiling!



Boom Rock – Boulderdash with brass knobs on!

A level designer is built into the game, although you'll need to register to use it properly.



Later levels introduce enemies and slime, making the tight time limits even harder to conquer!



BOOM ROCK

LAPD • DISK NO: G.364 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Look back over the history of home computers and very few games stand out as being totally original and yet mindlessly playable; however there's little doubt that *Boulderdash* qualifies as one of those "special" titles. The gameplay combined elements of strategy plus arcade action and *Boom Rock* aims to bring the sheer panic that is *Boulderdash* to your screen.

Whack the disk in the drive and you are presented with a super-slick intro, and the game follows quickly afterwards. The old-style hero has been replaced with a much more "right-on" pink rabbit and the graphics are nicely defined despite the sixteen colour limitation. In a break from the original, the play area is larger than the screen and scrolls in chunks as you move towards the edge. It's fast and jerky, but you really don't notice that much once the puzzles begin to wrap themselves around your brain. And "puzzles" is certainly the word to use – none of that nancy-boy "easy-level to get you started" nonsense around here! The hardest part about the game is the time limit – there are precious few seconds to collect the necessary

number of jewels and finding the large caches is essential. As the levels progress, more challenges are added. Baddies are introduced first of all and then slime comes along, slowly blocking off parts of the maze and robbing you of access to jewels.

Only in the audio department does the game really let itself down. The "magic wand" noise used to indicate an open portal is great, but most of the other effects are nondescript and rather crackly. When some slime puts in an appearance, the pulsating bubbling noise will have you reaching for the volume control within seconds (if not sooner!).

A total of eight caves are bundled with the demo, but a built-in designer allows more to be put together as and when you need them. The shareware catch is that only one cave can be saved out from the designer, but you can't really grumble at the £4 registration fee.

ST REVIEW COMMENT: "*Boom Rock* is addictive, very addictive. Memories of misspent hours playing *Repton* in computer studies lessons come flooding back, and a few games are mandatory to prove you haven't lost the old "knack". OK, so it's not as polished as *Douglas Rockmoor*, but the caves are well designed and the gameplay good enough to keep you coming back for more."

☆☆☆☆



It's fast and it's smooth, but it's also extremely difficult – poxy death icons!

MULTI-PAKMAN

**MERLIN PD • DISK NO: BY NAME • £1.25 •
MEMORY: 1MB • PUBLIC DOMAIN**

IN BRIEF: It seems that *Pacman* has become so ingrained in the psyche of public domain authors that they cannot even produce an original game without including the infamous little pill-popper. You see, despite what the title suggests, *Multi-Pakman* isn't a *Pacman* game in the traditional sense of the word at all!

Sure, you still find yourself trapped in a maze full of bonuses but this time around, the screen is split horizontally into two scrolling pieces. The game can be played against the computer or another human and the aim is more survival than victory – in other words, clearing the maze is not essential. Ghosts are not a part of the action and instead are replaced by "death" icons that appear randomly throughout the maze. The manual describes these as "not too easy to avoid" – an understatement of epic proportions. In fact, when travelling vertically, you've usually eaten the icon before you've actually seen it! This tends to make the whole thing slightly annoying to play, but then again, maybe I just need quicker reflexes!

ST REVIEW COMMENT: "Ooooh – a *Pacman* game with a difference. Of course it's impossible to improve on perfection, but *Multi-Pakman* stands up as a reasonable offering in its own right. It certainly proves that STOS is capable of fast action."

000

ROLL-IT

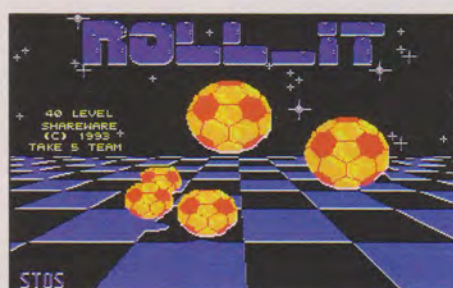
**FLOPPYSHOP • DISK NO: GAM.4294C • £2.00 •
MEMORY: 1MB • SHAREWARE**

IN BRIEF: Rejoice! – the public domain has produced another action puzzle game. *Roll-It*'s action is set on a tiled board suspended in the middle of space and the gameplay is centred around two balls. One is held under joystick control while the second can only be moved with the help of special tiles; the idea is to use ball A to move ball B to the next level – easy! The catch is that the levels are purpose-designed to make life difficult. Unless you use the right tile at exactly the right time, you find yourself trapped and the only option is to start again.

Roll-It is German in origin and the in-game prompts reflect that fact. However, an English text file is included and the gameplay is very easy to pick up after a few attempts.

ST REVIEW COMMENT: "If you think you can stomach another "ball" game, it's certainly worth taking *Roll-It* for a spin (groan... Ed). It lacks Oxyd's luscious presentation, but at the end of the day is almost as playable and a whole lot cheaper to register."

0000



The presentation may lack Oxyd's sparkle, but Roll-It is still an attractive little puzzler.

The multi-coloured sprite is controlled by the joystick and it's just a case of moving the black ball to the portal at the top of the screen.



SUPER PSYCHO KART DEMO

**FLOPPYSHOP • DISK NO: GAM.4293C • £2.00 •
MEMORY: 1MB • SHAREWARE
• FALCON-COMPATIBLE**

IN BRIEF: Now I've seen some pretty feeble plots in my time, but *Psycho Kart*'s just about takes the biscuit. The scenario is this: Aliens have invaded your galaxy and are storming from planet to planet stealing pigs (yes, pigs). Your character, a member of the Super Psycho Squad, has been drafted in to rescue these helpless animals and return them to their owners. There we are; I told you it was bad...

Standard issue equipment to aid you in your quest is one *Psycho Kart* for transport and a rather nifty pulse rifle. The Kart is very fast and capable of jumping huge distances, but is very small, so you do need to hop out in order to let off any lead. The demo level included with the game is made up of above and below ground sections, and a standard issue end-of-level guardian is thrown in for good measure.

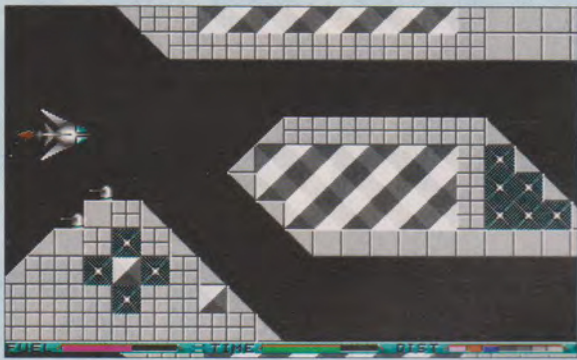
ST REVIEW COMMENT: "*Super Psycho Kart* is yet another classic from the Animalsoft stable. The graphics are as stylish as ever, the gameplay simple but addictive and the only major problem is a serious lack of levels. Mind you, the full game is superb value at just a fiver."

0000

Super Psycho Kart includes most of the characters from earlier Animalsoft games and is wonderfully presented.



A monstrous end of level guardian surfaces from the deep and it's time to jump out of the kart for a little target practice.



The scenery is well designed in the main and scrolls at an unbelievable speed.

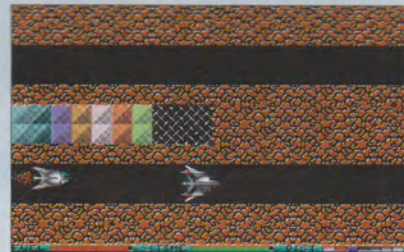
SIDELONG

GOODMAN INTERNATIONAL • DISK NO: GBU.123 • £2.95 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: *Sidelong* is a horizontally scrolling shoot-'em-up with a neat twist. Instead of pitting you against hordes of aliens, the idea is simply to survive by flying through a maze of swiftly moving scenery. Although the spaceship is rather plump in appearance, the wings retract to squeeze through tight gaps and make a horribly satisfying scraping noise as they do so. This neatly cures the "so much as breathe on these walls and you're history pal" problem associated with this type of game and makes things just a little bit more exciting to boot. A sturdy laser cannon is bolted to the front of the ship and is capable of melting its way through any part of the scenery. A few baddies do pop up from time to time, but believe me, they're the least of your worries! The tricky part is digging yourself a big enough hole to squeeze out of a dead end.

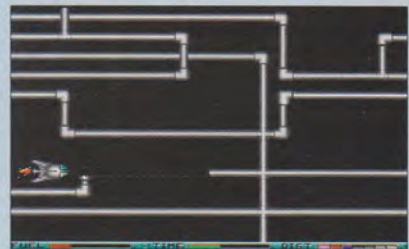
As and when a ship is lost, the game restarts at the last junction. There are no "lives" – as long as you manage to run the course within the time limit, the number of accidents is irrelevant. Although less annoying than many games of this genre, you do have to have a relatively high frustration

Sidelong scores over the competition in its well thought out restart points and forgiving collision detection.



One or two aliens creep in to keep trigger-happy players interested.

The hardest part of the game is burrowing a large enough hole for the ship to squeeze through!



threshold. Technically, *Sidelong* is rather tasty. The graphics look nicely futuristic and the scrolling manages to stay smooth despite its speed. Sound effects are limited to a zap for the laser canon and a few scraping noises, but rather than beefy samples that slow up the action.

ST REVIEW COMMENT: "Space driving games have a history of being rather dull, but *Sidelong* is sufficiently playable to warrant a look. It is still a bit frustrating to hurtle into the same piece of protruding rock for the fifth time in a row, but the wings allow a small error margin and of course the laser cannon helps out no end. Nice one."

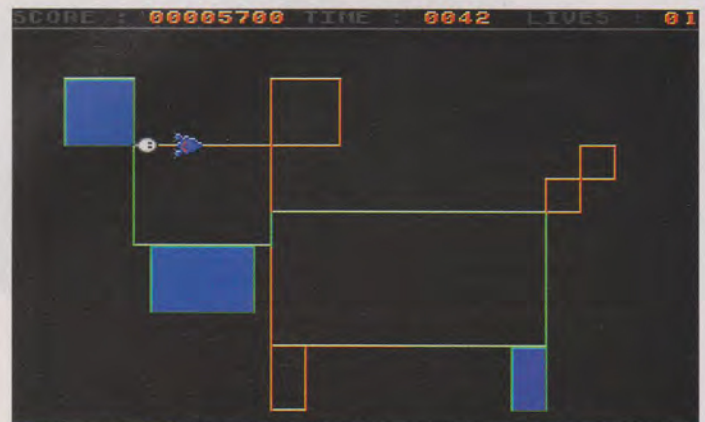
★★★★

PAINTER

LOCAL BBS/PDL • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: It seems strange that despite the number of arcade games released in the eighties, PD authors seem to stick to the same old favourites. We've all seen far too many *Pacman*, *Defender* and *Invaders* clones, so it's a nice change when something reasonably original arrives. *Painter* is just such a game.

The idea is simple. Each new level presents a set of intersecting blocks on screen and it's your job to paint around them, while avoiding prowling nasties. And that's just about it really – the shapes get more outlandish, a few hidden lines are thrown in for good measure and the action speeds up to breakneck levels. The only aspect of the game that has been significantly improved is the sound effects, with some crisp samples signalling the loss of



Just guide the drip around the blocks and it's on to the next level – not so easy with a fast-moving baddie on your tail!

a life and blocks being completed. Graphically, on the other hand, it's very basic, although smooth doesn't begin to describe the presentation.

Painter should be available from any good PD library or BBS, but you can buy and register it all in one go by sending a fiver to Sinister Developments at: 17 Hamilton Drive, Edinburgh, Scotland, EH15 1NP.

ST REVIEW COMMENT: "It's quite nice to find an arcade game that hasn't been cloned to death already. *Painter* is very playable and the crisp sound effects are matched by the silky smooth presentation. Some may find it just a bit too retro, but it's bound to touch a nostalgic nerve in most people."

★★★★



Painter is very true to the original in terms of playability and the sound effects are wonderfully crisp.

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UPGRADING AN STE

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This month continues the Atari ST Review campaign to get every ST owner to upgrade the memory of their machine to at least 1Mb and to have all those useful items – at the right price!



ST UPGRADE

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UPGRADING THE REST...

For the last few issues, I've looked at how you can upgrade almost every variety of STF, STFM and STe. This month, we'll take a look at the rest of the Atari range of computers.



Let's start with the older members of the family: ST and STM. Both of these use our standard board but a slight modification is needed to one component. While this is only minor, it entails a little soldering. If you feel capable of carrying this out yourself, then make sure you tell us what your machine is when you order. Our engineer will give you the necessary instructions. If you're not into soldering irons and the like, then we'll do it for you at our usual low cost: call for a booking.

Next up is the Mega ST. The memory upgrade for this is identical to a standard STFM and has the distinct advantage of extra space. Of the two boards, plug the first one into the top of the MMU (Memory Management Unit) chip. Then remove the Video Shifter chip, plug in the second board and finish by plugging the Video Shifter back in on the new board. Mega STs always have socketed Video Shifter chips – no problems there.

For those of you with a MegaSTe, you'll be pleased to know that these take standard SIMM chips. Very much a plug in and go situation!

Now the bad news; we can't help you if you own a TT, STacey or Falcon as these are substantially different from the run of the mill ST. However, here's a piece of free advice: if you intend to buy a Falcon for serious music or graphics work, then buy one with 14Mb of RAM fitted as standard. If you buy a 4Mb machine and then upgrade, you'll effectively have to throw away the original memory module as the 14Mb module replaces the 4Mb one.

Over 10,000 of you have now upgraded through ST Review – perhaps it's time for the rest of you to consider how more RAM would benefit your system...

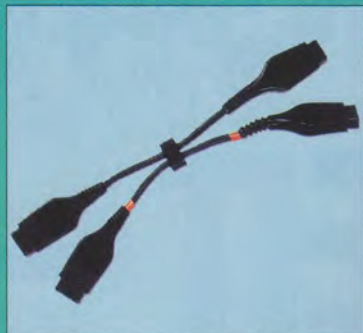
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MOUSE

The ST may be a great computer but the mouse that comes with it simply is not up to scratch. The *ST Review* mouse is a major enhancement because it uses micro-switches for the buttons, making it much lighter and easier to click. Our mouse also has a much higher resolution – 280 dots per inch which means you need far less desk space and get much finer control.

CLOCK CARTRIDGE

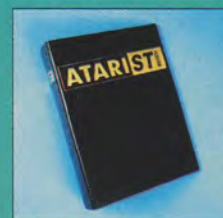
Who sets the time each time they switch on their ST? If like many thousands of ST owners you don't, then you are missing out. Every time you save a file it gets stamped with the time and date – invaluable when you are hunting for a file. Get a clock cartridge and the time will be set automatically each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



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
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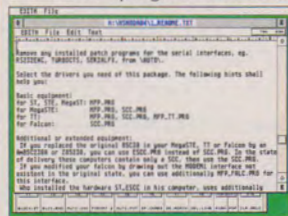
Possibly the fastest growing form of software distribution available today is *shareware* which relies on payment from the user. Typically you are given 30-90 days to try out a package, after which you must "register", or pay a fee to continue using it. The shareware system is all about honesty: if you don't pay the fee, the author is hardly likely to "send round the boys" but on the other hand you won't get any of the benefits of registering or that warm cuddly feeling inside that comes as part and parcel of being honest. All clear? Hmm, well on to the oddities...

Charityware is pretty self-explanatory. The idea is to empty your pockets into charity boxes rather than the coffers of a software author – it's that simple. It has the advantage that no currency needs to be changed and the programmer earns himself a unique excuse when it comes to tin rattlers!

**CIX BBS • ATARI.ST/2LISTINGS TOPIC •
SHAREWARE • FALCON ENHANCED**

IN BRIEF: It's often said that "time is money" and in no area is that more true than communications. Not only does BT take its chunk, but many bulletin boards have their own charges so pushing the cost per minute sky high. What's even more annoying is the fact that the ST is the limiting factor in many cases!

HS-Modem fixes this problem with the operating system and allows much higher baud rates to be used. On a Falcon or a TT this is accomplished totally through software, but the standard ST does require a small hardware modification. The good news is that version 4 is a little more anglicised than earlier versions. English documentation is appended to the German text and the "Setter" program now includes a few helpful prompts. It is still a little bit tricky to set up, but all the hassle instantly disappears when you see your modem rocket from around 1600cps to well over 3000cps on ASCII text!



The English docs are quite difficult to understand, but persevere and keep the speed-doubling result firmly in mind!

Konfigurator für PRG/GTP/TDS/TFP nach Haruns Methode für fremdkonfigurierte Programme. / Setter for programs.
(C) Harun.Scheutzw@08.meus.de, 1994-05-07

Bearbeite Programm / Work on program:

```

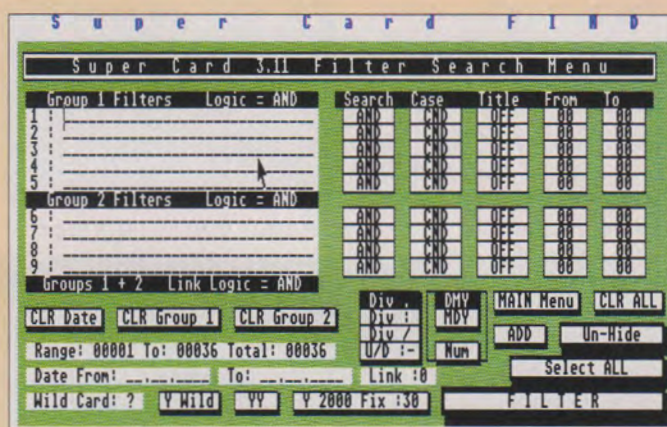
Informationstext / information text :
PC/L: Benutzen Sie einen auf 1474560BHz SCC-PC/LK ungebauten
MegaSTE/TT/Falcon?
Aktuelle Einstellung / current setting : Nein. / No.
Eingeben: „J.“ oder „N.“ / enter: „Y.“ or „N.“

```

HS-Modem's configuration program is now slightly more user-friendly, but not a lot!

ST REVIEW COMMENT: "HS-Modem is daunting to say the least, but nevertheless an essential addition to any Falcon or TT owner's armoury. This version is easier to use than earlier incarnations and just following your nose seems to net reasonable results. Yeehaa – downloads at 3000cps!"

★★★★



Cards can be filtered and sorted prior to display and the whole process is lightning fast.

**FLOPPYSHOP • DISK NO: BY NAME • £2.00 •
MEMORY: 0.5MB • SHAREWARE • FALCON-
COMPATIBLE**

IN BRIEF: Supercard is a program that will be familiar to all hardened ST users. It's a card index with database aspirations and has steadily improved over the past six years. This latest release boasts a few refinements that will please existing users and a nice drop in registration fee, thus making it a little more attractive to new blood.

The main attractions of the program are its speed and flexibility. Every time you view a set of cards, a screen full of search parameters is presented allowing certain records to be pruned. Slightly less impressive is the interface: the main control panel and many of the sorting options are presented in GEM dialogue boxes, but card editing itself is still on a text-only screen. Still, the registration fee has taken a drop to just a tenner and upgrades from earlier versions cost just half that amount.

ST REVIEW COMMENT: "If you haven't tried *Supercard* before, now is the ideal time to do so. The reduced registration fee combined with the small improvements in specification make it one of the best shareware databases available. However it is still rather more powerful than user-friendly."

FIND 1 / 36 : Line 1 / 99 : Serial 1 / 36 (Help=Info)
 001 INTRODUCTION SC3 VERBOSE GUIDE Version 3.11

This Super Card 3 Verbose File is designed to work with the Illustrated 3.10 Guide to teach the inner most secrets of Super Card 3.

By using the FILTER, Users can look up all references to a particular topic.

Illustrations in the Printed Guide are referred to thus : - (3,2), meaning Page 3, Illustration 2.

This guide is meant to accompany the 3.10 Printed Guide - it can be used on it's own, But it is much easier to have the illustrations to look at as well.

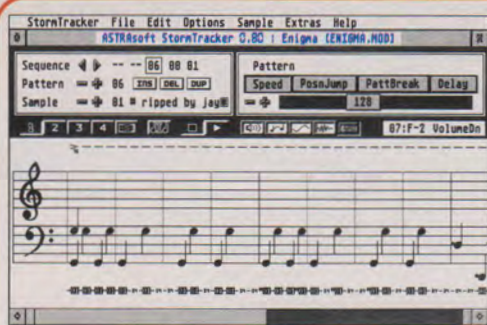
Newly Registered users will receive the latest Illustrated Guide, Whilst existing users will be able to purchase it for a small fee.

All Registered users will be able to obtain the latest versions of Super Card 3 and this Verbose File from P.O. sources. There will be no further fees unless you want the new printed guides as well.

Note that a later version of the Verbose Guide will refer to the Illustrations found in the latest printed guide. And may not match up with earlier versions.

■ We will try to keep these differences to a minimum so that you won't have to

Although filtering is handled through GEM dialogue boxes, the display screen seems to be stuck back in the late eighties...



An easy-to-use interface and traditional music notation put StormTracker light years ahead of the competition!



STORMTRACKER DEMO

GOODMAN INTERNATIONAL • DISK NO: GD.2259 • £1.95 • MEMORY: 1MB • BANNERWARE • FALCON-COMPATIBLE

IN BRIEF: Soundtrackers are the very best way to extract quality music from an ST, but many people are put off using them simply because of the interface. The familiar four column layout was inherited from the Amiga and is really a computer user's approach to music more than a musician's. This being the case, it's nice to find a package that remedies the problem – it's called *StormTracker* and a working demo can now be found in the public domain.

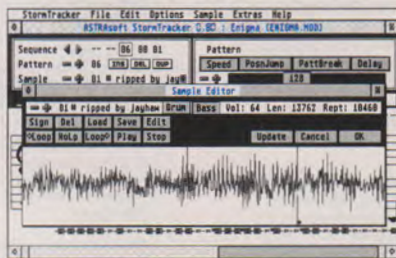
The first thing you notice about *StormTracker* is that it dispenses with the customary non-standard interface and instead chooses to clothe itself with a GEM front-end. At the top of the screen a control panel takes care of most operations and lurking down below is the staff. The notes can be displayed either in traditional music notation or as tracker-style figures on the staff itself. Of course, tracker modules and samples are supported and the program was written by the *DeskTracker* team, thus ensuring compatibility with the Falcon. Three demo tunes are included on the disk and the public domain is positively heaving with the things if that isn't enough for you.

Beyond the innovative interface, *StormTracker* has much more to offer. A basic sample editor is built in and you can even add effects to digitised snatches; there's also a spectrum analyser. Most of the pattern control feels familiar despite the different setting and there's very little culture shock when moving from an old-style tracker. The block mode is particularly good – just drag the mouse over the area you want to move and then use the standard "Cut", "Paste" and "Clear" method.

Three qualities of play-back are supported in the full version, ranging from 12.5kHz to 50.1kHz, although only the first is actually usable in the demo. Other limitations are restricted saving and editing. It is usable, but to exploit it fully you will need to buy the full version from Goodman at £24.95.

ST REVIEW COMMENT: "Trackers have finally come of age! *Storm* makes the most of any ST, looks great and more importantly is extremely easy to use. The feature list compares favourably with all but the latest generation of trackers, and that GEM interface makes it feel more modern. All in all, a very innovative program."

A basic sample editing suite is built-in, allowing pops and crackles to be removed painlessly.



A GEM application to the core, *StormTracker* can be configured through window-based dialogue boxes.

TOP TEN UTILITIES

1 STORMTRACKER DEMO • GOODMAN INTERNATIONAL • DISK NO: GD.2259 • £1.95 • MEMORY: 1MB • BANNERWARE • FALCON-COMPATIBLE

A revolutionary tracker program that dumps cryptic figures in favour of standard music notation. Power is not compromised for ease of use and the interface is sheer joy to work with, even managing to muster 3-D buttons on the Falcon.

2 HS-MODEM 4 • CIX BBS • ATARI.ST/2LISTINGS TOPIC • SHAREWARE • FALCON-ENHANCED

A software amphetamine for your Falcon's serial port. *HS-Modem* almost doubles the performance of high speed modems on the Falcon or TT and this latest version is a little easier to set up thanks to semi-English prompts. ST owners will need a small hardware modification to benefit, however.

3 TRASH CPX • THE ST CLUB • DISK NO: DMG.40 • £2.25 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

Possibly the best system tweak of the year. *Trash CPX* allows files to be recovered from the standard desktop wastebasket. Instead of being deleted, they are copied to a folder of your choice and can be selectively flushed at the end of each session. Easy to install and it seems to be reliable.

4 XMENU 1.4 • THE ST CLUB • DISK NO: DMG.40 • £2.25 • MEMORY: 0.5MB • FREWARE • FALCON-COMPATIBLE

X-Menu is a little like a GEM version of *Superboot*. It works from the desktop and allows a set number of programs to be run from a simple click of the mouse. Maybe not a lot of use to Newdesk users, but it's great for grouping programs under earlier versions of TOS.

5 SUPERCARD 3.11 • FLOPPYSHOP • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

The world's favourite shareware database takes on a few new features this month. Card files can now be colour coded, there's a multiple print option and several small bugs have been obliterated. Best of all, the registration now sits at a tantalising £10.

6 AUDIO BASS • GOODMAN INTERNATIONAL • DISK NO: GD.2268 • £1.95 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Ever wanted to keep a track on your sprawling CD collection? *Audio Bass* (geddit?) is specifically designed to store the vital statistics of records, compact discs and tapes. It's very basic in its approach but does have a simple search facility and is very compact.

7 ASCII TABLE • FLOPPYSHOP • DISK NO: F.4406 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • HD DRIVE REQUIRED • FALCON-COMPATIBLE

One for the programmers out there. *ASCII Table* is a CPX module that provides information on the ST's character set. Each letter is listed together with the decimal, hex, octal (useful, huh?) and binary equivalent. It's just a shame you can't copy a selection to the GEM clipboard really.

8 STOS FIX 2.7 • FLOPPYSHOP • DISK NO: F.4406 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • HD DRIVE REQUIRED • FALCON-COMPATIBLE

A program to patch *STOS* for total compatibility. It works with the STe, MegaSTe, TT and Falcon, and seems to work perfectly well. This update improves reliability a little, but doesn't appear to add any significant new features.

9 PEN PAL • GOODMAN INTERNATIONAL • DISK NO: GD.2255 • £1.95 • MEMORY: 0.5MB • FALCON-COMPATIBLE

Pen Pal is a small but perfectly formed text editor. It has no frills, but all the basics are there – block handling, printing, search, replace and a little more besides. It's ideally suited to kids and the main attraction is its skimpy size – at 83Kb it won't present any memory problems at all.

10 LPAK • FLOPPYSHOP • DISK NO: UTL.4272 • £2.00 • MEMORY: 0.5MB • FREWARE

Now here is a clever idea – a packer for data files! Just run the supplied compressor through your hard disk and *Lpak* will automatically decode files as and when they are called upon. Be warned though, this is a beta test version – handle with care!

New Age PDL £1.75 EACH

Unless otherwise stated

All disks require a COLOUR system unless: 'H' - High resolution monitor required, 'A' - Any setup suitable.

FALCON 030 - ALL HD DISKS

- FALC 2 - Falcon Boot 1.2, Backward 2.24 (ST emulator), New Depack, Text Files, Desk Copy, Desktop 1.05, Sysinfo, DC Xtra 2.1, Revive, Spirited 1.3 (utils).
- FALC 9 - Gratesque (Excellent), Gourd, Speeder, Plasma 30 & 50, Intel + more! (demos).
- FALC 31 - Temptation! The first disk of an EXCLUSIVE pack of JPEG pictures of gorgeous girls. Excellent quality pictures and the three disk pack contains no less than ninety pictures! Yes 90! Disks 2 & 3 on FALC 32 & 33.
- FALC 35 - Neohack 3.1.1 - 2 Meg memory, brilliant dungeons and dragons game.
- FALC 36 - RDE 3.1, Towin 1.4, Iho 2.22, Zoo 2.1, Zip 2.3, Gem Bench 3.25, Good Backup 1.13, Boot Init 1.1, Easy 1.5, Frontal, Shout 1.3 (utils).
- FALC 37 - Fractal Playtime, Gemview, Delpaint, Gix Gif, Binaris 2.0 + more! (art).
- FALC 52 - System Audio Manager 1.1 - assign samples to events, Digilope 2 demo (music).
- FALC 77 - Emacs 3.11, Everest 1.5, KM Term, Atomik 3.5, X-Menu 1.3, Profile 1.43, Rezboiler (run RGB stuff on VGA monitor), Fullers 1.01, Swabs, Dclock 1.0, Fuzzy Clock 1.14.
- FALC 96 - When Dreams Become Reality (RGB), Warum (RGB), Inconver (RGB) (demos).
- FALC 103 - Oryd (excellent), Des Lasers at Des Hombres (3D shoot em up), Masters of Chaos (Dungeon Master clone), Tran, Ikar Editor, Mario Kart demo, (games).
- FALC 106 - Falcon Flight Demo - real time zooming demo over fractal landscape + great music.
- FALC 107 - Crime by the DNT crew, Magnet by Alphatech, Bobs-1. All RGB/TV only, (demos).
- FALC 109 - DM8 icons - two large sets of replacement icons, Before Dawn screensaver 1.25.
- FALC 110 - Vide - easy to use VGA viewer, Rainbow demo 0.5 - Trucolour art package.
- FALC 112 - Mahjong II - German version of this classic tile game. Disk approx 1/2 full.
- FALC 113 - Margo demo (4meg+) - digitised pictures of a woman modelling a skimpy bikini!
- FALC 114 - Multi-Dialogue 1.3, Master Browse 3.2 - excellent text file viewer, T-Cache 6.0.
- FALC 115 - Octalyser 0.8 - another 8-track tracker ported from the STE + docs + source code.
- FALC 116 - Papa was a Blade Runner (4meg+) new demo by EKO, very nice, RGB/TV only.
- FALC 117 - MOV Raytracer 2 on 2 disks, zipped & expands to nearly 5 meg! £3.50.
- FALC 119 - Moving Pixels Demo (VGA) - 4 meg+ - a mega-massive demo that requires 10 megabytes of hard drive space! From Australia, this basically shows off the Falcon itself - the sort of thing you'd see in a shop window, covering graphics, sound and productivity. Very good. Five disks - £8.00!

GAMES

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 for 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!

- GAME 168 - Napoleon - a 'risk' style game of war and strategy. 'H'.
- GAME 185 - Oryd 2 - the sequel to the brilliant Oryd, much harder than the original. 'H'.
- GAME 186 - Tetris - a new Tetris type game. 'H'.
- GAME 11 - A Question of Snooker, Pinball, Devastator, Roll n' Nudge, Ranger.
- GAME 78 - Popeye - a pop music game with an adult theme.
- GAME 83 - Grandad & the Holy Vest - superb animated adventure. 1 Meg+.
- GAME 104 - Blat! - A very nice version of Tetris. STE ONLY.
- GAME 117 - Fast Freddy - lovely platform game with superb graphics.
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- GAME 132 - Psycho Pig - two disk platform game, very cute. £3.50.
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- 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 157 - B17 - bomb the buildings, F-16 - very good flight game, 8 missions.
- GAME 178 - Argon, Our Codename Bomb, Pyramid, Disk Hunt, Sinter, Tower War, Jeep, Plumber, Picker, Planet Man, Uboat, Ypsilon - 13 games!
- GAME 179 - Asteroid, Bang 3, Battle, Bellum, Blitz, Blaster, Chunks, Europe, Explode, Fuzzball, Gems, Invaders, Megaroids, Micro, Octopod, Ohello, Pac Man, Plant, Rockball, Taux, Tennis, Wall Street, Zappy.
- GAME 180 - Mystic Well, Deep Lair, Football, Harris Goes Skiing, Haunted House, Invaders, Jumper, Room, Stoneage Deluxe, USA, Zyxx, Firestorm.
- GAME 181 - Utopias 1.5 - very slick STE only Olds/Gray type game, Endurance - 3D game.
- GAME 183 - Towers - a great new Dungeon Master Clone - the best yet! 2 disks 1 Meg+ £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, Mindmelt - 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 193 - World Fighting Championships - beat up opponents from all over the world.
- GAME 198 - Roll-It - ingenious puzzle game with 40 levels, a sort of ball/tile game. 1 meg+.
- GAME 199 - Skulls - A hash STE only version of Minesweeper from the PC, good. 1 meg+.
- GAME 201 - It's A Mug's Game - good overhead view boxing game with nice graphics etc.
- GAME 204 - Gone to the Dogs - bet on the races! Good arcade game based on Odds.
- GAME 209 - Money Mania - collect all the money from each screen, loads of nasties etc. Good.
- GAME 210 - Ruthless, shoot em up, Spherical - good platform game, Serendipity - good puzzler.

BUDGIE GAMES - £2.75 EACH

- BUGAM 89 - Horse Racing Simulator for 1 to 5 players. Buy/sell and bet!
- BUGAM 104 - Jetpack - another faithful clone of a classic Spacey game.
- BUGAM 113 - Football Tactician - formerly a £20 release! Excellent!
- BUGAM 121 - Super Scramble - take a trip to the 8-bit days with this shoot 'em up.

DEMOS

- DEMO 356 - Kuba Club Culture Mix Pack 1 - 6 great bits of club music.
- DEMO 355 - The Brace Demo - nice auto-running multi-part from Diamond Design.
- DEMO 351 - The Edge of Panic Demo - a good STE only demo by ACCS.
- DEMO 350 - Exhaust demo - another good STE only demo by ACCS, 1 meg EXACTLY!
- DEMO 342 - Sid James Demo - clips from the films - STE only 1 meg+, 2 disks £3.50.
- DEMO 335 - Reality is a Lie - a 13 screen demo by Psychomix, very good. 1 meg+.
- DEMO 333 - Cemetery demo - a good dig-music demo.
- DEMO 330 - Beginning of the Ending - this demo actually plays in the background of a game of breakout which is played with 5 balls! Hows your concentration.

ART & GRAPHICS

- ART 1 - A disk full of 23 miscellaneous utilities including viewfig 1.2.
- ART 51 - Crackart 1.36 - latest version of the best ST art package! 1 Meg+.
- ART 128 - Gemview - 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.
- ART 187-196 - Temptation! Volume 1 - the first pack in a whole new range of top quality pictures of tempting girls! Two versions (please state which!) - one for ST/M and one for STE which takes advantage of a 32,768 colour palette! EXCLUSIVE to New Age PDL! Ten crammed disks at just £15.00!
- ART 209 - Erotic Dreams slideshow 1 - all pictures of Supermodel Cindy Crawford.
- ART 212/213 - POV Raytracer, the best raytracer around! 2 disks. £3.50.

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 Lemmings, Backpopped, Psychic 1, Bushfire, Donna 2, Ace Base, Echoing.
- TRAC 126 - Scrambled Mind, 1+ World, Wyre II, Hope Part 2, Lotus Turbo, H-Metal.
- TRAC 125 - The Leader Final, Artificial, Finally I Play, Space Journey, Still.

WORDPROCESSING & DTP

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

BUSINESS

- BUSI 2 - Sheet 2.0, Dbase One, First Base 1.6, Home Budget Template. 'A'.
- BUSI 4 - Opus 2.2 - brilliant spreadsheet. 1 Meg+ 'A'.
- BUSI 6 - Double Sentry Book Keeping System, Address Book. 'A'.
- BUSI 7 - Astubank 1.1at - complete home accounts system - colour only.
- BUSI 11 - Compact Office Management Program 2.05 - for businesses, lots of features. 'A'.
- 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. 'A'.

FREE ST CATALOGUE WITH FREE SOFTWARE FOR NEW CUSTOMERS UPON REQUEST

UTILITIES & APPLICATIONS

- UTIL 2 - Startgem, Head Start 1.1, DC Clock, Disk Checker, Hard Disk Utils, Ram Disks, Hack 'n' Copy, Turtle 3.2 (HD backup), Megafan, Memory Test. 'A'.
- UTIL 4 - Pools 2.5, ST init 3.4, Switcher - loads programs faster, 20 DC utilities. 'A'.
- UTIL 5 - F-Copy 3, DC Showit, Desk Manager, Disk Scan, Mono Emulator 5, Spool, DC Shuffer (loads 32 ccs), Speech Synthesiser, Mouse Accelerator. 'A'.
- UTIL 6 - James The Butler, London Phone Cards, MenuSYS, Pinhead, Super Calendar Batch Startup, Auto Sort, Postmortem, No Bombs, E-Disk, 9 Quick Utilities. 'A'.
- UTIL 12 - Jan Packer 4, Wind XES (Modulator control panel), Satellite 4.01, Clock Set. 'A'.
- UTIL 13 - German to English translator, fast Print, DC Salvage, MINT, Mascal 3.0. 'A'.
- UTIL 14 - Printer Drivers inc Canon Bubblejet, Quic Daisywheel, Brother + Epson. 'A'.
- UTIL 16 - Chameleon - loads and unloads accessories without having to reboot. Sticker 3.0 (H).
- UTIL 16 - Definitive File Selector, Super Virus Killer, Benchmark. 'A'.
- UTIL 19 - Your Second Manual, Jokes, GDOS info, Bombs info + several magazines. 'A'.
- UTIL 30 - Superboot 8.1, Build Your Own Scanner, Report Writer, Disk Cleaner. 'A'.
- UTIL 35 - Cheats 1.1 (high speed copying util), Rainbow TGS patches, Uniraj 2.2. 'A'.
- UTIL 38 - Printer Drivers inc KXP 1124, Star LC24, NEC Pinwriter, Brother, Canon, Citizen, HP Deskjet, Oki, Gume, Taux, Toshiba, Riteman, Atari. 'A'.
- UTIL 40 - Loads of packers inc: Atomik 3.5, Automation 5, Dragon 3, Fire 2, Ice 2.4, Pompey 1.9, Speed Packer 2, Branch Always Packer, Multi Depacker 1.5. 'A'.
- UTIL 42 - Intro Maker - mix pictures, sprites, scrolls and music together. Colour only.
- UTIL 45 - Kaos Desk 2.01, Terra Desktop 1.36 - replacement desktops. 'A'.
- UTIL 46 - STOS Shoot em up builder kit 0.6 - colour only.
- UTIL 53 - TOS Version 1.0 - allows you to run programs that don't run on your TOS. 'A'.
- UTIL 54 - Message Scroller, Archiver, Shells, Envelope Printer Demo, Mega Cracker. 'A'.
- UTIL 57 - Revenge Doc Displayer 3.0, Wordfinder 3.0, Desktop.inf configurator. 'A'.
- UTIL 58 - Career Themes Inventory and Personality Tester - great fun!
- UTIL 59 - Neodesk patches - upgrades 3.01 to 3.02 and 3.02 to 3.03. 'A'.
- UTIL 60 - JC Label 1.3, Jan-Dos 1.7, Flawchart Compiler, Boot Time 2.0, Multisync. 'A'.
- UTIL 62 - BJ Chrome 1.1, Desk Master, Grocery Lister, Silk Mouse, Auto Load, Blitz. 'A'.
- UTIL 66 - Narton X utility disk - over 150 programs! Everything you need to get you started! Includes disk utils, diary, virus killer, packers etc. - highly recommended! 'A'.
- UTIL 67 - Label CAD 2.2 - design cards, posters etc. Document files on UTIL 68. 'H'.
- UTIL 70 - Route Finder 1.8 - Like Autroute - plans journeys for you, Spirited 1.3, Die UHR. 'A'.
- UTIL 74 - Award maker - easy to use program to create certificates with nice fonts, borders.
- UTIL 75 - Idealist 3.4 - file printer that saves up to 80% of paper used! 2 disks £3.50. 'A'.
- UTIL 77 - Before Dawn 1.25 - latest and biggest version of this screen saver. 2 disks £3.50.
- UTIL 79 - Spectrum Games - a disk full of games to go with the emulator on Util 55. 'A'.
- UTIL 80 - Terradisk 1.38 (latest), X-Jet 097, Curtains - protect your ST from snappers. 'A'.
- UTIL 82 - Berapress 2.6 - create posters, banners, gift cards, letters etc. 'H'.
- UTIL 83 - Spectrum Emulator 2.07 - latest version - 2 disks + example progs. 1 meg+ £3.50.

MUSIC & MIDI

- MUSIC 1 - Noisetracker 1.5 - a popular soundtracker creator with samples & source.
- MUSIC 2 - Samples disk 1 - works with most soundtracker creators.
- MUSIC 7 - Hacker voice sets and songs for use with Quartet.
- MUSIC 11 - Arpeggiator, Zeppelin, MIDI Beat, Project, Jubeebox, MKS-50. 'A'.
- MUSIC 12 - Henry Cosh Sequencer, Composer. 'A'.
- MUSIC 13 - Drum Patterns for Cu-Base in standard MIDI format. 'A'.
- MUSIC 16 - Yamaha PSS790 Editor, includes loads of sample voices.
- MUSIC 22 - Alchemie Junior 2.2 - sequencer with real-time, multitasking etc. 'H'.
- MUSIC 23 - Sound Merlin - good ex-commercial program, Mozart's Dice Waltz - compose music without musical knowledge. 'H'.
- MUSIC 24 - Octalyser 8-track tracker - STE only, Protracker 2.1, YM Tracker.
- MUSIC 26 - PSS Utilities disk, loads of programs including patch editor, librarian etc. 'A'.
- MUSIC 27 - Casio CT sounds, 32-track sequencer, Kawai K1 editor, MIDI menu. 'A'.
- MUSIC 29 - Kawai K1 synth sounds. 'A'.
- MUSIC 31 - SOX 1.0, MIDI Mover, TX81Z Editor, Red Drumming. 'A'.
- MUSIC 32 - Tri-Sound Sequencer (Not STE), Disc Play 2.45, in control.
- MUSIC 33 - DTX File Reader 0.1, DTX Cataloguer 1.0, Q-Play 3, Make One, Separate. 'A'.
- MUSIC 34 - SOS 64, Guitar Professional, Unilap, Play Em 1.0, YM2149 Editor. 'A'.
- MUSIC 35 - Roland 7 Series Sound Banks for DS, D10, D20, D110 and GR synths. 'A'.
- MUSIC 36 - Final Score 2.0 - score writing system. 'H', EXSEK - 100 track sequencer. 'A'.
- MUSIC 37 - Mid-Step 1.2 1 meg+ - 16 track sequencer for step-time music operation.
- MUSIC 38 - 7SP Dump, ST Sound 2 - record, play, compress and edit samples.
- MUSIC 39 - SSP PD Voicepack - patches for the Roland GM-70, TX81Z, Roland D110.

EDUCATION

- EDUC 1 - Kid Music, Kid Notes, Kid Piano, Kid Puzzle, Kid Graph, Rebus Writer.
- EDUC 7 - Michael's Big Adventure - colourful graphics, easy to play, Age 8+.
- EDUC 9 - Bodyshop, Computer School 2 & 3, Butterfly in the Park.
- EDUC 20 - Easter Egg Hunt - pleasant adventure for 7-12 yrs without violence etc.
- EDUC 21 - G.C.S.E. Higher Maths Grade Tutor, François 3 - French Tutor.
- EDUC 22 - G.C.S.E. Chemistry Tutor - all you need to attain grade 'C' or above.
- EDUC 23-26 - CIA World Factbook - four disks crammed with information on hundreds of countries + weights & measures and a complete chemistry reference book! £6.50.
- EDUC 39 - Mini Magic Storybook - cut down version of the successful commercial packages.
- EDUC 40-42 - World War II - look at life on the Home Front during the war. 3 disks. £5.00 'H'.
- EDUC 43 - Professor Clever 2 - teaches kids aged 5-11 about numbers, spelling and time.

PROGRAMMING

- LANG 1/2 - Sazobon C Compiler release 2. Includes documentation, shell etc. £3.50.
- LANG 5-9 - GNU C++ Kit - Hard Drive + 2.5meg required, not for novices! 5 disks £8.00.
- LANG 13 - Professional GEM guide - 17 chapters of tutorial with C source.
- LANG 16 - STOS Tutorial and various basic programs.
- LANG 27 - GFA Basic v 2.0 - GFA Expert - a nice GFA Basic tutorial.
- LANG 29 - STOS Tracker - adds a new set of STOS commands for Soundtracker.
- LANG 36 - STOS Extensions: Missing Link, Misty, Blitter, MIDI, STE, + 7 more!
- LANG 37 - STOS Software pack 1 - millions (almost!) of routines etc.
- LANG 41/42 - STOS 3D - brilliant extension allowing you to program in 3D. 2 disks £3.50.
- LANG 43 - A disk crammed to the brim with STOS ACBs.
- LANG 44 - STOS Adventure Creator 1.03 - write your own graphic adventures. 'C'.
- LANG 45 - Heat 'n' Serve Sazobon C - a very easy to install version of this compiler. 'A'.
- LANG 46 - XLSP 2.00 - object oriented programming language with a huge 84k manual.
- LANG 48 - STOS Extra Extension 1.91a - adds about 52 new commands to STOS. 'A'.
- STOS 13 - The latest issue of STOSSER disk magazine, tutorials, articles, reviews etc.
- BURPO 2 - 68000 Programmers Library - hundreds of routines for games. £2.95.
- BURPO 4 - Moving Bytes 1 - more routines for screen effects, music, scrolls. £2.95.
- BURPO 16 - ST-68K Reference 3 - includes full data on ST internals, excellent. £2.95.

ACCESSORIES & COMMERCIAL ALL ITEMS UK ONLY

- Easy Text Professional DTP (1 Meg+) £35.95
- Easy Text Professional Version DTP (2 Meg+ & HD & Speedo GDOS) £36.95
- Introducing Atari ST Machine Code - book & disk £17.95
- Beginners' Guide to STOS Basic - 618 page ringbound manual £32.95
- IMPRINT, for quality mono printouts on 9 or 24 pin printers £9.95
- IMPRINT, same as above but for colour printers £13.95
- Degas Art v2.0 - computer art tutor on 2 disks £9.45
- Calamus 1.09 - mono 1 meg+ £79.95
- Mr. Smart's BIG TIME - 25 commercial educational programs £24.95
- Family Roots - Genealogy Program £23.95
- ST/STE Mouse £12.50
- Quickshot Joystick £6.95
- Mouse/Joystick Extension leads £4.95
- 10 Capacity disk box (only with order of one or more disks) £0.95
- 100 Capacity Disk Box £7.95
- 200 Capacity Disk Box £9.95
- 3.5 inch Drive head cleaner £3.45
- ST or Falcon dust cover £3.45
- Keyboard Cleaner - pack of ten wipes £3.95
- Copyholders (attach to monitor to save desk space) £3.45
- Mouse house £2.95
- Mouse mat £2.95
- Mouse cleaning kit - 10 cleaning sticks and cleaner tissues + fluid £4.95
- 10 High quality blank disks £4.45
- 50 High quality blank disks £19.95
- 100 High quality blank disks with 100 cap disk box £41.95

For full details on any of these products just give us a call!

ORDERING DETAILS:

All orders MUST be accompanied by payment. In the UK send a cheque or uncrossed postal order made out to 'New Age PDL'. Elsewhere any form of payment in sterling except for credit cards. Postage for PD disks as follows: UK is FREE! Europe 15p per disk, elsewhere 50p per disk. There is no minimum order.

PD ZONE

ST NEWS 9.1

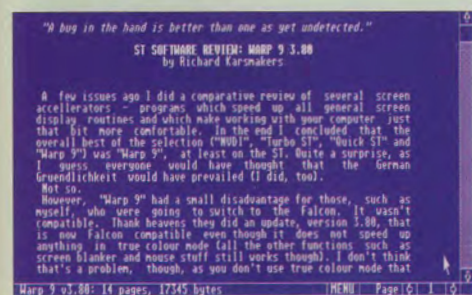
**FLOPPYSHOP • DISK NO: DMG.4490 •
£2.00 • MEMORY: 1MB • PUBLIC
DOMAIN • FALCON-COMPATIBLE**



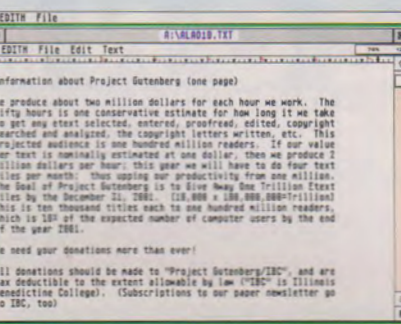
IN BRIEF: Anybody who has been in the Atari market for a number of years, must have seen *ST News* at one time or another. It was one of the first disk magazines to appear and after a small hiccup, the operation seems to be running as smooth as ever.

In recent times the content has shifted away from programming onto more general-interest topics. There are reviews of the latest software packages, including *Kobold 2.5*, and previews of forthcoming attractions such as *1st Word Plus 4* and *ChromaStudio 24*. A good number of pop concerts and CDs are also given the review treatment. It's all very light-hearted and exceedingly well written, even if the enormous article on the number 42 does take "Hitchhikerdom" to new heights! And of course, the whole thing is wrapped up in the delicious shell we have come to expect from the *ST News* team – cascading menus are used to squeeze all of the articles into place and it just flies through lengthy articles.

ST REVIEW COMMENT: "*ST News* is the best disk magazine you can buy – it always has been and probably always will be. The general interest approach means it will appeal to almost anybody and the grammar is tighter than any other disk magazine on the market. A stonking good read."



**Text display is
lethally fast and
the perfect
grammar should
keep pedants well
at bay.**



**Project Gutenberg
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books into digital
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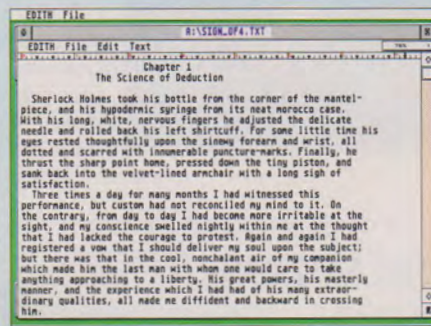
DIGITAL BOOKS

**FLOPPYSHOP • DISK NO: VARIOUS • £2.00 •
MEMORY: 1MB • DONATIONWARE**

IN BRIEF: One of the more interesting additions to Floppyshop's catalogue this month is a range of digital books. They have all been produced by a company called Project Gutenberg and a huge range of copyright-free classics are available, from *Aladdin* to *The Adventures of Tom Sawyer*.

None of the books are presented in any special way – plain ASCII is all you get – and at first it can be hard to see the point. But when you think about the number of quotes that need no longer be laboriously typed up or something as simple as searching for a phrase, the benefits begin to shine through. The *Revenge Document Displayer* is included on every disk and a search is usually completed within seconds. Admittedly, quite a lot of the books are for children, but one or two more "mature" titles do put in an appearance too – *A Discourse on Method* by Descartes and *War of the Worlds* to name just two.

ST REVIEW: "What a great idea! *Digital Books* are ideal for students and teachers alike and can save hours when searching for a particularly obscure quotation. The *Revenge Document Displayer* is renowned for its speed and copes admirably with even the larger texts."



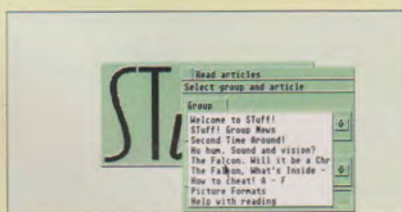
**A wide variety
of books are
available, from
Sherlock Holmes
to Aesop's Fables...**

STUFF – ISSUE 1

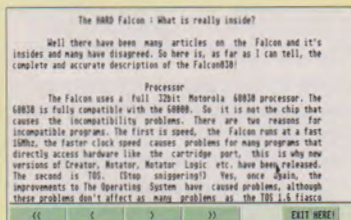
**NEW AGE PDL • DISK NO: BY NAME • PRICE: TBA
• MEMORY: 0.5MB • EXCLUSIVWARE • FALCON-
COMPATIBLE (IN ST HIGH RESOLUTION)**

IN BRIEF: *Stuff* is a new diskzine designed to appeal to users of all Atari machines from the ST to the Falcon and the producers intend to cover the Jaguar when it eventually becomes available in this country.

The first issue is really a pilot more than anything. It contains some articles on the Falcon, one or two reviews



**It's a bit short on articles right
now, but Stuff's slick interface
points to a healthy future.**



**The magazine includes a good
splash of Falcon coverage and
text display is admirably fast
in paged mode.**

ST REVIEW COMMENT: "*Stuff* has a nice atmosphere. The authors obviously enjoy using the ST and that is reflected in the enthusiasm they show; it's nice to find a bit of Falcon coverage too.

"It could do with a little work in the article department but all in all, a very promising first issue."

and a huge pile of freebies. The articles are written to quite a high standard, although it's evident that the magazine has been a few months in production – some of the information is a little old. However, this should improve as and when issue 2 arrives.

Stuff has one very important aspect in its favour – its shell. The 3-D dialogue boxes, pop-up menus and speed of the paged text display promise that future issues will definitely be worth looking out for.

PD ZONE

PAPA WAS A BLADERUNNER

**FLOPPYSHOP • DISK NO: F.4446 • £2.50 •
MEMORY: 4MB • PUBLIC DOMAIN • FALCON
(RGB) ONLY**

IN BRIEF: It must have taken demo coders at least three years to explore the full potential of the ST, so I suppose we shouldn't be too surprised that the current crop of Falcon demos are a little bit lacklustre.

Papa Was A Bladerunner is another reasonable demo to add to your collection. Technically it's very good – the show starts with an impressive intro, the logo forming from shattered pixels and then it moves on to a scene of texture-mapped cubes twisting aimlessly in space. When half a dozen different shapes have been displayed, it's on to some more traditional 3-D effects and a nice little wander through a fractal calculation. Audio consists of some very atmospheric music and one or two wicked sound effects. Errmm, that's it...

ST REVIEW COMMENT: "Once again, another pretty good Falcon demo. It's very impressive the first time you see it, a little less so the second time and you're not likely to want to run it again after that. Mind you the music is out of this world, and for two and a half quid, who's complaining?"

000

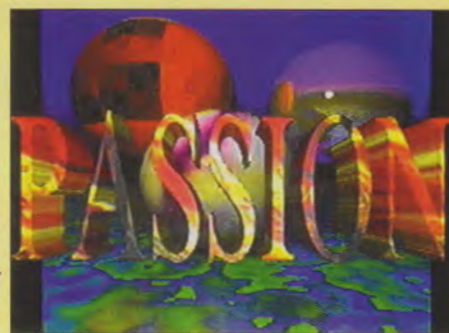


The morphing vector screen is one of the more interesting areas of the demo – if only we could see a little more of them!



A particle explosion forms the demo logo while rather atmospheric music pumps along in the background.

Rendered true-colour graphics and slick presentation make Arrival one of the better rolling Falcon demos.



THE ARRIVAL DEMO

**FLOPPYSHOP • DISK NO: F.4447 • £2.50 •
MEMORY: 4MB • PUBLIC DOMAIN • FALCON
ONLY**

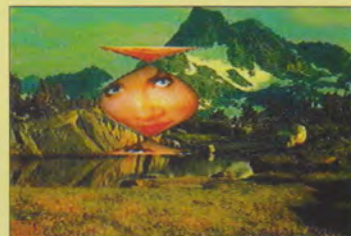
IN BRIEF: When the Falcon was first released, promises of true colour graphics and breathtaking effects filled the air. Sadly, many of the games that were planned never made the market, so it's a good job we've got the public domain demo scene to take up some of the slack.

There's no interaction involved with *Arrival*. The show begins with a picture of a Falcon that slowly throws itself towards the screen and then it's into the demo proper. Most of the effects are centred around texture-mapping – first of all, a spinning picture is shown and then an incredible animation of a bouncing vase gives way to a flight across a rendered 3-D landscape. It's one you really do need to see to believe, but sadly only silence accompanies the action...

ST REVIEW COMMENT: "Arrival is easily the most graphically impressive Falcon demo currently available. Whereas most are little more than souped-up ST offerings, this one really does look like it's a part of the 32-bit generation. However the effect is somewhat spoilt by the lack of music."

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The texture-mapping screens are stunning, but what on earth happened to the music guys?



DREAMZONE

**NEW AGE PDL • DISK NO: DEMO.274 &
DEMO.275 • £3.00 ALL IN • MEMORY: 1MB •
PUBLIC DOMAIN**

IN BRIEF: If you've got any doubts about the ST's ability to scroll, *Dreamzone* is enough to lay them to rest. After an intro boasting one of the most atmospheric pieces of music ever to grace the ST, the light fades to reveal the main menu – a full-screen, platform game! Scattered over the brightly coloured landscape are doors leading to demos. The game itself isn't that taxing, but it makes a nice break from the monotony of scrollers, vector balls and starfields.

As for the screens themselves, they are well above average. There's a great joystick-controllable starfield section (similar to the level selector in *Tempest 2000*), some incredibly smooth vector graphics, a "lamer" test and plenty more besides. And that's just scratching the surface – there are literally dozens more to choose from and enough scrollers to keep even hardened demo freaks happy for many hours.

ST REVIEW COMMENT: "Dreamzone is technically stunning from start to finish. The Sonic-style main menu adds a needed interactive element and it's colourful enough to make your eyes sting. The demos themselves are quite entertaining, but yet again the emphasis does fall on technical achievement."

0000



For impressive vector graphics, you can't beat Dreamzone – this Amiga conversion is every bit as smooth as the original.

A colourful platform game leads to the various sub-demos – fall down a gap and it's back to the start for you!



DEMO MENU IS THE ONLY

THE EUROPEAN DEMO

CALEDONIA PDL • DISK NO: D.31 & D.32 • £5.00 ALL IN • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: *The European Demo* is possibly the greatest megademo ever to emerge from France. It's spread over two disks and is fronted up by a full screen menu system with some of the smoothest scrolling you ever did see.

As for the subdemos, you know the score by now; colourful rasters and digitised music line the show from end to end, and a fair few 3-D graphics screens are thrown in for good measure. Also featured is the biggest scrollline in the world – it stretches from the top to the bottom of the screen and into all of the borders! The only thing *The European Demo* does lack is originality; it may be faster and smoother than all the rest, but nevertheless it is all rather familiar. Yet again, one or two doors are locked and it's up to you to find out how to open them...

ST REVIEW COMMENT: "Bright, colourful and thoroughly professional, this one is worthy of inclusion in any serious demo addict's collection. Slightly substandard graphics do spoil the otherwise superb menu screen though."

★★★★



Although technically impressive, the below par graphics let The European Demo down a little.

A vast overscanned menu screen complete with flying lion allows access to the many demo screens – pure class!



DARK SIDE OF THE SPOON

CALEDONIA PDL • DISK NO: D.37 • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

IN BRIEF: There are two types of demo available for the ST: those that set out to entertain and those that are satisfied to beat the competition in feats of programming excellence. *Dark Side Of The Spoon* falls firmly into the latter category, but manages to be entertaining enough for general consumption.

The menu screen, if it can be called that, is an overscanned castle and the joystick controls the only inhabitant – a winged lion. Various doors are scattered about the place and each conceals a mind-bogglingly impressive demo. The main trick used by *Dark Side* is overscan – many of the screens lack black borders altogether, even if the content is fairly unoriginal. There's also a huge bank of doors leading to the same demo and no doubt there's a hidden screen in there somewhere – I just hope you have more luck finding it than I did!

ST REVIEW COMMENT: "In terms of technical achievement, *Dark Side Of The Spoon* is just awesome. The playable menu screen makes it relatively entertaining and the music is well above average. It's certainly proof that the ST has got what it takes to impress in the graphics department."

★★★★

TOP TEN DEMOS

1 CYBERNETICS RELAPSE DEMO • FLOPPYSHOP • DISK NO: DEM.3789, DEM.3790 & DEM.3791 • £5.00 ALL IN • MEMORY: 1MB • PUBLIC DOMAIN • STE ONLY

Genuinely original ideas combined with the fascinating *Liquid Osmosis* screen put the *Cybernetics Relapse Demo* at the top of the heap. All of the sound plays at close to 50kHz, and don't worry, there are a few scrolllines to keep demo addicts happy.

2 DARK SIDE OF THE SPOON • CALEDONIA PDL • DISK NO: D.37 • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

Technical excellence is a trademark of the ULM and the menu screen of *Dark Side* is enough to tell you that this time they really mean business. All of the best crews in Europe are featured somewhere within the dozen or so screens and despite the lack of originality, it is a very enjoyable demo.

3 DREAMZONE • NEW AGE PDL • DISK NO: DEMO.274 & DEMO.275 • £3.00 ALL IN • MEMORY: 1MB • PUBLIC DOMAIN

An incredibly smooth and colourful menu screen is the highlight of this demo from the Wild Boys. Also featured is a "lamer" detector that asks a number of coding questions and then provides a pictorial assessment of your abilities – the less said about my result, the better!

4 TOBIAS RICHTER SLIDESHOW • CALEDONIA PDL • DISK NO: D.175 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • STE-ENHANCED

Tobias Richter is one of the most respected computer artists in the world. This disk contains a number of slides converted from the Amiga and most have a futuristic, "Trekkie" feel about them. It's best viewed on the STE due to the amount of colour used.

5 THE EUROPEAN DEMO • CALEDONIA PDL • DISK NO: D.31 & D.32 • £5.00 ALL IN • MEMORY: 0.5MB • PUBLIC DOMAIN

Originality flies out of the window yet again in this very slick presentation from the Overlanders. There are plenty of screens spread across the two disks and keep an eye out for the three-dimensional disk as each is loaded. Certainly worth a look.

6 ALADDIN'S LAMP DEMO • CALEDONIA PDL • DISK NO: D.43 • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

This animation replays the classic tale of a mother and baby desk lamp, together with a bouncy ball. I won't spoil the surprise by telling you what happens in the end, but suffice to say that it is very entertaining. The quality is fairly good considering the length of the show.

7 THE BEYOND DEMO • FLOPPYSHOP • DISK NO: DEM.3399C • £2.00 • MEMORY: 1MB • PUBLIC DOMAIN

A large cursor-controlled spaceship is used to access the five screens of this Finnish megademo. Beyond this promising start it's all formula stuff, but the neat little reset demo is worth a mention. Do be warned though – the language in one or two of the scrollers is a bit ripe...

8 THE ARRIVAL DEMO • FLOPPYSHOP • DISK NO: F.4447 • £2.50 • MEMORY: 4MB • PUBLIC DOMAIN • FALCON ONLY

Texture mapping is the theme of this impressive demo. Spinning pictures and bouncing three-dimensional shapes fill the screen and the effect is rounded off by an intense flight animation. The lack of music pushes it well down in the all-round entertainment stakes however.

9 V8 MUSIC SYSTEM 2 • CALEDONIA PDL • DISK NO: D.117 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

This disk must contain at least half of the chip music ever produced for the ST! Many tunes are ripped from games and you'll find dozens taken from demo-land as well. The audio quality isn't exactly inspirational, but then again there's plenty of variety.

10 PAPA WAS A BLADERUNNER • FLOPPYSHOP • DISK NO: F.4446 • £2.50 • MEMORY: 4MB • PUBLIC DOMAIN • FALCON (RGB) ONLY

The Falcon struts its stuff in this rolling show from E.K.O. The sound is out of this world, but the entertainment value on the visual front is a little lower. No doubt, there's some extremely clever things going on behind the scenes, but it's just a little bit boring once you've seen it the first time.

PD ZONE

LAMEMINE

**FLOPPYSHOP • DISK NO: F.4259 • £2.50 •
MEMORY: 2MB • SHAREWARE • FALCON ONLY**

IN BRIEF: The programmers of *Windows 3* on the PC have got an awful lot to answer for, not least the sheer number of *Minefields* clones that have been ported across to the ST over the years. Even Atari got in on the act with the release of the Falcon!

As you are no doubt aware, *Lamemine* is yet another *Minefields* variation. It was written as an experiment with the Falcon's hardware and features several enhancements over the run-of-the-mill clone, most notably sampled sound. The graphics are reasonable and it plays very well, but the gameplay contains precious little originality. The highlight is the introductory sample: as soon as the program is run a voice booms out of the internal speaker "I am the god of hellfire and I bring you..." and then the title screen appears. S'pose that says something about the game itself really...

ST REVIEW COMMENT: "*Lamemine* is a little better than Atari's attempt at the game, but has the drawback of not running as a task under *MultiTOS*. Ultimately the question of whether to buy or not depends how sick you are of *Minefield* clones."

☹☹



The sound is nice but let's face it, *Minefields* has been cloned far too many times before.

MINI-F1 DEMO

**FLOPPYSHOP • DISK NO: F.4446 • £2.50 •
MEMORY: 4MB • PUBLIC DOMAIN • FALCON
(RGB) ONLY**

IN BRIEF: It had to happen I suppose. The Falcon can now boast an overhead racing game – probably the first of many. *Mini-F1* is a demo of a forthcoming commercial game, but it is fully playable and just lacks a few of the refinements needed to justify the increased price tag.

The idea is to race your way through a season gaining cash and experience along the way. Although the play itself is viewed from an overhead perspective, a superb 3-D aerial preview is given before each race commences. The main failing of the game is the control system; when you are used to the precision of *Super Sprint*, the cars feel clumsy and it's far too easy to get involved in a pile-up. Mind you, a good range of tracks on offer and the digitised speech is a nice touch, even if it does sound like a bad impression of Inspector Clouseau!

Lasers and Men now has a presentation in keeping with a commercial game – though the lack of enemy graphics is extremely annoying.

Des Lasers

& des

Hommes

PRESS SPACE



LASERS & MEN

**GOODMAN INTERNATIONAL • DISK NO: GF.65 •
£1.95 • MEMORY: 4MB • SHAREWARE •
FALCON ONLY**

IN BRIEF: *Lasers and Men* has to be the most eagerly awaited shareware Falcon game of all time. The preview has been doing the rounds for at least six months and now, finally, the finished version has arrived.

In case you haven't had a chance to check out the preview, *Lasers and Men* is based very closely on a PC game called *Wolfenstein*. It is set in a three dimensional, texture-mapped maze packed to the brim with alien nasties. The idea is to battle your way through to the exit of each level. Movement is via mouse and very fluid indeed thanks to a little effort from the DSP.

The graphics have been totally redesigned for the full release, but unfortunately the documentation explains that the enemy sprite files were lost to a virus. As a result, the baddies just appear as a block of colour with a head. Maybe it's just me, but escaping from the jaws of a livid piece of plasterboard just doesn't seem to have much impact!

ST REVIEW COMMENT: "*Lasers and Men* is just a whisker away from being a superb game. It's every bit as smooth as *Wolfenstein* on the PC and if anything the scenery is slightly more interesting, but it's impossible to forgive the lack of opponent graphics."

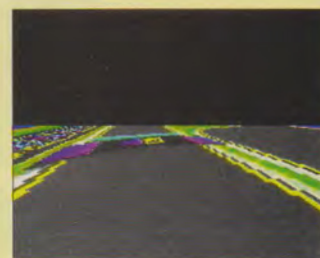
☹☹☹☹



Texture-mapped 3-D graphics and smooth screen updates provide a real feeling of "being there".

ST REVIEW COMMENT: "Any overhead racing game has to stand up against *Super Sprint*, and *Mini-F1* struggles a little bit. It is still very nicely presented and the aerial preview is a sweet touch – with a few tweaks to the control system, it could become a classic."

☹☹☹☹



A terrific aerial fly-by leads you into each round of the game and sampled speech is used liberally.

Super Sprint is reborn on the Falcon, although *Mini-F1* can't quite match the original's slick controls.

CUT OUT 'N' SEND COUPONS

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P.O. Box 273,
Aberdeen,
AB9 8SJ

NAME.....

ADDRESS.....

- ☐ Cybernetics Relapse Demo £5.00
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- ☐ Papa Was A Bladerunner £2.50
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- ☐ Mini-F1 Demo £2.50
- ☐ Lamemine £3.00
- ☐ Supercard 3.11 £2.00
- ☐ Super Psycho Kart Demo £2.00
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ATARI ST REVIEW

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Hilton,
Inverness,
IV2 4PT

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ADDRESS.....

- ☐ Dark Side Of The Spoon £2.50
- ☐ The European Demo £5.00

Check out the latest PD and shareware offerings in our PD Zone pages, fill in the relevant coupon and send your cheque winging on its way...

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- ☐ Lamemine £3.00
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New Age PDL,
P.O. Box 30,
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- ☐ Dreamzone £3.00
- ☐ STuff - Issue 1 £Call

ATARI ST REVIEW

Merlin PD,
11 Grange Close,
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- ☐ Multi-Pakman £1.25

Andrew Wright
looks at ways of
improving your
file selection...

Most of you will have heard about replacement file selectors, and perhaps experimented with them at some stage, but I suspect that not everyone really appreciates the benefits they can bring. If you read last month's article, you might have learnt a thing or two about the TOS file selector. You might also have noticed just how limited it really is, particularly if you're still struggling along with TOS 1.02 or even earlier versions.

A replacement file selector can make all the difference. First of all it gives you a much more convenient way of selecting files from within programs than the keyboard-intensive TOS method. Secondly – and perhaps more importantly – when you are running an application program, such as a word processor, it puts at your disposal a whole range of features that are normally only available from the desktop.

Two replacements stand head and shoulders above the rest: the *Universal Item Selector III (UIS)* and *Selectric*. The former is a commercial program available from FaST Club while the second is shareware originating in Germany but currently being supported in the UK by Joe Connor (65 Mill Road, Colchester, Essex CO4 5LJ).

Both come with matching accessories so you can call them up at any time whenever you have access to the menu bar. In fact you can always summon a replacement selector at any time from inside a program simply by trying to load or save a document. The replacement file selector appears, you carry out your required operations and then click on "Cancel" to return to the program again. You don't have to load or save a file at all.

DIRE STRAITS...

Imagine this little scenario. It's late on Sunday night, you've a busy day on Monday and you really must get that book written and printed out for a meeting with the publisher first thing in the morning. You save for what you hope will be the last time and one of the most frightening messages you'll ever see appears on the screen (figure 1).

Once your heart starts beating normally and you've swallowed a few more tranquillizers, you take stock of the situation. Apart from cursing yourself for not being properly organised, the only option is to find a blank disk with some free space on it.

BEAT THE SYSTEM

PART EIGHT: THE RIGHT SELECTOR

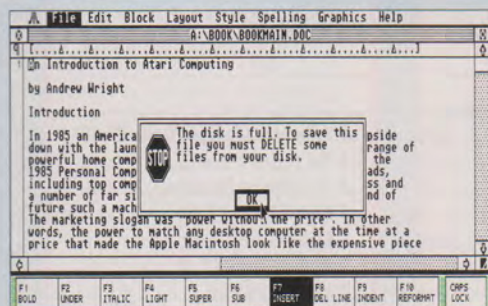


Figure 1:
a message to
frighten even the
bravest of ST
owners!

Now this is an extreme case and you'll probably have a blank disk, or at least one only partially filled, nearby. However, it could easily happen

with a long essay or book.

With the normal TOS file selector you could click on "OK" to return to the word processor and select "Save As..."

to open the file selector box. This would only allow you to browse disks until you found one that looked as though it had space. In fact you could select "Delete..." from the File menu and remove the *.BAK files that 1st Word leaves all over the place but what if that still didn't free up enough space?

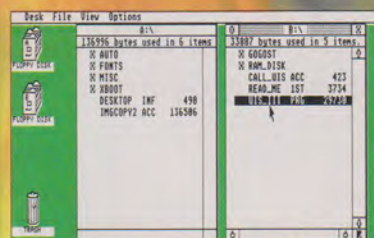
If you were fortunate enough to have something like *UIS* installed, your problems would be over. Click on "OK" to return to the program and then "Save As..." to bring up the file selector dialogue box. Alternatively, with the accessory installed, you could call it from the Desk menu. Just a quick glance



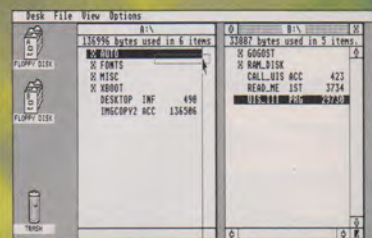
STEP BY STEP GUIDE

A FILE COPY REFRESHER

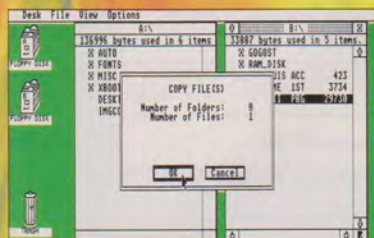
To install a replacement file selector, you have to copy the main program file from the master disk, such as a PD library disk, into the AUTO folder on your boot disk. Some selectors, such as *UIS* and *Selectric*, come with a small accessory that lets you access the file selector from the Desk menu, a feature that is often useful as you can still access the replacement file selector from the desktop and perhaps use its disk formatting or the multiple file copying features...



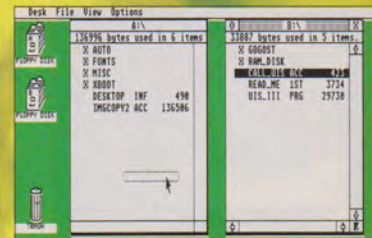
1 Open two windows side by side, one for drive A and the other for drive B. In this case, B will contain the master disk and A the boot disk.



2 Select the file you want to copy from drive B, ensure the right disk is in the drive, and drag the file across onto the drive A window. When the folder turns black, release the mouse button...



3 ... and the file will be "dropped" into the AUTO folder. You'll be asked to confirm, unless you've turned off confirmation in the "Set Preferences..." dialogue box.



4 You will then be prompted to swap disks until the copying is complete. You can copy the relevant accessory in the same way – just drop it on the root directory rather than the AUTO folder.

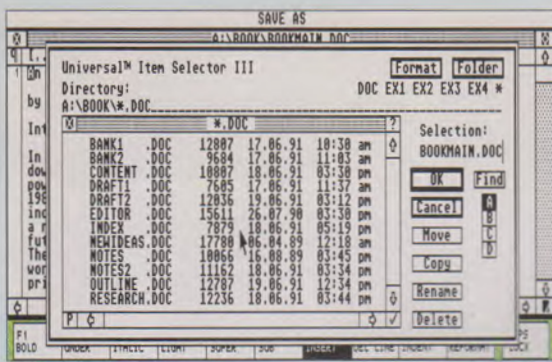


Figure 2:
one look
at UIS
convinces
you of its
power.

shows you how powerful *UIS* is (figure 2). A replacement file selector is called by the operating system. When called, the main program – in this case *1st Word Plus* – is suspended and *UIS* takes over. Now you can do any of the things *UIS* allows and then return to *1st Word Plus* as if nothing had happened.

You have plenty of options. If you happen to have a new disk handy, *UIS* will format it for you (figure 3) so you can save your file on it. It will also allow you to delete unwanted files (such as *.BAK* files) or copy files one or two at a time onto other disks

which don't have enough space for your current document.

Here's an example. In figure 4, you can see that we've found a disk with some 90Kb of free space on it using *UIS*'s disk space facility (the question mark button in the top right corner of the window). Unfortunately this isn't enough to save the current file. Putting the original disk back in the drive, you can select a few files that will just squeeze onto the other disk. Note that the running total is displayed at the top of the file window (figure 5).

With the multiple files still selected (using rubber banding or holding down the <Shift> key) the next step

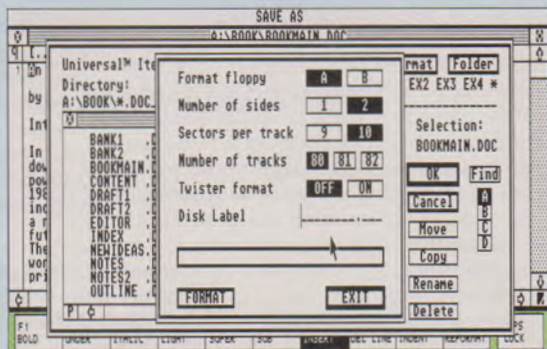


Figure 3:
UIS will
happily format
a disk when
requested...

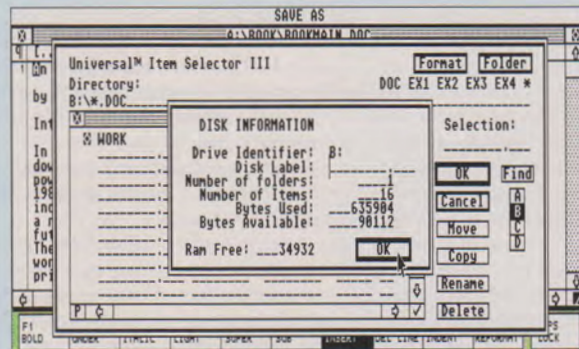


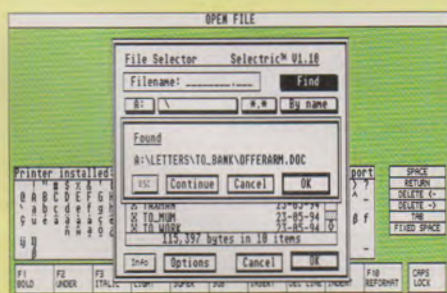
Figure 4:
this disk
has some
90Kb of
free space
available.

EVERY NOOK AND CRANNY

Here's another way *Selectric* can help. You load your trusty word processor to type a letter to the bank. With a flash of inspiration you remember that you wrote a similar letter a year ago. Now all you have to do is find it...

With the *TOS* selector you'd have to search every folder bit by bit until you found the document you wanted. *Selectric* has an alternative – a search facility. It is particularly useful for hard drive owners, of course, but with a single floppy disk containing perhaps 200 documents and 50 folders, it is still a handy feature.

Recalling that the letter to the bank manager was called *OFFERARM.DOC*, you type it into the search field and tell *Selectric* where to look (current drive if you have it on a floppy). Within seconds *Selectric* will find it. If you can't remember the file name, you have to use standard wildcard notation to help *Selectric* in its search – but that's a subject we'll cover in more detail next month...



**Finding files
with Selectric...**

is to click on the Move button (the same as copying except it deletes the originals). *UIS* immediately prompts you for a destination – click on the drive B button and point to the disk

and folder you want the files copied into (figure 6). *UIS* then takes care of the rest – all you have to do is feed in the right disks when they're requested.

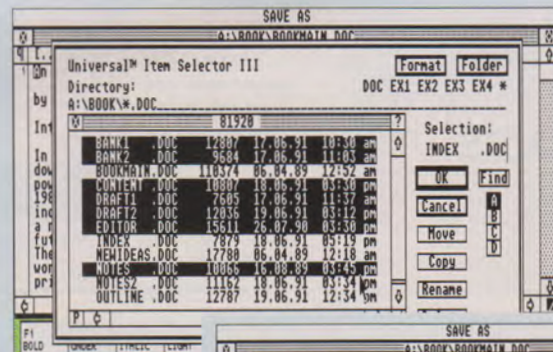


Figure 5:
the running
total of
bytes for a
number of
selected files
is displayed
in the top
of the
window...

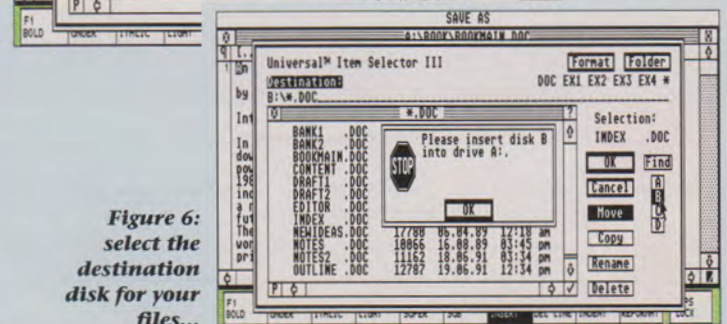
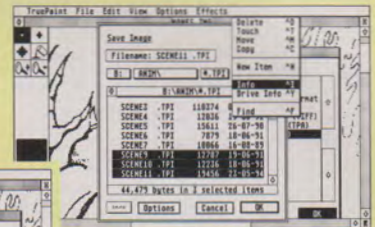


Figure 6:
select the
destination
disk for your
files...

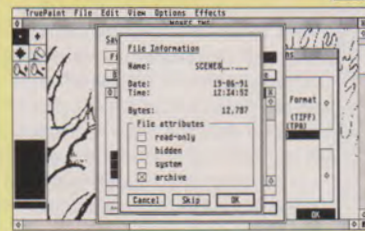
MAKING LIFE EASIER

There are dozens of ways a decent file selector can improve your file handling and save you time. While saving a sequence of high res. images to disk, you suddenly realise you have missed out number 8. In normal circumstances you would have to reload each of the last three files and save them with the correct names. Either that or quit *TruePaint*, rename each file individually from the desktop and then reload the paint program.

With *Selectric* (a shareware program I can't recommend highly enough), you simply select the images that need altering (*SCENE9.TPI* will need to become *SCENE8.TPI* and so on) and click on the Functions box to select Info. When the box appears, all you need to do is hit the <Esc> key to clear the name, type the new one and click on "OK". The next file appears and you repeat the process. Within seconds you have renamed three files and can carry on with the job in hand.



**To change a file name in
Selectric, select Info...**



**... and type in a
new name – it's
that easy!**

In the second part of our short series, Ofir Gal looks at the contenders for essential file selector...

ESSENTIAL EXTRAS

FILE SELECTORS

The file selector is probably the most used part of GEM – you see and use it each time you load or save a file. However, for reasons only known to Atari, this must also be the most neglected part of the system. Through four major TOS revisions, it has only been updated once. While the standard file selector may appear adequate at first, there are many features that are sadly lacking.

As is always the case, whenever Atari doesn't provide the goods some clever programmer out there does! In the case of the humble file selector there have been a number of replacement versions available, but at present there are only two contenders for ST and Falcon owners alike: *Universal Item Selector 3 (UIS)* and *Selectric*. Both are extremely powerful utilities that can make a big difference even to the casual user.

File search facilities, pre-defined file masks and paths, folder creation and file copying are just the start – both *UIS* and *Selectric* have much more to offer. If you use the built-in file selector you are certainly missing out on some very useful features. Which? Read on to find out...

This shareware file selector originates from Germany where it has become very popular. *Selectric* features a similar layout to the standard file selector, displaying eight files in a scrolling list. Each file line also shows the size and date the file was created. Like the GEM selector, it can be mouse driven, but also has full keyboard shortcut support: drives can be selected by pressing the drive letter while holding <Alternate>, and files chosen using the cursor keys. By holding <Shift>, you can use the cursor keys to scroll through eight files at a time, <ClrHome> takes you to the top of the file list, and <Shift>+<ClrHome> jumps to the end of the list.

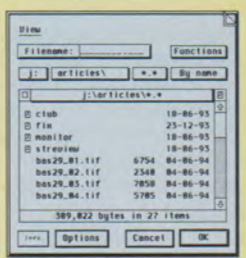
One of its most attractive features is the auto finder. Pressing the first letter of the file name you are after automatically selects the first file that matches and if necessary the list scrolls as well. In addition to the <Return> key duplicating the "OK" button – as with all GEM programs – *Selectric* also uses <Undo> to cancel and exit the file selector.

Selectric features full file manipulation functions such as multiple file copy, move, delete and rename. All of these are available from a pop-up menu that also supports file search facilities. Wildcard support is quite outstanding and includes much more than the standard "?" and "*". You may use complex Unix-style expressions to search for files. *.DOC, *.TXT, for example, will find all files with one of the two extensions.

The file mask and paths also support this extended

use of wildcards and up to 10 different paths and masks can be stored and called from a pop-up menu or via a keyboard shortcut. *Selectric* has a few more features that can only be used with programs that support it, one of these being the ability to load several files in one go. *GEMView*, *Everest*, *CoNnect* and the forthcoming *ImageCopy 3* all fully support this. Other options include a free disk space dialogue box, forced media change (useful for those buggy versions of TOS) and a powerful sort facility for showing files in numeric and even reversed order.

When running in enhanced resolutions with Overscan, a graphics card or on a Falcon, *Selectric* displays up to 24 files at a time, but the main complaint against the program is the small number of files shown in standard ST resolutions – and no support for ST low resolution. Currently at v1.10 and still being supported, the next version is promised soon with an improved layout.



Selectric features an up-to-date GEM interface full of bells and whistles including pop-up menus, real-time scrolling and full keyboard shortcut support.

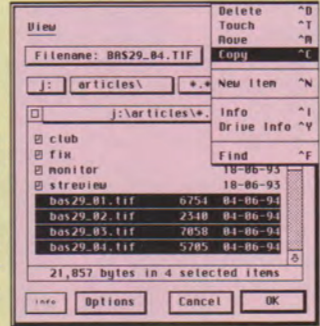


CONTACTS

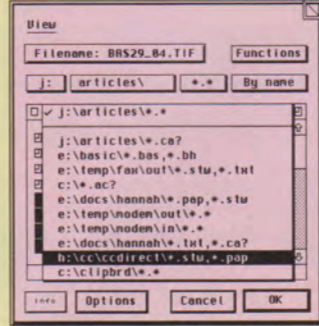
UIS 3: FaST Club
(0602 455250)

Selectric: Joe Connor
(0206 851488)

Various file operations are available from this pop-up menu. File copy, move, delete, rename and even change of attributes are available.



Frequently used paths can be stored and recalled from this pop-up menu or a keyboard combination.



UNDER THE SPOTLIGHT...

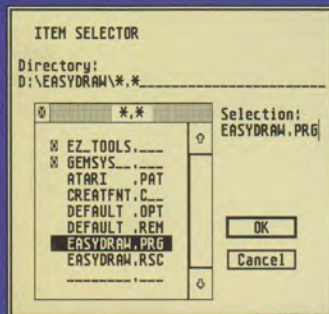
To help you make a comparison, here's the nitty gritty on the two main programs...

Product	Copy/Delete/ Move/Rename	Show/Print	Format disk	No. of preset file masks	No. of paths	Complex wildcards	Find	Multi-task
UIS 3	✓	✓	✓	28	10	✗	✓	✗
SELECTRIC	✓	✗	✗	10	10	✓	✓	✓

THE STANDARD FILE SELECTOR

The original file selector was created at a time when the mouse was still a new entity, making it very much command-line based and old fashioned. Changing drives in early TOS versions requires the typing in of a drive letter. The directory line also contains a file mask for masking out unwanted files from view; *.DOC, for example, only displays files with a .DOC extension.

TOS 1.04 saw the introduction of two new features in the file selector: the addition of drive buttons and an info line at the top of the selector box. The TOS 4 and MultiTOS file selectors feature a rather attractive 3-D look – but no functional improvements at all!



Changing disk drives on the original Atari file selector entails typing in the drive letter on the command line...

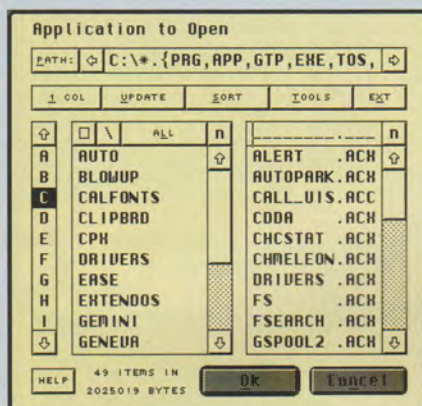


... a situation that improved from TOS 1.04. However, the latest TOS 4 and MultiTOS selector still lacks any useful functions.

GENEVA AND MAGIC

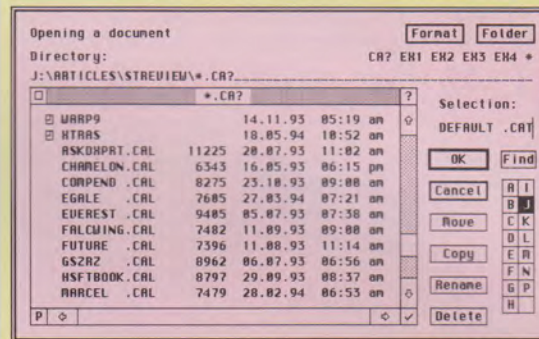
Geneva, the new multi-tasking system for the ST, also incorporates a new file selector with some very useful facilities. For instance, there's a two-column display that intelligently shows folders on the left and files on the right, making it a little easier to navigate your way around. As you'd expect, it supports standard file operations, folder creation, stored paths, file masks and much more.

The Magic (formerly MagIX) file selector is a much simpler affair. Its only improvement over the TOS file selector is the ability to use multiple file masks, *Selectric*-style.



Geneva's two-column display shows folders on the left and files on the right – neat!

UNIVERSAL ITEM SELECTOR 3



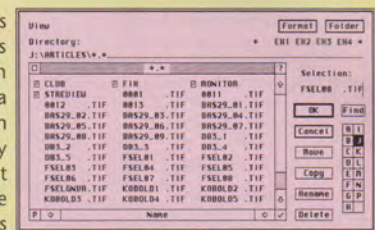
UIS 3 shows each file along with its size, date and time stamp. You can also sort files by their size, date or extension, or leave them unsorted.

Better known as UIS 3, this commercial file selector originates from the USA and is available in the UK from the FaST Club. As a firm favourite with many users in both countries, it includes many powerful features, the most obvious of which is a 12 or 36 file display. The "12" mode displays files along with size, date and time information, while the "36" mode displays file names only.

Apart from the obvious task of selecting files, UIS stores up to 10 paths that are recallable from a menu or through keyboard shortcut. UIS functions are available via keyboard shortcuts as well as buttons and a pop-up menu although the interface design is a little old fashioned – not surprising when you consider the fact that it has not been updated in almost three years.

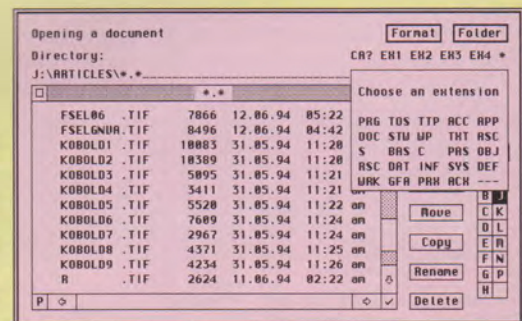
File manipulation includes the standard copy, rename, move and delete as well as global operations. UIS 3 can also format disks and display and print text files, a handy feature indeed. However, no support is offered for wildcard selection, but the program compensates for this by allowing you to define up to 28 file masks, including simple "?" and "*" wildcards. If you're looking for your 1st Word Plus files, just select the .DOC mask to simplify the search.

The main shortcomings of the program lie in its design. Many options are too well hidden from the user, making the printed manual an essential read if you intend to make full use of the program. For example, some buttons do not look like buttons at all! Others change their function depending on which mouse button is pressed. UIS 3 is not fully compatible with the Falcon or graphics cards and does not appear to like multi-tasking systems too much. The lack of support means that, as useful as it may be, UIS 3 is a dead product, an unfortunate situation as it is indeed a great little product.



The configurable display can show between 12 and 36 files on-screen.

Up to 28 configurable file masks can be installed and used to view files of a certain type.



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COLOUR ME BAD

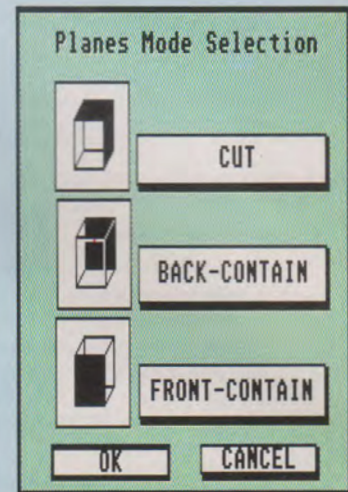
In the concluding part of our MasterCAD series, Joe Connor splashes some colour around his virtual living room...

HINTS 'N' TIPS

If you're not sure which lines should be hidden, it's possible to remove the hidden lines automatically without adding textures using the following commands:

- Select all objects and set the master shade to white using the **Texture** option from the **Process** menu.
- Open 3-D mode and set your desired viewpoint.
- Now select **Filled planes**.

While the output probably isn't clear enough to use directly, it does provide a handy reference guide for subsequent editing.



Don't be put off by the jargon.

"Contain" means "fill"!

Experiment using the 3-D

"Filled planes" option on a simple object until you get the hang of it.

Running in medium resolution, MasterCAD supports four colours in up to eight shades. Every object has a colour and shade that can easily be changed using the **Color** and **Texture** options in the **Process** menu. By careful selection, it's easy to generate simple colour renderings from any viewpoint.

MasterCAD removes hidden lines and applies shading intelligently, but the limited number of colours and shades results in poor quality rendered images. However, by using the **Save screen** option in the **FILE** drop-down menu, 2-D and 3-D images can be exported in Degas format so making it easy to include MasterCAD images in DTP layouts, or edit them using other applications.

You can try enhancing the four-colour images using *Degas Elite* running in low resolution, which provides 16 custom colours and a wide range of fills, but you'll soon run into problems trying to apply colour over existing fills.

To take maximum advantage of the individual strengths of both programs, try exporting a wireframe without fills but with the hidden detail removed (see *Hints 'n' Tips* box). Unfortunately this method generates very thin images that are quite unsuitable for rendering.

The compromise solution is to export wireframe images from MasterCAD and use *Degas* to remove the hidden lines manually.

ART OF THE MATTER

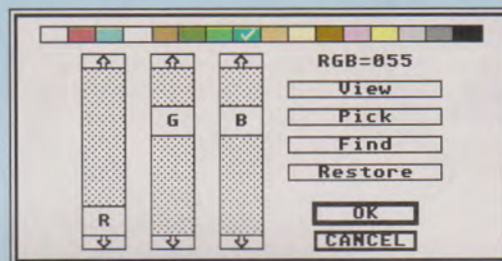
Degas works in all three resolutions and makes a good job of converting images between each. Atari's own *Hyperpaint*, and any other art package capable of working in 16 or

more colours, should also be suitable.

Select a viewpoint that avoids lots of lines running closely together to make editing as painless as possible. Take some time to plan your work, creating an approximate palette of the number and shades of colours you'll need - this can easily be fine-tuned later. Try using white as the colour for hidden detail; you should find that most of the hidden detail disappears. However, you may also lose some of the drawing but it's

easier to replace lines than to erase the hidden detail.

It's also worth simplifying your creation as far as possible. Try removing some of the "facets" generated by curved objects and straighten up any near vertical or horizontal jagged lines. Edit out any unwanted hidden detail and save your simplified wireframe before adding any colours and textures because it's not much fun manually undoing fills! Then add your fills and textures. It's even



Degas is an ideal partner for MasterCAD but any art package that can handle both Degas .PI2 and .PI1 files will enable you to edit your creations.

feasible to create animated sequences from a series of MasterCAD renderings. Using the **Save screen** option in conjunction with your art package, you can animate frames using a suitable slideshow utility.

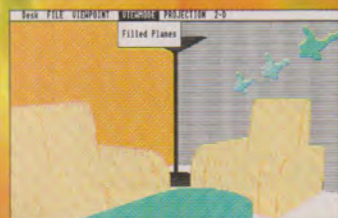
Degas includes *Showpic* but there's plenty of public domain utilities to choose from. Open 3-D mode in MasterCAD and plan each step of your animation sequence. When you're happy with the sequence move to each viewpoint in turn and save each screen.

Edit each frame in your art package and then pass them through a slideshow utility. Have fun!

STEP BY STEP GUIDE

A DASH OF COLOUR

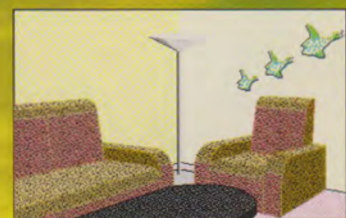
By using MasterCAD with an art package, you can end up with a tastefully coloured pic...



1 MasterCAD offers four colours in medium resolution which simply isn't enough to bring images to life, so we've taken a different approach and used *Degas* to complete the job.

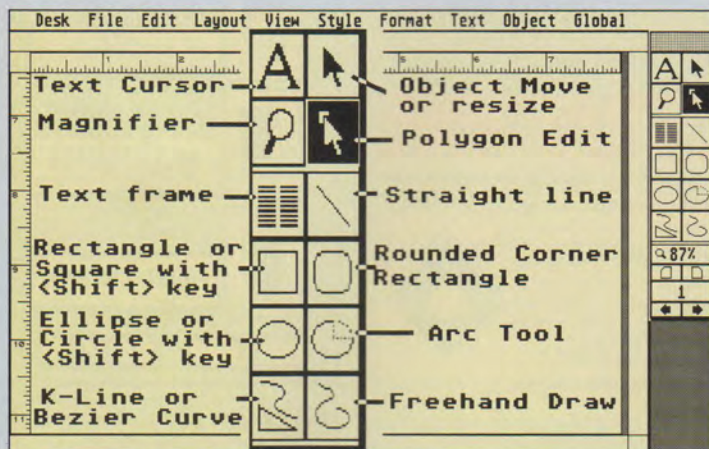


2 Using the "Save screen" option from the "FILE" drop-down menu, export your image as a wireframe and use a suitable art package for editing. Remove any hidden or unwanted detail manually.



3 Running in low resolution, any 16 colours from a palette of 512 (or 4,096 on an STe) can be selected. Using a combination of patterns and fills, it's easy to create convincing results...

Buried within the depths of PageStream is a set of drawing tools just waiting to get out. Keith Berry helps them on their way...



A magnified view of PageStream's toolbox. Note the two Arrow icons at top right – the lower one is the equivalent of Easy Draw's Edit Polygon function. Hold <Shift> to draw straight lines, exact circles and squares.

FINE ART

When the PageStream v2.2 upgrade appeared it transformed a versatile but unstable program into a publishing power unit with a standard of reliability that is exceeded by none of its competitors. Unfortunately this metamorphosis seems to have been at the expense of its .GEM vector file handling, which, apart from the import of the simplest of designs, has become almost useless. A page of patterned rectangles will transfer from Easy Draw 2 and appear and print flawlessly but other shapes will appear without

their patterns – rounded corner rectangles are printed inside out!

All, however, is not lost because PageStream has vector drawing facilities of its own. Almost lost among the text handling, font manipulation, layout options and the other features belonging to a leading DTP program, to an Easy Draw user they initially appear somewhat rudimentary. Closer inspection soon reveals that they lack nothing that Easy Draw 2 has – apart, of course, from Easy Tools, though there are PageStream functions that can emulate many of these.

An obvious bonus is that no drawing package in the Atari world can surpass PageStream when it comes to incorporating text. The only perceptible disadvantage is that despite the wide range of graphics and text formats that PageStream can import, it has no means of exporting its own drawings in vector form.

EVEN EASIER DRAW?

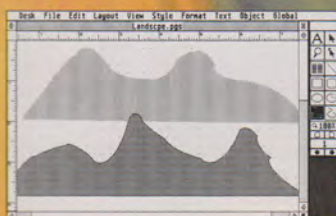
Anyone familiar with Easy Draw 2 will find, after a bit of practice, very few problems drawing within PageStream. The principles of layers and grouping are just the same – it's



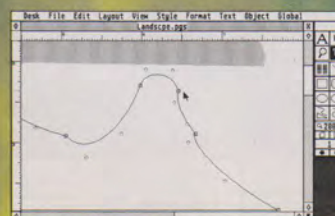
STEP BY STEP GUIDE

AT THE DOUBLE

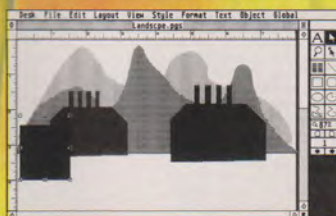
You'd be surprised at how quickly impressive pics can be created within PageStream...



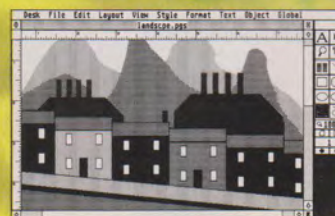
1 Let's construct a quick industrial landscape, starting with a couple of Polylines to represent distant hills, setting the Fill paler for the more distant one. Switch off the surrounding lines from the Lines menu.



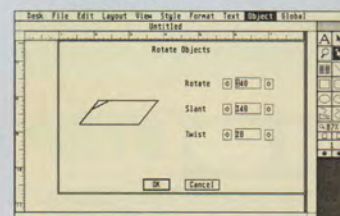
2 Unhappy with a hill's contour? Then edit its square nodes with the lower of the two arrow icons then wait for a screen redraw to see the effect. Moving the outlying circles affects the steepness of a curve.



3 With progressively darker fills, construct a couple of factories. Here one is a larger, darker duplicate of the other, followed by rectangles to depict a terraced house – you can install an outline for the latter.

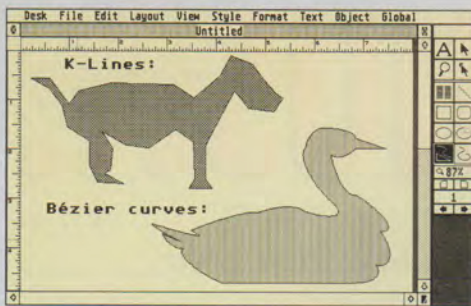


4 Add windows and doors, group and duplicate a few houses down the hill (sloping roofs reflect light so have paler patterns) and three triangular Polyline represent pavement, kerb and street. Add pylons and street furniture to taste...

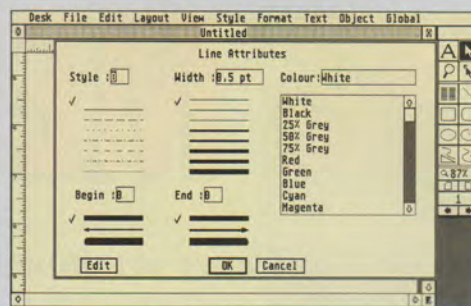


The Rotate Objects function is extremely powerful and can rotate, slant, or twist an object or even a group of objects, including text, a full range of degrees while displaying the effects of each on a rectangle.

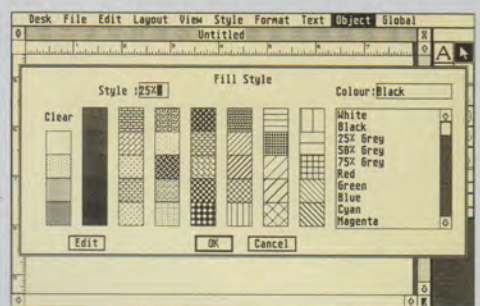
just that the facilities have to be sought in unfamiliar places. An important difference is the use of PageStream's dual Polyline feature. Once selected, a series of straight lines is automatically drawn to each point that is set by left-clicking, very much like the K-Line feature in a bit-image drawing utility. If instead of



The basic difference in the two effects of the same Polyline tool shown selected. Depending on the drawing method used, the component line can be either straight, bézier curves or a mixture of both.



The range of line types and widths available is similar to that of Easy Draw, including the "No-line" shown selected. This, you will remember, allows an area of pattern to appear without an enclosing border



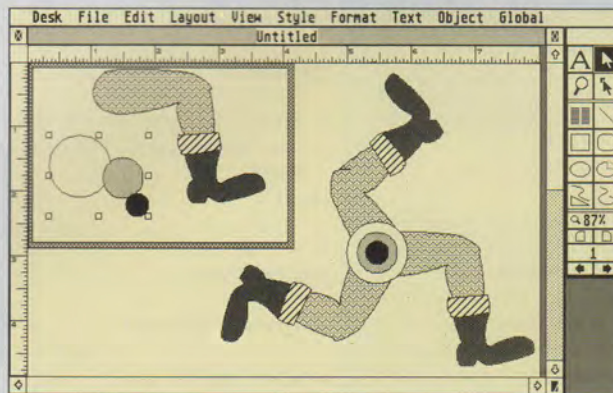
The usual range of GEM patterns are available – with a number of additions. By typing a "0%" sign into the Style box, a pattern is replaced by a shade of grey, from 0% white to 100% black.

just left-clicking at a point, the left mouse button is held down, the last line drawn becomes a *bézier* curve. A small cross appears in the middle of the curve, the shape of which is controlled via the mouse. The curve remains fluid until the left button is released, whereupon it becomes fixed and the Polyline awaits the next point to be set. Completion of the Polyline figure requires a double left-click at the last point, which should coincide with the start point if a closed figure is required.

A completed Polyline can be edited while it is active (shown selected) by just clicking on the lower of the two arrow icons in the toolbox to display its nodal points.

The square ones can be clicked on and moved around the screen to change the figure's shape and the round ones should be treated as levers with which to bend the curve. The amount of adjustment has to be estimated for no movement is visible until after the resulting screen redraw and several attempts may be necessary to achieve the desired reshape.

While the same range of patterns as *Easy Draw* is available, there is the option of typing a percentage figure



straight into the Style box – 1 to 3 digits followed by the "%" character – to specify a shade of grey from white (0%) to black (100%).

Don't be too excited at the prospect of 100 shades because after printing, you will be able to differentiate between only ten to twenty or so of them, depending on your printer type.

The values are not consistent either; in some documents shades of 5% and 10% differ visibly while in others any value below 15% appears as clear white as the program appears to average out the shades in each page.

TWIST AND SLANT

Improvements over *Easy Draw* include the much more flexible Zoom, and the very efficient Rotate, Twist and Slant. Although the object or group is invisible during the selection of degrees for these functions, their effects are displayed graphically in the form of a rectangle, either while operating the arrow icons or entering the number of degrees into the boxes.

Regular users of any vector graphics program will have experienced the vexation of trying to select an object that is completely concealed behind another. Having to resort to putting the obstacle to the back or moving it away can cause serious disruption to the overall design. *PageStream*'s much-appreciated solution is the <Control> left-click to select such a hidden object.

As already mentioned, there is no facility to export your drawing elsewhere, but it is a simple matter to transfer it between *PageStream* documents. Just ensure that it is grouped and active, and press <Alt>+<C> to copy it to the buffer. Load the

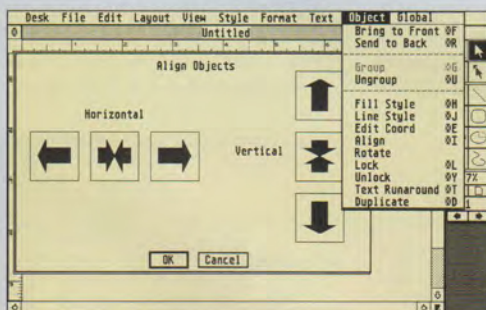
This design for the legs of a running cardboard model was simply one Polyline-drawn leg duplicated twice with the copies rotated 120 and 240 degrees. The "bearing" was three circles made concentric with Align.



An exercise in creating from a few simple geometric shapes. The hair is a filled Polyline and most of the features were centred using Align. Each pair of eyes, ears and so on must be grouped before using Align's Centre or they will all be heaped in the middle!

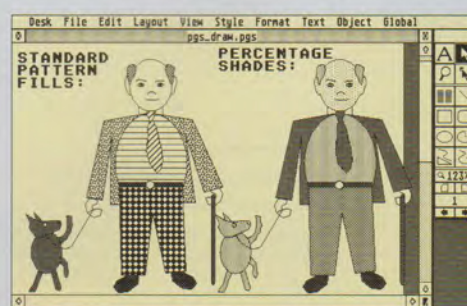
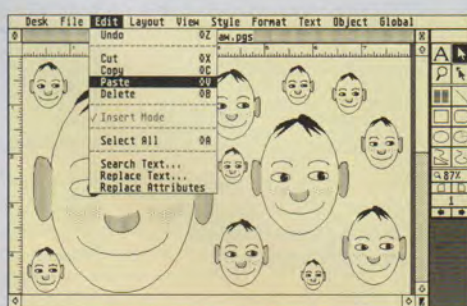
destination document and press <Alt>+<V> for Paste, when the top left corner of a box appears. Using the mouse, drag the rest of the box downwards and to the right until it fills the required area. Holding down <Shift> at the same time will ensure that the original proportions of the drawing are maintained. You can create a quick bit-image representation of your drawing with the aid of a screen-grabber such as *ImageCopy*, after adjusting the Zoom's magnification level to make the drawing as big as possible on screen.

If you are a *PageStream* user who hasn't thought of it as a drawing utility, try it – you might just like it...



Most drawing functions are located in the Object menu, all except Rotate having an <Alternate> keystroke option. The Align function, like *Easy Draw*'s Arrange, is useful for accurately positioning objects before Grouping.

PageStream has no means of exporting its vector drawings so Copy and Paste are necessary for moving them between documents. Paste with <Shift> held down to ensure that a picture's correct proportions are maintained.



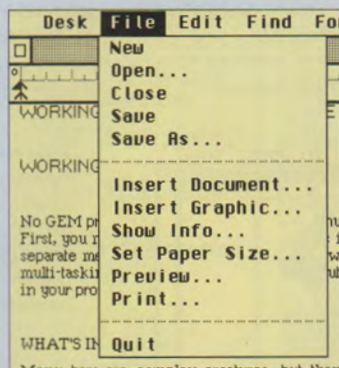
The screen shows a noticeable difference between patterns and percentage shades, but when printed the differences are much less marked, particularly at printer resolutions of 300 dpi or higher.

CREATING MENUS...

No GEM program is complete without a menu bar which has several advantages. You can have several dialogue boxes in your program, each called from a separate menu item. The program allows access to desk accessories and is even more multi-tasking friendly. The subject of this tutorial is how to create and use the GEM menu bar in your program.

WHAT'S IN A MENU?

Menu bars are complex creatures but, thankfully, most of the hard work is done for you by the AES. In principle, all you need to do is create a menu bar with a resource editor like *WERCS* or *K-Resource* and then instruct the AES to display it. Once the menu bar is enabled, the user can access it by dropping down menus and selecting items. The number of items is up to the



Moving the mouse over the menu title drops the box and reveals the items; moving the mouse over an item highlights it.

Ofir Gal shows you how to add a menu bar to your BASIC programs...

LISTING 1

'installing a menu bar

```
'$option k50,y
'$include toolkit.bas
'$include gem5.bh
```

```
IF FNrsrc_load("GEM5.RSC")=0 THEN
  junk=FNform_alert(1,"[3][Error while loading|resource file.][Abort]")
  SYSTEM
END IF
```

```
SelectTree MENU1
menu_bar tree&,1
```

```
evnt_timer 10000 'wait for 5 seconds
```

```
menu_bar tree&,0
junk=FNrsrc_free
SYSTEM
```

LISTING 2

'installing a menu bar

```
'$option k50,y
'$include toolkit.bas
'$include gem5.bh
```

```
DIM mess(7) 'create message array
```

```
IF FNrsrc_load("GEM5.RSC")=0 THEN
  junk=FNform_alert(1,"[3][Error while loading|resource file.][Abort]")
  SYSTEM
END IF
```

```
SelectTree MENU1
menu_bar tree&,1
```

```
evnt_mesag VARPTR(mess(0)) 'wait for AES message
```

```
menu_bar tree&,0
junk=FNrsrc_free
SYSTEM
```

programmer although there are various limitations.

The menu bar consists of a row of special AES objects called "Titles". These are a familiar sight and are the only part of a menu bar that is always visible. Moving the mouse on top of a Title object causes the box below it to "drop" and reveal the menu items. These are the simplest AES object available – text strings, enclosed in a box.

The left menu title, drop box and strings must have a fixed format to allow for desk accessories. Both *WERCS* and *K-Resource* create it automatically and you should not try to modify it except for the top string which is normally the *About...* item.

See the *Creating A Menu Bar* box for more information.

MENU ACTIONS

The AES automatically handles the menu bar, allowing the user to drop menus and browse around. When a menu item is clicked on, the AES sends a message to the program, indicating the item index which is defined in the .BH file. The program can then use a simple *SELECT CASE* to decide what to do for each menu item.

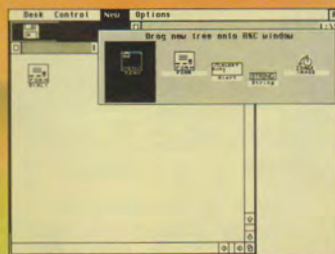
In our example, the resource file has three menu items: About, Open and Quit. The objects are named *mabout*, *mopen* and *mquit*



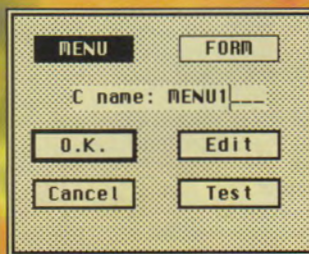
STEP BY STEP GUIDE

CREATING A MENU BAR IN K-RESOURCE

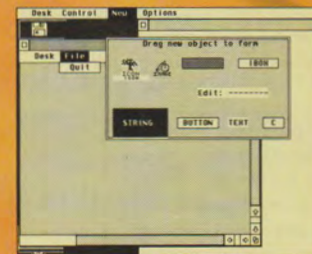
Our *K-Resource* cover disk giveaway is very useful for creating menu bars...



1 Select New Tree and the menu item from the dialogue box. Drag it onto the resource window.



2 The menu bar name will later be used to select the menu tree. Double-click on the menu icon to edit it.



3 To add a new menu item, select New Object from the New menu and drag a String into position.

LISTING 3

```
'handling a menu bar

'$option k50,y
'$include toolkit.bas
'$include gem5.bh

DIM mess(7)                                'create message array

IF FNsrc_load("GEM5.RSC")=0 THEN
    junk=FNform_alert(1,"[C][Error while loading]resource file.[Abort]")
    SYSTEM
END IF

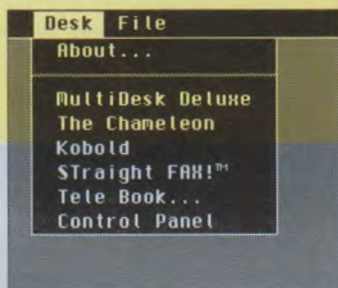
SelectTree MENU1
menu_bar tree&,1

DO
    evnt_mesag VARPTR(mess(0))              'wait for message
    do_message                               'handle message
LOOP UNTIL quit_flag=1

SUB do_message
    SHARED mess(),quit_flag
    STATIC item,a$,res
    IF mess(0)=MN_SELECTED THEN
        item=mess(4)
        SELECT CASE item
            CASE MABOUT
                a$="[1][Menu Test][ OK ]"
                junk=junk+FNform_alert(1,a$)
            CASE MOPEN
                SelectTree DIAL1
                res=FNhandledialog(TEXT1)
            CASE MQUIT
                quit_flag=-1
        END SELECT
    END IF
END SUB

SelectTree MENU1
menu_bar tree&,0
junk=FNsrc_free
SYSTEM
```

respectively and these constants may be used in the program by including the file *GEM5.BH* as in the previous tutorials. If the user selects "Open" then the program should display the test dialogue box. "About" should display an alert box with some info about the program and "Quit" should simply exit the program.



A correct implementation of a menu bar allows access to desk accessories without any special effort.

Selectable	Default	Exit	Radio Butn
Touchexit	Disabled	Editable	Preselect
Shadowed	Outlined	Crossed	Checked

Extended state # 0 Extended type # 0

Extended Flags: 15 14 13 12 11 10 9

Object Index 16 C name: MOPEN

String Button Title

Text: Open

O.K. Cancel Next

4 Double-click on the new menu item to edit it. You only need to enter the text you want and give the item a name for use in the .BH file. The various attributes have no effect.

MISSED THE FEBRUARY ISSUE COVER DISK WITH K-RESOURCE?

No problem – just turn to page 90 for information on how to order back issues.



DISPLAYING THE MENU BAR

The menu bar is displayed by calling *menu_bar* which takes two parameters: the form address and a flag. If the flag is 1 then the AES will put the menu up; if the flag is 0 it will remove the menu bar. A program must remove the menu bar on exit using the 0 flag. The tree address is obtained as usual by using the toolkit call *SelectTree* with the index of the menu bar as in the .BH file.

The program in listing 1 demonstrates the procedures for setting up and removing a menu bar. Note that the menu bar form was given the name *MENU1* in the resource editor. You must use the resource file *GEM5.RSC* which is on the cover disk. If you run the program, you will be able to see just how much the AES does by browsing through the menu items and clicking on them. The *event_timer* call causes the AES to wait for 10 seconds (10,000 milliseconds) before ending the program.

RECEIVING MESSAGES

As explained earlier, when the user of your program selects a menu item

the AES sends the program a message. The obvious questions are: how do you know that the AES has sent you a message and what does a message look like? The AES system call *Evnt_mesag* waits until such a message is received. It then places the contents of the message into an array.

The call takes a single parameter, the memory address of the array as obtained using *VARPTR*. You need to create an eight-element array by declaring *DIM mess(7)* at the beginning of your program.

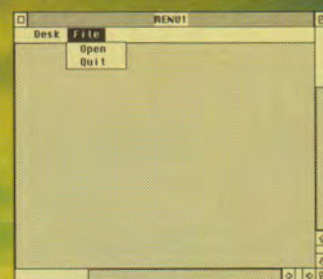
The example program in listing 2 allows interaction with the menu. Note that you can now use desk accessories if installed by selecting them from the Desk menu. Select any other menu item to exit the program.

WHAT'S IN A MESSAGE

Each time your program receives a message, the *mess()* array is filled up with information. The first element in the array indicates the type of message. The value 10 is a menu event while other events are of no interest at this stage. Use the constant *MN_SELECTED* instead of using the number 10. The actual constant is defined in the file *AES.BH* found on this month's cover disk. While *mess(0)* contains the message type, *mess(4)* contains the number of the item selected.

A program can wait for a menu-selected message and use a simple *SELECT CASE* to check which item was selected as shown in listing 3.

The program does not work fully yet. As you will notice, menu titles stay selected and need "clearing up" after each menu selection. There's much more to menu handling and to structuring a "proper" GEM program and I will continue with the subject of menus next month. Until then, if you have any questions, please write in or email me directly at ogal@cix.compulink.co.uk.



5 Menu items can be reordered by dragging them around. Finally, use *KR2HB.TTP* on the header.

TYPE WRITER

*This month
Jon Ellis delves
into a little
theory concerning
variables...*

At the end of last month's tutorial, we had almost finished hacking through the new C features in the file-purging program. All that was left were a couple of oddities to do with variable types.

The first of these is shown in Listing 1. We looked briefly at these lines last time, noting that their function was to access the `te_ptext` fields of the TEDINFO structure, allowing the program to initialise the appearance of the "Path" and "Type" editable fields. The bit that was glossed over is the (TEDINFO *)).

What is this doing?
The answer lies in the definition of the OBJECT structure. In the last tutorial we saw that the `ob_spec` member was implemented as a union:

```
union {
    void *ptr;
    unsigned long longval;
} ob_spec;
```

To get at a text field, we need to read the address of the TEDINFO structure out of the union member

`ptr`. The snag is that there is a difference in types: `ptr` is typed as a pointer to a void (of which more later), and the program variables `path_field` and `ext_field` are pointers to TEDINFOS. To keep things tidy, we need a way to convert the data from one type to another. This is the role of the (TEDINFO *) code, which is something called a *cast* – see the HOME GROWN box for more details.

MIND BENDING

A more fundamental question is why the TEDINFO pointer was stored as a pointer to void in the first place. We previously met void in the declarations of functions that have no return values. A void pointer is a similar idea – it is a pointer to nothing. Since it points to nothing, it is illegal to apply the indirection operator `**` to a void pointer.

This might seem like a completely abstract and useless concept, but this is far from true. What matters about the void pointer is not *what* it points to, but that it *is* a pointer. A void pointer can be used to store the address of variables of any type; it is a general-purpose pointer.

Perhaps a concrete example will make void pointers easier to understand. In the OBJECT type, `ob_spec` might be required to point to a TEDINFO structure for editable text objects, an ICONBLK for icon objects, a BITBLK for bit images and so on. It could have been defined as a large

LISTING 1

```
TEDINFO *path_field, *ext_field;

path_field = (TEDINFO *)((box+PATH)->ob_spec.ptr);
ext_field = (TEDINFO *)((box+TYPE)->ob_spec.ptr);
strcpy(path_field->te_ptext, path_store);
strcpy(ext_field->te_ptext, type_store);
```

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 Publications) to: *Prospero C Disk, ST Review*, Europa House, Adlington Park, Macclesfield SK10 4NP.



TYPE CASTS

One of the first features of C pointed out in the original tutorial was the *typing* of its variables. `int` variables hold integers, `char *` variables hold pointers to chars, and so on. Most of the time this aspect of the language is useful, as it lets the compiler help a programmer by making sure that the right kind of data is put into a variable.

Occasionally though, there are times when data in a variable of one type needs to be used in a variable of a different type. Type changing in C is easy, unlike the cumbersome manoeuvres required by other typed languages like *Pascal*.

The conversion is achieved simply by prefixing the data to be converted with the name of the new type enclosed within brackets.

For example:

```
long big_var;
int normal;

big_var = (long)normal;
```

allows the value of the integer variable "normal" to be transferred into the variable "big_var" which is a long. Similarly for pointers,

```
TEDINFO *tptr;
char *cptr;

tptr = (TEDINFO *)cptr;
```

assigns the value of `cptr` to `tptr`, changing its type from pointer to character, to pointer to TEDINFO along the way. Of course, it is up to the programmer to make sure that whatever `tptr` is made to point at is a valid TEDINFO structure. Omitting the type cast in this example would provoke a warning from the compiler ("incompatible types in assignment").

A WARNING

Type casting needs to be done with care though, as there are some traps for the unwary. First, the conversion can have side effects. Think what might happen if `int` data is converted to `char`. `char` is much smaller than `int`, being only 8 bits wide, and so has a maximum value of 255. As long as the values being converted are less than this, all will be well. However, larger values will be altered by the conversion – the portion that will not fit into the `char` format will be discarded.

More subtly, such type casts can make code compiler or machine-dependent. Under *Lattice C*, casting long data to `int` will have no side effects as both types are 32-bit values. Under *Prospero C* however, the same code will suffer from the truncation problem outlined above, because longs are 32 bits wide, and ints 16 bits.

Another difficulty arises if ints are cast to unsigned. Positive values will be unchanged by the process, but negative numbers will be mangled. For example:

```
int_val = (int)(-1);
```

yields a value of 65,535 under *Prospero C*, as the type cast exposes the two's-complement representation of negative numbers. A similar effect can occur while using `printf()`, if the `%d` and `%u` specifiers are confused. Always use `%u` to print unsigned values and `%d` to print ints. The `%x` option also assumes unsigned data.

Secondly, incautious use of casts effectively circumvents the compiler's type-checking role, making programs more difficult to debug...

ORDER OF MERIT

As your experience of C increases, you will begin to write code that involves more complicated constructions. For example, as a beginner you might come up with something like this:

```
temp = input & 0x7F;  
temp = temp + 5;  
temp = temp * 3;
```

whereas after a little practice you might write:

```
temp = ((input & 0x7F) + 5) * 3;
```

The key to producing concise code is knowing in which order various operations will be performed.

At school we all learnt that multiplication and division are carried out before addition and subtraction, so $4 * 3 + 10 = 22$ and not 52. C has a similar order of precedence, but since there are so many more operators, the list is quite long.

The table below should help with any problems in this area. It is adapted from material in the essential reference book for C programmers (The C Programming Language 2nd ed, Kernighan, BW & Ritchie, DM, Prentice-Hall; ISBN 0-87692-596-4; £26).

The vast majority of the operators in this table should be familiar, though there are a couple which have not yet made their debut in these tutorials. Look out for them in upcoming articles...

Operator	Grouping Direction
() [] -> .	->
! ~ ++ -- (typecast) *(a) &(b) sizeof	<-
*(c) / %	->
+ -	->
<< >>	->
< > <= >=	->
== !=	->
&(d)	->
^	->
	->
&&	->
	->
:	<-
= += -= and all other assignment-operators	<-
,	->

(a) indirection operator
 (b) address-of operator
 (c) multiplication
 (d) bitwise-AND

union with members for every possible structure type but this would be quite a long list. It is much simpler to use a general-purpose pointer whose value can be *cast* to the appropriate structure pointer type when needed.

ROLLING YOUR OWN

Finally for this program, the answer to something that may have been niggling at the back of the minds of the more observant readers. In the discussion of TEDINFOS and OBJECTS, we have talked about them as “structures”. Despite this, in all the pointer variable declarations there is not a “struct” keyword to be seen.

According to the C learnt so far, surely the correct declaration for

`path_field` and `ext_field` should have been:

```
struct TEDINFO *path_field,  
*ext_field;
```

How is this done? You can guess where to find the answer...!

THAT'S ALL, FOLKS

In this tutorial you have encountered some of C's more advanced facilities for manipulating variables types. In the next article, we will return to more practical matters by looking at the topic of the command line.

**Next issue – mastering
the mysteries of the
command line!**

HOME GROWN

C provides the facility for programmers to define their own variable types. This can be used to make source code more understandable. Type definitions are done using the **typedef** keyword. For example,

```
typedef int BOOLEAN;
BOOLEAN flag;
```

defines a synonym for `int` (`BOOLEAN`), and a variable of this new type called `"flag"`. It is conventional to use uppercase characters for new type names to emphasise their user-defined nature. `typedef` can go far beyond simple synonyms though:

```
typedef char *CPTR;
typedef int TWO_BY_TWO[2][2];
```

The first of these defines a name for the type “pointer to character” and the second for a two-dimensional integer array with two elements in each dimension. When trying to disentangle **typedefs**, it might be helpful to remember that they are structured just like variable declarations, with the name of the new type where the variable name would normally go.

Returning to `TEDINFO`, the `aesbind.h` header file contains code that defines the structure and also a **typedef** to make a new type name for it. You can think of it like this:

```
struct {
    . All the tedinfo fields defined here
    .
} temp_name;
typedef struct temp_name TEDINFO;
```

typedefs can also be used to increase program portability. Returning to an example used earlier, *Prospero C* and *Lattice C* implement the `int` type as different sizes: 16 and 32 bits respectively. In many cases this will not matter, but if a variable has to be of a particular size, say for interfacing with the operating system, problems could arise in porting software from one compiler to another.

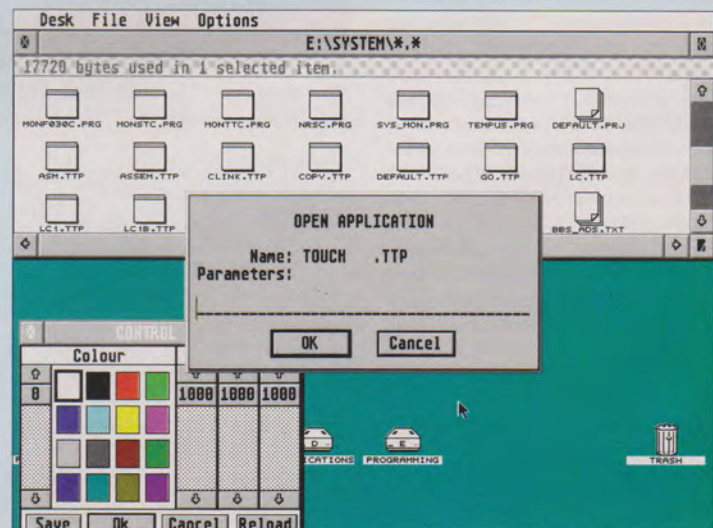
typedef can help in these cases. For example, if some variables need to be 32 bits wide, we could declare them with a user-defined type, say **DWORD**, and then define **DWORD** in a header file. Porting from one compiler system to another would then be as simple as altering the header file, and recompiling:

Header file:

```
typedef DWORD int;      /* Default Lattice C behaviour */
or typedef DWORD long; /* Prospero C behaviour */
```

Main program:

```
DWORD big var1, big var2;
```



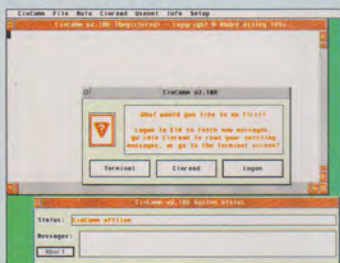
Sending messages, downloading files, chatting with people – it's enticing. But as for the 'phone bill, a modem could eat a hole in my budget that would be difficult to fill. I know this bloke who ran up £2,000 in a quarter...

An all too possible scenario, and one that must stop a lot of you from taking the plunge and buying a modem. It shouldn't do – a modem needn't cost a lot to run. With a little bit of thought and common sense, it's possible to gain a lot for only a little outlay.

SOUND ADVICE

So, how do you cut down on the bill? Try to follow these five simple rules...

- Make sure you buy a modem with a decent turn of speed. While you can buy a 2,400 baud modem for a quarter of the cost of a 14,400 v42bis speed merchant, you'll eventually pay the price. The amount of mail I receive each day is something like 200,000 characters; at 2,400 this



Here we have Cixcomm, about to have a quick blast on the CIX BBS.

would take 20 minutes or so but on a 14,400 modem (with data compression) it takes a little over two minutes. However, you have to watch things even with a faster modem – the temptation to download that 2Mb demo can be hard to resist!

- Despite those homely BT adverts with that nice Mr Hoskins in them, steer clear of BT like the plague and use Mercury instead. It's 20 per cent cheaper on average for all calls apart from local rate, and all for a few quid a quarter (see table).

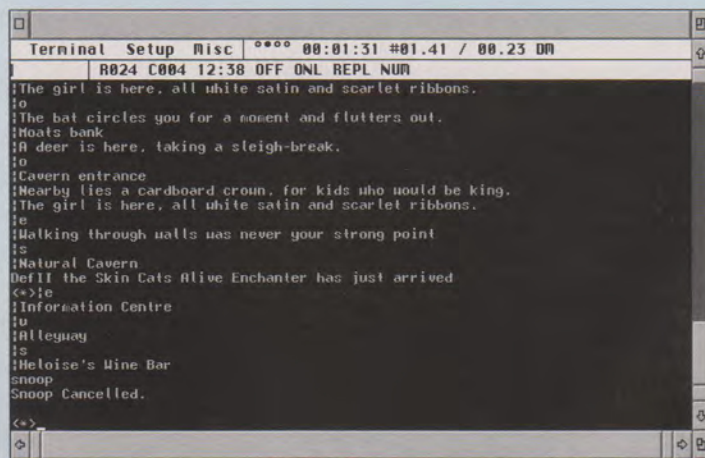
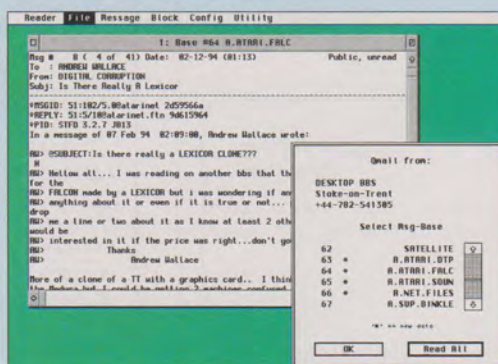
- For your personal and public email, use an off-line reader. Rule number one: *never* read mail on-line. Most bulletin boards use the QWK (off-line reader) format and other systems, like CIX, have their own formats. The OLR for the CIX Atarian is called Cixcomm/Cixread and is generally held as the best available. If you find an on-line system that doesn't have OLR support then be very wary of it. In fact, I'd advise you to just say no.

- Although they're a great deal of fun, real-time systems such as multi-user games and BBSs with chat facilities can eat up modem time like nothing else. If you decide to try

QUANTA COSTA?

Comms costs were top of the agenda some months ago. Graeme Rutt takes a second look at the situation...

For BBSs that support QWK there's the excellent MT-QWK



The dreaded "Shades" – beware MUGs if you want to retain your sanity and bank balance...

them out then keep an eye on the clock. Make sure you know exactly how much it's costing you a minute and try to stick to a limit. Multi-user games, in particular, are known for their addictive qualities so be careful out there!

- Finally, and most importantly, *think*. Think about what you want from comms. Think about what you can afford to put aside each quarter for your 'phone bill. And think about what you're doing when you're on-line. Don't download big files "just for a quick look" and don't spend hours chatting to a total stranger. Also, try to keep your longer calls to Economy rates (6pm-8am, all day weekends) and local or Tier A distances.

THE BIG BILL...

And if it all goes wrong? What if the temptation gets too much and a big bill comes in? Don't just forget it, ignore the red bill and lose your line. Talk to your call provider and they'll try to sort something out. They might allow you to pay it off by instalments or, at least, keep an incoming calls-only line.

Following simple advice like this can promise you years of relatively painless comms use. Give it a go and you'll find yourself involved in an interesting, absorbing – even fruitful – hobby. The World is there for you to explore, so why sit with a modemsless Atari when you can get connected?

Next month, *Comms Coaching* goes up to two pages with Mark Baines and I sharing writing duties. We'll be starting with a series on the Internet, by far the most interesting and important network that any comms user can belong to. I hope you'll enjoy it...



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ASK THE EXPERTS

A selection of
your questions
answered by ST
Review's experts...



Data overload – all this data must be sent to the printer for a graphic font, but internal printer fonts are accessed via simple control codes.

IS THAT RIGHT



I have recently bought an HP DeskJet 510 and I use it with *That's Write* 1.52 word processor. The results are quite satisfactory but I should like to have access to the built in fonts. I can't do this with *That's Write*, so is there any way round the problem, like using a different word processor?

C.D. Harrison, Nottingham

One of the strengths of *That's Write* is access to your internal printer fonts. These can even be combined with the graphic fonts you're already using. An understanding of how this works serves to illustrate the unusual flexibility *That's Write* offers.

Printers output using either internal fonts or in graphic mode but most software uses either one or the other but not both. *That's Write* addresses both internal and

graphic fonts by using separate screen and printer fonts. The screen fonts provide the "What you see is what you get" (WYSIWYG) display; when you press the "Print" button, *That's Write* springs into action and substitutes each screen font with its corresponding printer font.

If an internal printer font is called, a pseudo printer font consisting of control codes is accessed to instruct the printer which internal characters to print. If a graphic font is called, each character has to be sent to the printer as a stream of graphic data which takes much longer than a few simple control codes. This open-ended approach has been extended in *That's Write* 3 to add support for *Speedo* and *Postscript* fonts.

Compo* (0487 3582) offers a range of supplementary printer disks to access internal fonts and these are available as optional extras. You'll need the *Hewlett

Packard DeskJet disk which costs £14.99. Joe Connor

WINX GOES WEST!



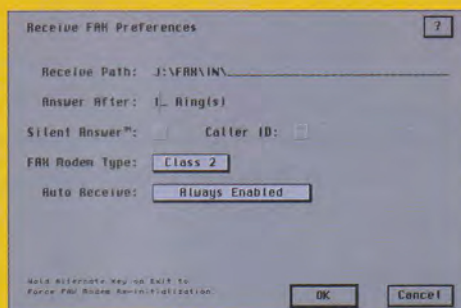
I have three questions. I run a TOS 1.02 machine and I'm very attracted to *WinX*, but the first two questions explain why I won't be using it:

1. Why doesn't *WINX.PRG* work with TOS 1.02 (2 bombs) without *GEMRAM.PRG* when *WINX22.ENG* says it does?

2. Why is *GEMRAM.PRG* - cum - *WINX.PRG* incompatible with *UIS III.PRG*, the file selector that modernises TOS 1.02?

I have a PC at work plus a terminal on a DEC VAX net. However at home I wouldn't be without my seven year old double-floppy 8MHz STFM because of its friendly nature. ST software is cheap, simple and to the point – unlike PC programs which are often complex and always swamped

Rings a bell – you can set the number of rings before answering, but your fax modem has to detect 'em...



GET IT STRAIGHT



I read with interest the glowing review that you gave *STraight FAX!* in your issue 24. But I am having extensive problems with this program (version 2.00a) bought direct from Toad Computers on 23rd November 1993. In spite of sending three faxes to them (and one telephone conversation to confirm their arrival) on the 13th, 14th December 1993 and 20th January 1994, I have received no assistance whatsoever.

Please help me with this list of problems that I am experiencing:

1. When I receive a fax the software gives the message "Remote Fax disconnected unexpectedly" after the first page. Therefore only the first page is received. I have tried this with a number of remote fax machines with the same result.

2. When using the Auto Receive, the actual number of telephone rings is greater than the number counted by the software.

3. When I use the RTS/CTS flow control the received fax is corrupted. That is, some of the lines of text appear stretched (elongated letters). I have a 2.5Mb STFM with TOS 1.04 and use the *TOS14FX2.PRG* provided with the program. I use the *TOS14FX2.PRG* and RTS/CTS flow control with my other comms software without problem. My fax modem is verified to work with *STraight FAX!* according to their manual.

4. Clip Area Edit Settings – the Auto button does not work as the clip position/size does not change when the view window is resized/scrolled.

5. When attempting to add a new name/number entry from the "Select FAX Phone Number" menu, the program crashes (with bombs) when I click on the "+" button to enter the data.

6. When attempting to print fax files generated by *STraight FAX!* the printer produces rubbish. However fax files received by *STraight FAX!* are printed without apparent problem. I use the *GDOS* version

supplied with *Timeworks* on your issue 7 cover disks.

7. I have saved the default preferences with the auto answer enabled. When the program boots up, "Auto Receive" does appear in the information box but there is no check mark (tick) to the left of the "Receive Fax..." command in the preferences menu.

8. I notice that when I make a backup/working copy of the master disk using *FastCopy 3* it takes two to three passes before it makes an error free copy. I also notice that the master disk is a High Density disk formatted to 800Kb approx. Is this not a potential source of problems when used in a 1Mb drive.

I note that Charles Smeton of NewStar Technology is writing for you. Perhaps you can obtain a response from his company.

Nigel Brook, Cheshire

NewStar Technology Management has a two-tiered technical support system for registered *STraight FAX!* owners. The first level is via telephone or fax to our technical support personnel, handled by Toad Computers (Severna Park, Maryland) during their normal business hours (10am-7pm local time, Mon-Sat). The majority of such calls are handled either immediately or within a business day. Some calls require consultation with the developer of *STraight FAX!* at NewStar Technology Management who

either contacts the registered owner directly or relays the necessary information to Toad Computers who then calls the customer back.

The second level of support is through direct contact with the developer (Electronic mail on *Genie*, *CompuServe*, *Toad Computers' BBS* or postal mail). Electronic mail can also be sent to the *Genie* or *CompuServe* accounts via Internet. A message is followed up via return electronic or postal mail.

In December 1993, an agreement was reached with System Solutions (081-693 3355) in the UK to distribute *STraight FAX!* 2. This agreement allows customers to purchase *STraight FAX!* without the need to order it overseas and also provides an outlet for the first level of tech support in the UK.

You purchased *STraight FAX!* 2 from Toad Computers in the US just prior to the agreement being reached with System Solutions. As such, your copy of *STraight FAX!* did not include the UK contact numbers to reach System Solutions. NewStar Technology Management and System Solutions have done their best to spread the word about UK distribution via the Atari media in the UK.

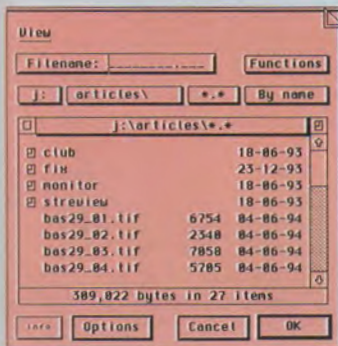
You are welcome to call System Solutions with tech support questions. If the level of the question requires the developer's attention, System Solutions will

with frippery. Rush jobs can be quicker at home. It is only now after the works' PC became a 486 33MHz that I am beginning to itch for a hard disk at home. So...

3. What's the cheapest TOS upgrade that would help with a hard disk and which either makes *UIS* redundant or makes *WinX* and *UIS* compatible?

Bob Willcox, Bath

*It appears that you must use GEM-
RAM with UK versions of TOS as
WinX works by patching GEM*



*Select tricks – if you want a
shareware file selector that
works with WinX, then look no
further than Selectric...*

*directly. The documentation refers
to German TOS versions. Universal
Item Selector III does not work
with WinX because of the way it
installs itself into the system
regardless of TOS version. The
solution is to use Selectric instead.*

*As far as a hard disk goes, TOS
1.04 is highly recommended
although patches like FATSPEED
can alleviate some of the problems
of earlier TOS versions. The
upgrade to TOS 1.04 is simple and
normally requires no additional
boards or soldering skills – contact
Compo UK on 0487 3582 for
details about the various TOS
upgrades. Another possible
solution is to get Magic (System
Solutions: 081-693 3355) which
completely replaces TOS with a
multi-tasking system. Ofir Gal*

PUBLISHER POSTSCRIPT



I have a question for which I have been trying to find the answer for some time and might be appropriate for your Ask The Experts column.

I use Fleet Street Publisher. I understand that the producers,



*Not an illusion – Ghostscript
will handle most PostScript
files, and it's PD!*

Mirrorsoft, are no longer in business. Is it still possible to obtain the Ultrascript fonts which Fleet Street Publisher uses?

Alternatively, is it possible to obtain a program which will print PostScript onto an HP Laserjet II? It would be particularly useful for me to be able to use the Dingbats font, which Fleet Street Publisher displays but does not print, on an overhead projector for business presentations.

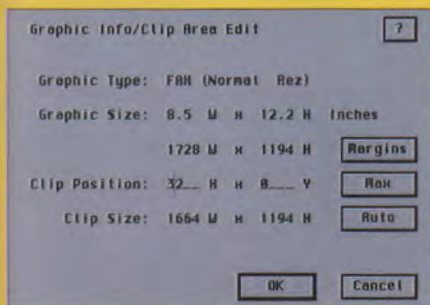
M.E. Falla, Macclesfield

*Sadly, I think you are out of luck
when it comes to Ultrascript fonts.
As you already know, Mirrorsoft
are no longer in business and I*

*believe the American company
that developed Ultrascript has
also long since disappeared.*

*On a brighter note though, it is
indeed possible to get a program
that will print PostScript on a
Laserjet II. The software you need
is called a "PostScript interpreter"
and there are two of these
packages available for the ST.
The first is called GhostScript and
is available freely from public
domain libraries. It handles most
PostScript files successfully and is
certainly worth a try; contact
Floppyshop (0224 596208) for
more details. The commercial
alternative is known as
CompoScript and while relatively
expensive, it does come complete
with 35 Adobe fonts. Give Compo
a ring on 0487 3582 for more
information on compatibility and
price.*

*A third option to consider is a
Laserjet PostScript cartridge. With
the Laserjet 4 now on the market,
peripherals for earlier models are
plummeting in price. It might be
worth scanning through
MicroMart to see if you can pick
up something second-hand.
Nial Grimes*



*Clip ahoy – the Auto
setting calculates the
minimum rectangle
that can surround
the visible area.*

*FAX Modems, some that
operate identically to
others, and some that
have subtle differences.*

*Without specific details
about your computer and FAX
Modem set-up, it is difficult to
give specific answers to his
questions. However, we can
offer the following suggestions:*

1. On December 4, 1993, version 2.10 was released. It has a number of changes that should eliminate or reduce the possibility of this problem occurring. As of May 1994, a pre-release version of STraight FAX! 2.20 is also available to users who request it. STraight FAX! 2.20 will be officially released this summer. Also, contact the vendor who manufactured your FAX Modem and investigate if newer firmware is available. Many vendors in the US, such as Zoom, Supra and Boca, who manufacturer Rockwell-based FAX Modems with the V.32AC chipset have released newer firmware that corrects problems with the page acknowledgement in their older version 1.7x firmware.
2. The FAX Modem sends a RING response to the computer after a

*Ring is detected on the tele-
phone line. Different countries
have different Ring Cadences;
sometimes a Ring may be inter-
preted as a Fast Busy signal
when calling some European
countries. If the FAX Modem is
non-approved by the BABT, it
may be a US model that is not
100% compatible with the UK
Ring signals and so may miss
Rings. If the modem does not
detect a Ring, it does not send a
RING response to the computer.*

3. Flow Control is only in effect during FAX send operations, not FAX receive. We recommend using Serial Fix 2.0 over Atari's patches and while we include Atari's patches with their permission, we don't have permission to include Serial Fix 2.0 at the moment. Serial Fix 2.0 is available from most PD libraries. Also make sure that the I/O Buffer sizes are 32,767 bytes each or less. This is set in the Modem Preferences.
4. There may be some confusion as to what the Auto button does. This button calculates the minimum rectangle (Clip Area) that can surround the visible area of the window. It then sets the Clip Area to this rectangle.
5. This is a bug in version 2.00 that was fixed in version 2.10. Version 2.00 to version 2.10 updates are available from System Solutions in the UK for a nominal fee.
6. The original GDOS has many problems. It is now over seven

*years old and no longer support-
ed by Atari. We recommend
SpeedoGDOS which is faster and
has better printer drivers.
Without knowing the printer,
further comment is difficult.
300dpi printers such as HP
Deskjets and Laserjets require a
megabyte of RAM to print prop-
erly with GDOS. Older versions of
GDOS have memory allocation
problems. Older TOS versions
(1.04) also have memory prob-
lems and require other Atari
patches (such as PoolFix). We
recommend using a newer TOS
version (2.06 or higher), which
can be fitted into most computer
models. FontGDOS is available
from PD libraries and while not
as reliable as SpeedoGDOS (the
FontGDOS HP DeskJet driver has
a serious bug that causes it to
send extra bytes that confuse
the printer and make it eject
page after page with random
characters on each page), it is
much preferred over the original
Atari GDOS.*

7. This small bug has also been corrected in version 2.10.
 8. Toad Computers was using high density disks formatted to double density last year but now uses standard double density disks. If the disk is defective, we will replace it free of charge; just send it back along with the Registration Card (if it has not been mailed in yet) and we will replace it with the latest version.
- Charles Smeton, NewStar Technology Management**

*promptly contact NewStar
Technology Management. In an
effort to aid both customers and
our tech support personnel in
diagnosing problems, NewStar
Technology Management and
Toad Computers co-developed
SysInfo, a program that tests the
FAX Modem and computer oper-
ating system and writes out the
results to an ASCII text file that
can be forwarded to our tech
support. SysInfo 1.60 is through
System Solutions.*

*The report generated reduces
the time required to solve a
customer's problem by eliminat-
ing the need to verbally step a
user through a series of confus-
ing steps to run various utilities
to determine such things as the
TOS version, free memory,
modem type and so on. This
information is vital in solving a
user's problem as there are vari-
ous patch programs required for
different TOS versions to allow
proper operation of the serial
port and since there are hun-
dreds of different vendors with*

Someone has to win
£25 for the star
letter each month
— write in and it
could be you...

LETTERS

FAULTY FLOPPY

Many thanks for printing my recent letter (*Can't Copy*, Experts, Issue 27) in connection with the problem I was having with my disk drive, and to offer £15 to a "reader who can come up with a suitable explanation."

Not long after I sent the letter, I started to get some strange sounds from the drive.

As I now didn't want to risk damaging any of my disks, I replaced it

with a new one from Power Computing and now everything works fine.

Barry Green, Kent

All's well that ends well...

DISK DELIVERY

Great magazine — just the right mix between serious and games, which is why I've just put in a regular order

with my newsagent. Here's an idea. Why not put your tutorials, specials such as "Short Cuts", "Beat The System", "BASIC Programming" and other features like MIDI Monthly on the cover disk in a text file so that people who are interested in a particular subject can run them off and save them together for future and easier reference?

Food for thought. Keep up the good work.

W. Gardner, Salisbury

Thanks for the idea, but there are two distinct problems. First, we'd have to find space on the cover disk! You'd be amazed at the stunts we have to pull to fit the main programs and associated files, tutorials and utilities but yes, it might be possible to create an archive of various text files and so save space.

A bigger problem is that of screenshots. These are an integral part of the ST Review style of writing, often being used to illustrate a particular aspect or to take you through a series of points, step by step. To provide you with a text file stripped bare of such pictures is likely to be pretty useless, but I'll certainly bear it in mind for the future.

CALAMUS ON THE CHEAP

As an Atari owner of some two years or so I thought I would like to write you a note to express my extreme gratitude at now having *Calamus SL* in my possession after using 1.09N for so long.

I must admit that I was unsure how such a price reduction of 60 per cent could be achieved (something dreadful would be missing or some modules wouldn't work) but no, it came through my door in just 24 hours. I was left in no doubt of what I'll be doing for the next six months...

P. Wilkinson, Cleveland

Having never seen a reason to write to the Atari press, sadly I feel the time has come due to a great injustice which has befallen me and probably quite a few others.

After waiting for months, nay, years for the price of *Calamus SL* to fall to a reasonable level, I was very pleased to see JCA's recent offer. I sent my money off, unaware of what was in store.

Only days after receiving it, I was told that DMC were no longer supporting *Calamus* on the ST. I wrote to JCA and they assured me that *Calamus* was still being developed alongside the PC version by DMC. Then what do I see in the May edition of your magazine? *Calamus SL* at over £200 less than what I'd just paid for it!

To say I was slightly p'd off after just spending over £400 to see this offer must be the understatement of the year! I wrote to JCA about it but they just wrote back confirming it with no explanation of the drastic drop in price, which is over £200 less than their own offer of £499!

I think this is inherently unfair to recent customers and surely deserves some kind of explanation from JCA. Have I just bought a rather large white elephant or does *Calamus* have a future?

Chris Good, Hants

Since receiving my *Calamus* package, I haven't been able to put it down. I've experimented with it quite extensively and all I can say is that it's the best thing since sliced bread.

I've done fliers, menus and loads of other things too numerous to mention here. I sent off to the ST Club for two of their *Calamus* font sets which means that my total outlay has been just £78.15. Quite a good bargain considering that *Calamus 1.09N* used to sell for £140 not so long ago.

Thanks to *ST Review* for making this brilliant offer possible to its readers. Keep up the good work.

M. Nixon, Stoke-on-Trent

I was pleased with the way the article on *Calamus S/SL* came out and would like to thank you for this. The offer has done extremely well and I would like to thank you for this opportunity to happen. Sales and interest have certainly increased due to *ST Review*. Yours sincerely,

Alastair Craig, Director, JCA Europe Ltd

The above are just a small sample of the numerous letters I received regarding the Calamus offer and while there were a few complaints over the pricing, the vast majority praised ST Review for offering Calamus in this way. And yes, the Calamus developers are continuing to support the Atari platform.

One important point to note is that editorial and advertising in ST Review are independent. We decided to run a substantial feature on Calamus to highlight the new features in S and SL version 2, including the printing of a page designed and output to film from SL. Appreciating the quality of Review's readership, JCA Europe decided to make Calamus 1.09N and SL available at low prices in Review and no other glossy ST mag, an offer I happily accepted for one reason: to allow you, the readers, to benefit.

Just goes to show that you don't have to be the number one selling magazine to carry the most weight...



Thanks indeed — JCA Europe were certainly pleased with the response from ST Review readers...

NOT A SUCCESS

I am writing to let you know what a failure the Europress organised (or at least heavily supported) Spotlight '94

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.

Please do not send stamped-addressed envelopes; personal replies cannot be entered into. All mail received is considered for publication unless otherwise stated and we reserve the right to edit letters where necessary without altering the context.



Win me – everyone who comes to the Bristol or London Atari Shows will have a chance of winning a Jaguar!

show was. Amiga companies were out in force, leaving the Atari stands with a lot to be desired! Even with the presence of the Amiga stands, the show was still smaller than the '93 "LeST Get Serious Show" in London. The usual companies like HiSoft, Compo and Gasteiner were there; 1 Jaguar, 3 Falcons and 3 STs. If the ST isn't dead, then I dread to think what dead is!

The only up of the show was the fact that I managed to get my hands on a Sega MegaDrive with two controls and three games for £45.

I am not yet deserting the ST as I have invested a lot of money in it for sequencing, but at least I have the Mega to fall back on in times of trouble!

Chris Brown, Middlesex

I went down to the Show late on the Saturday and have to admit to being a little disappointed with the number of Atari stands compared with those for the Amiga. That said, the companies that did attend were pleased with the response from the buying public – and I'm sure that the rackmounted Falcon on Digital Village's stand must have interested you as a sequencing person!

But Chris, why do you conclude that the ST is dead? There may be little new research and development at present, but support is certainly being sustained by those companies that have sunk a substantial amount of money into the market. Anyone who read the Berlin Show report in the last issue cannot failed to have asked themselves why the attitude is so different in Germany. During the interview with Patrick Jerschel of Overscan (see page 48), the one comment of his that stuck in my mind was that Overscan's turnover continues to increase year in, year out. Why? Because people buy its products! And Overscan continues

to design, promote and sell new products on the strength of this, many of which make their way to these shores.

Check out the list of exhibitors for the forthcoming Atari Shows at Bristol and London (page 30); it reads like a "Who's Who" of Atari companies. There should be over a dozen new products there, including Papyrus, That's Write 3, MUSICOM 2, NeoDesk 4 and DA's Layout, plus the opportunity to win a Jaguar. So tell me Chris, if you're the lucky person, what will you do with the MegaDrive!

I'll be at both Shows and look forward to meeting lots of you for an informal chat...

PROJECT PROJET

I have had extra form feed problems with Calligrapher and my Citizen Projct printer. After speaking with you and experimenting, I have come to a satisfactory conclusion as follows:

- 1) Set paper size to 10.8".
- 2) Customise paper length to 10.2" as the measured print area is always 0.3" shorter I found.

With virtual page set to TOP in the "Printer" menu this combination works for all my files using the plain DeskJet.SYS driver. Unfortunately, the



£25 STAR LETTER

ALWAYS LATE...

Could I suggest that instead of regularly berating Ofir Gal for his lateness you try a different method? I've experienced this problem from both sides as a musician in other peoples' bands and as an organiser of my own groups, and what you have to do is bring deadlines forward by the average amount of the person's lateness. Publicising it obviously isn't going to work!

Seeing photos of your "3 Wise Men" on the same page in the June issue was very revealing; spot which of them were carefully posed at a photo session and which was taken in a photo booth in a station on the way to the office to meet the deadline for the photo!

Dick Lee, Edinburgh

I already give him early deadlines – and the record for lateness stands at three and a half weeks which, given the four week nature of this mag, has had me pulling out what little I have left of my hair!

All joking aside, Ofir is the technical voice of ST Review and is currently attempting to ensure that standards are not allowed to fall in the absence of an Atari-led development team. His Internet "list" of people interested in discussing Atari software standards stands at just under a hundred at the moment and includes almost every commercial developer on this planet.

What with organising this, finishing various manuals and promoting his band's new album, I suppose this means that his copy may continue to be a little late for some time...

HPL300.SYS driver causes streaking, especially noticeable on large type-faces.

Thank you for your timely call which has restored my faith in both Calligrapher and my printer.

Ted Hartwell, West Sussex

Quite a few of your letters have mentioned printing problems with Calligrapher and the Citizen Projct and Projct 2. Both are supposed to be DeskJet+ compatible but as a question mark appears to hang over this, we'll be reviewing the Projct 2 next month.

While you should be able to use a standard DeskJet driver for any DeskJet-compatible printer, it's worth remembering that the resolution varies depending on whether your printer is based on a DeskJet, DeskJet+ or DeskJet 500 series.

Using the wrong driver is likely to result in inferior printout quality.

FALCON FACTS

"...stay in touch" you said at the end of my letter printed in issue 26, so here I am with the latest news from the Falcon Fact File.

As mentioned, if a Falcon owner wants to join they should send a stamped addressed envelope for information and a membership form. Membership is growing nicely and we are getting feedback from some that they have made contact with, and received contact from others, so the FFF is working. We have settled into a routine of entering all new members, and those updating, into the file ready for monthly distribution.

The PD software used to fill the disk is changed every 3 months. It is, therefore, worth members returning their disk with return postage and a note of any changes in their hard/software set up each quarter. This way they will keep up with the new memberships and receive some of the very best Falcon PD.

By the way, as nice as it was to see my letter giving detail of the Falcon Fact File printed, it would have been nice to have seen the address as well: FFF, 11 Pound Meadow, The Green, Whitchurch, Hampshire, RG28 7LG.

May the FFForce be with you!

Colin Fisher-McAllum, Hampshire

Model Citizen – but is the Projct fully DeskJet-compatible?

Keep up the good work...

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ATARI ST REVIEW

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