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ATARI World

PUBLISHING

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- GT Look
- Ping 2000
- Imagecopy 4
- Twilight
- Guitar Dreams

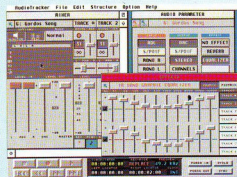


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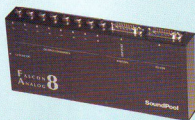


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NVDI 3.0 including 8 Speedo fonts **£49.95**
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For update pricing, please phone.
 NVDI v2.5 will continue to sell for only **£29.95**
 Best Software Upgrade 1993 & 94 - ST Review.

Magic

"If you want a multitasking system that works simply and reliably, then Magic is for you."

ST Review, June 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 full command shell are included. Magic runs on ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a useful working system. The Falcon version is expected to be available by July 1995.

"It's like running an accelerator and getting the multitasking thrown in for free."

ST User, February 1994

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

Magic (RRP £69.95) Intro Price **£59.95**
 Magic and Ease **£79.95**
 Magic and Kobold **£79.95**
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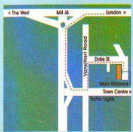
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Turn your computer into a 32bit system with the PAK68/3 and a 68030 processor. The 32MHz clock, 32bit wide TOS and a 32Kbyte cache will accelerate your system by 775% (Gembach 3.10). This is faster than the Falcon and the TT1 Clock speeds of 40 and 50MHz are possible. The use of recycled processors makes this upgrade very affordable without sacrificing reliability.

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Kobold

This High Speed File Manager gives unbelievable speed. Copies 1000 files (10Mb) in 45sec (GEMDOS 5.35min). Use Kobold for backing up; formatting floppies (DD,HD,ED); move, copy and delete files; use the learn function to automate repetitive jobs. Ease calls Kobold automatically for all desktop file and floppy operations.

Kobold 2.5 (RRP £59.95) **Still Only £39.95**

Ease

ST FORMAT Awarded 97%
 Use your Atari with EASE. Replace the old Atari Desktop. This program could not be more more appropriately named. The right click replaces the double click. Iconize windows for instant access to groups of files. Ease is aware of multitasking and comes with a sophisticated Colour Icon Editor. Works on any ST, all TOS versions, and with any display and graphic card.

Ease (RRP £49.95) **Still Only £39.95**

DeskTupper

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FreeKeys **£39.95**
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Cherry Keyboard **£29.95**
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 MultiBoard **£149.00**
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SCSI Drives

Best Hard Drive 1994 - ST Review Christmas '94
 Mini's hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed and style. The ST(fm/e) version now comes with the ICD Link II as standard, or choose the Translator with HD Drive. Also included are terminators and all required cables.

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270Mb Quantum	£Call.....	£Call.....
540Mb Quantum	£289.00	£339.00
730Mb Quantum	£319.00	£369.00
850Mb Quantum	£359.00	£409.00
1Gb Connor	£499.00	£549.00
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NEW SyQuest removable media offers fast and secure storage. Ideal for backing up, or as a main drive. Imagine all your music files and software on one cartridge, and all your DT files on another.

105Mb Drive, 14.5ms, inc. Cartridge **£369.00**
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 230Mb Magneto Optical Drive **£799.00**
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ATARI WORKSHOP

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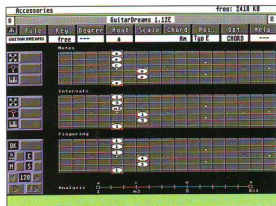
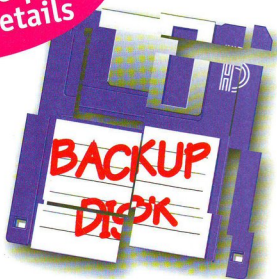
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Hello Timeworks, Goodbye Vic

Ask most Atari owners which area they'd most like to dabble in and the answer invariably will be DTP. There have been some good deals

offered by magazines over the years, including the cover-mounting of the original Timeworks on ST Review, but this month *Atari World* tops the lot. We're offering you Timeworks 2.01 on our unique Reader Disks, along with full tutorials on installation and how to work with styles and graphics. If you're already into DTP then you'll find our info on terminology and good design to be invaluable, especially as it's written by Günter Minnerup who we welcome to *Atari World*. You'll also find an excellent offer for Timeworks 2.04 with SpeedoGBOS 4 and a bundle of fonts. This version of Timeworks has never been released to the public before, and allows you to move into the realm of outline fonts, usually reserved for the likes of Calamus. Power to the people – or *Atari World* readers at least!

Paper costs over the past six months have crippled many magazine publishers, a number of which have reduced the physical size of their titles. Consequently, we have had to decrease the number of pages and increase the price to £3.25. Even so, you still get a packed 100-page mag – and substantial savings if you subscribe.

This is my last issue as editor of an Atari magazine; I now leave you in the very capable hands of Andrew Wright who has, in fact, carried out most of the work this month. I wrote the first of hundreds of Atari articles back in late 1989, and have been editor of an Atari magazine for almost three years, but the pressure of the last six months has taken its toll on my health. I'd like to thank Neal O'neils, the publisher, for having the courage to launch *Atari World*, my editorial team, all my writers for their endless support, and especially my wife and kids for their patience.

Looks like I'll be able to clear the kitchen table after all...

V Lennard

Vic Lennard, Editor

16 Page Sections...

... on floppy disks in ST Source (see page 51)
and hard drives in Atari Pro (see page 67).

ATARI Pro

STSource

SNIPPETS

• You can now contact your favourite Atari magazine on the Internet. For letters or questions, contact atari_world@cix.computlink.co.uk. For sales, subscriptions and advertising, contact atari_w_admin@cix.computlink.co.uk.

• Following the success of the recent Los Angeles Electronic Entertainment Expo (E3), the organisers are planning similar events for next year in Europe, Japan and South America. The Los Angeles debut event replaced the aging Summer CES and attracted all the major players in the computer entertainment world. Indeed, over 40,000 visitors pass through the doors over the three days. The European event is being organised by IDG Communications and is likely to take place in the Autumn of 1996. The venue has yet to be announced.

• Gasteiner's recent Spotlight '95 event has been hailed as a great success. The event, which was dedicated to Atari and Amiga computers, attracted almost 4,000 visitors over the two days. The response from dealers and developers was also said to have been very positive. HiSoft's David Link said, "Overall, HiSoft was extremely pleased with the Spotlight Show. We had many new products to display but hardly had a chance to do so since we were swamped with enthusiastic customers".

• Work on CompuServe's replacement for the GIF file format has been completed. The new format is known as PNG (Portable Network Graphic) and uses Huffman compression as used in STZip. PNG throws off GIF's 256 colour limitation, handling colour depths of up to 24-bit. It is a royalty free format and CompuServe claims to have numerous developers pledged to incorporating the new format into their packages. PNG looks set to become the standard on the Internet with top World Wide Web browsers already being updated to support it. On the Atari platform, Floppyshop's forthcoming image processing and photo retouching package, Positive Image, already includes PNG support and no doubt others will follow suit.

News

System Solutions scoop DA's deal!

System Solutions (0181 693 3355) has recently been appointed UK distributor for the highly acclaimed Digital Arts products, formerly handled by GGS Computerbild. The range includes DA's Vector, DA's Picture, DA's Layout and the top of the range DA's Layout TC. There have been a number of changes to the pricing structure for these products, so you are advised to check out their latest advertisement before ordering.

Also new from System

Solutions is the GT Look II scanner software. This latest revision has undergone numerous changes and is currently being bundled with their range of Epson GT scanners. Current pricing is as follows: GT6500 £699, GT8500 £799 and the top of the range 2400 dpi GT9000 at £899. All prices are inclusive of VAT, software and cables. See the full review of GT Look II in this issue.

Now you too can enjoy the benefits of a quad speed CD ROM drive running on your Atari too. System Solutions are currently

stocking the latest Toshiba model complete with software and cables, ready to plug in and go. Due to price fluctuations in the CD ROM market, you are advised to call for the latest prices.

Talking of CDs, the Mega Archive Vol 2, a massive collection of PD and shareware archived onto a single CD, is now available for £24.95. Existing owners of Mega Archive Vol 1 can upgrade to Vol 2 by returning their CD along with the upgrade fee of £12.95 plus £3.95 P&P.

JAG 2 ON THE WAY?

At the last shareholders meeting, Atari unveiled their plans for the second generation Jaguar. Going under the code name "Midsommer", the new cat is scheduled to go to developers in September. The machine is expected to be released in the last quarter of 1996, giving the developers a full year to get to grips with the new architecture. This should allow a healthy batch of games to be ready in time for the machine's public debut.

The exact details are sketchy

but Atari were stating that it would be "2-4 times faster than the PSX". Unconfirmed reports indicate the new custom chips are called Romeo and Juliet. Given that these two ended up killing themselves in despair, this seems a rather odd choice of name.

The developers kit comes with full C++ libraries to enable rapid game development, an important change as the original Jaguar development tools were rather more basic. Atari quoted current games as taking six months for

ports and 12 months for original titles.

Current indications suggest that Atari will not now release an all-in-one Jaguar and CD unit either but will hold off until the release of the Jaguar 2 towards the end of next year. Atari Europe has said that a combined Jaguar and CD is "not a priority". In the meantime, the standalone Jaguar CD ROM unit which can be used with the existing model, is due for release across Europe in August.

TALES FROM THE INTERNET

Graeme Rutt finds two cool programs for 'Net heads...

This month has seen my attention wander to a couple of really excellent programs for Atarians with an interest in the 'Net. The first is called Oasis and finally gives users of NOS a graphical interface for Usenet news and e-mail. It still uses NOS to gather the e-mail and to get your Usenet news but replaces the old TOS reading and replying software with a pretty good GEM interface.

While it has a few GEM problems on non-ST screens, it works well and can only get better. The authors, Phil Yeardon and Dave Levi really should be congratulated.

I'm really excited by Oasis because it bodes well for the Atari's future on the 'Net. The TOS-based, difficult-to-set-up NOS package was a good workhorse but was hardly likely to attract many new Atari users on to the 'Net. Oasis is different — it's point-and-click, easy to use and is a much more attractive proposition. It even features a (non-working) menu entry for Web browsing — I'm intrigued!

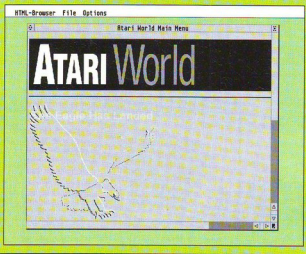
On that very subject, I've been checking out the HTML browser written by Alexander Claus. Unfortunately it only works off-line at the moment but it's a classic piece of GEM coding that displays disk-bound Web documents really well. It was a real pleasure to be able to create the majority of my 'Feel like makin' Web' screen grabs on my Atari this month. When Alexander sorts out the 'Net connection we're in store for some good times.

You can find Oasis on the ftp.demon.co.uk site, path `/pub/atari/oasis` and the HTML browser is available on CIX in `atari.st/2listings`, from bulletin boards and public domain libraries. That's it for this month — it's gone midnight, the house is quiet and it's time for some 'Netting. See yah.



A mirage? No, it's Oasis — graphical 'Netting on the Atari.

A HTML browser sans browsing capabilities — nice nonetheless.



Look North

Denesh Bhabuta headed to Gothenborg to find that the Swedes love their Ataris.

The Nordik Atari Show was organised by Svenska Atariklubben (the Swedish Atari Club) to celebrate its 10th anniversary. It took place over three days, 16-18th June, in a school in central Gothenborg, Sweden.

The show was focused on using rather than buying and there were talks on "The future of Atari computing" as well as hacker/demo coding contests and demonstrations of various programs.

The Falcon Pro Centre was demonstrating Twist and Papyrus, and showing off beautiful Tower Cases for the Atari range. They were also taking orders from the long list of goodies in their catalogue. The people behind the games Substation and Obsession, UDS, were there in force too, with many machines running the games if you felt like having a blast. And with Disk I making Jaguars available, running the likes of Doom and AvP, games players weren't left out.

16/32 Systems and Compo made up the British presence at the show. 16/32 had some good deals on games such as Ishar 3 and the Crawly Crypt CDs. Compo had on offer a whole host of hardware and software such as Falcons, memory upgrades, That's Write, and even some games at very good prices.

Sven Borneemark was also selling and displaying the Twilight screen saver, along with some FaST Club software and games. He was showing a preview version of Positive Image, an image manipulation program that should be available from Floppyshop soon. Shareware programmers were promoting their software and Christian Andersson showed off an early version of his GEM based WWW browser! The Swedes are serious about comms and several BBSs and an Internet service provider were present too.

Indigo 2, the only Atari dealer in Denmark, attended as visitors, and told me that MagiC for the Falcon was ready and undergoing testing. This news is sure to make a lot of people happy. With people arriving from all over Sweden and Denmark, the show demonstrated just how enthusiastic the Scandinavians are about their Ataris and that the platform is still alive and kicking. I look forward to the next one!



The Twilight screensaver.



Positive Image — rumoured to be under 80 pounds!

SNIPPETS

● Details of Atari's virtual reality headset for the Jaguar are now beginning to emerge. Pre-production units were unveiled at the recent Las Vegas Electronic Entertainment Expo (E3) where they were enthusiastically received. The display itself is 428 by 254 pixels and the headset weighs in at just 400 grammes. Atari has announced a target price of just \$299 for the US but no firm announcement has been made with regard to price or availability for the UK.

● MagicMac is now compatible with the Power Mac. The latest version runs most well behaved GEM based Atari software on any 68030 or 040 based Apple Macintosh or PowerMac. The price remains the same at £149. Existing users should call for upgrade details. An English language demo of MagicMac can be downloaded from CIX or obtained free of charge by sending an SAE to System Solutions.

● In last month's review of SoundPool's M04, you may remember that our major criticism of the package related to problems with the Studio module. We are pleased to confirm that these problems have now been resolved and that existing owners of M0 4 are being offered a free upgrade to the latest version. Contact System Solutions (0181 693 1919) for further information.

● Despite a move to CD ROM by software developers on other platforms, latest reports suggest that the floppy disk is about to undergo a major revival. It seems that Matsushita, Compaq and 3M have developed a floppy disk that can hold 120 Mb of data and can be used in ordinary high density drives such as those fitted to the Mega STe, TT and Falcon. Data transfer speed is reputed to be up to five times that of a normal floppy, making it slower than a hard drive but faster than your average CD ROM device (and re-writable of course).

Titan Designs' (0121 693 6669) real-time video digitiser for the Falcon, is now on sale. As well as being bundled with Apex Media, the package also includes FalCAM, an accessory that allows you to view live video from within any GEM based program.

FalCAM Tripod is another

piece of software developed to help you get the most out of Exposé, but it is still under development and unlikely to be ready in time for Exposé's release.

However, all purchasers of Exposé will have this software sent to them automatically as soon as it becomes available. Exposé costs £369 bundled with

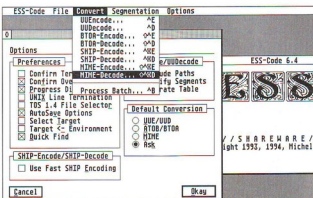
Apex Media. Existing owners of Apex Media can purchase Exposé for the reduced price of £249 by returning their Apex installation disk and registration card.



FalCAM - live images on the desktop.

The CyberStrider files

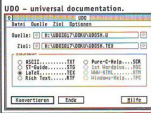
Denesh Bhabuta brings you the latest PD news from HENSA.



Support for Atari PD must be the best in the world. This month has seen updates to a lot of software, most of which has featured in PD Arena over the past few months.

Hardly a week goes by without some sort of update to the alternative desktop. Thing It has already gone through many updates since the Reader Disk version, with many bug fixes and new features, taking the best from Gemini, Ease and even Windows 95!

The optical character recogni-



ESS-Code.

tion program OCR is up to version 1.4 with a text editor and basic image editing tools (pen, eraser, filter and thicken) included. The interface also sports an icon bar among other enhancements.

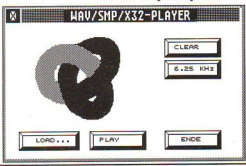
HTML-Browser has come a long way since last month's review. It supports the drag and drop protocol, has a hotlist feature and allows you to configure the window and text colours. The program also includes a "greyed-out" option for connecting

onto the Internet, so we may have a full Web browser in time! The Falcon screen saver, TurboBlanker, has gone through some bug-fixes, and now monitors the MIDI ports too.

ESS-Code allows you to send binary data over computer networks that don't support transfer of binary data. It does this by converting files to ASCII, then back to their original state after transmission. WSX is a shareware program which plays SMP, X32 and WAV sound files on any Atari with the DMA chip. UDO is another new arrival that allows you to convert between ASCII, LaTeX, RTF, ST-Guide and Pure-C Help. With "greyed-out" options promising HTML and Windows Help support, this is definitely one to register.

A demo of Rainbow II Multimedia is also available. This is a Falcon only multimedia program featuring picture, sound, photo, slideshow and sprite studios. You should contact JCA Europe (01734 452416) for further details.

Everything you need to do in WSX is done from a single dialogue box.



Next month...

SUMMER FUN!

ON SALE
18TH AUGUST 95



- ◆ Substation - Full review of the latest game from Unique Developments - The team that brought you Obsession.

ATARI World

- ◆ Substation - the ST's first Doom style first person perspective action game.
- ◆ The art of PhotoCD and tweaking those holiday snaps.
- ◆ Fun and Games on the ST, Falcon and Jaguar plus a special feature on playing head to head.
- ◆ All the latest reviews, including Exposé digitiser, Diamond Edge 2 and many more.

ATARI Pro

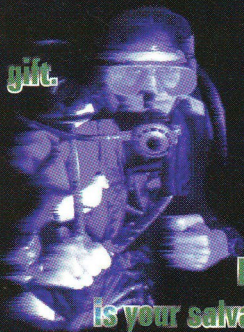
CD ROM
A comprehensive guide

STSource

FONTS AND TIMWORKS
How to access more fonts and how to use them to best effect.

SUBSTATION

Life
is a gift.



Death
is your salvation.

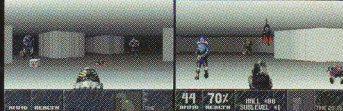
SUBSTATION: In 1996, Mitushi Industries Corp. reveals the greatest innovation in search of alternative energy sources.

By cooling the lava streams inside the mantle they create electric power through large underwater turbines.

Two years later, Mitushi's "IEE" (Inside Earth Energy) base SubStation, at 2500 metres below sea level, is fully operational and provides Japan's two largest cities with all their power needs.

June 6th, 1999, 11:15 am. Contact with SubStation is lost. In panic, Mitushi's board of directors pay the U.S government an unknown amount of money to lease an "M.E.M"-squad to explore the secrets of the ceased contact with SubStation. Secrets that should remain hidden, deep down at the bottom of the sea...

SubStation features: True 3D world More than 2000 different locations A vast number of horrifying enemies Real time Gouraud shaded walls Advanced DD-Audio sound 6 different weapon types Multiplayer mode Secret rooms & booby traps Real-time lightsourced sprites 25 kHz sound More than 30 colours "Trial and error" monster A.I. More than 30 action-packed levels End-of-level bosses 100% horror!



From the makers of Obsession
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Reader Disk

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order hotline:
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A cover disk increases the price of a mag yet many readers never even look at the software! There has to be a better solution – the Reader Disk...

The optional Reader Disk directly supports the software covered in the magazine and creates a link between the reader and the software author. *Atari World* supports and encourages shareware authors – in return you can do your bit by supporting them. The *Atari World* team is in constant

contact with the best Atari programmers around – we keep your finger on the pulse and obtain the very latest versions, often exclusive to *Atari World*!

A single Reader Disk costs £2.50 inclusive of post and packing – the same price as a typical PD disk. Some issues will offer two

or more Reader Disks with each additional disk costing £1. For example, a three disk issue would cost £4.50 inclusive of post and packing.

So the choice is yours but don't forget to check out the special subscriber deals on pages 50 and 51.

This month's Reader Disk

Everything on this month's reader disks is covered inside the magazine. The folder extension points you to the relevant section of the magazine. AW for the main mag, ST for ST Source, PRO for Atari Pro and PA for Public Arena. For example a folder called ADDRESS.PA means Address is covered in Public Arena. To make it easy to back up your reader disks a copy of AWBAKUP.TOS is included. Simply run AWBAKUP.TOS and follow the on-screen instructions; the program even formats the disk for you. We recommend that you always store your original disks in a safe place and don't use AWBAKUP.TOS for any other purpose.

Disk A

Address v2.02

Shareware •
Carsten Setje-Eilers

Address is a name and address manager that runs as either a program or desktop accessory. It's also one of the cutest GEM applications around!

AVFM v1.0

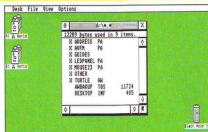
Special edition • Shareware •
Ian Richardson

AVFM is a program launcher with a difference. Virtual names up to 30 characters long can be assigned to programs, directories and documents.

LED-Panel v3.1

Public Domain •
Christoph Zwerschke

What's the time? Is Caps lock active or not? Did the hard drive really save that file? LED-Panel, installed on your menu bar, keeps you informed.



Mouse23 v2.3

Public Domain • T34

Plug a PC serial mouse in your Atari, run the software and hey presto, your Atari mouse can take a break. Useful! Maybe in an emergency but it's fun anyway.

Atari World Profile

Exclusive • Joe Connor

Database for issue three in ST-GUIDE format. The database now covers the first three issues. To maintain your database you may prefer to create a separate database disk which can easily be extended each month.

Use AWBAKUP.TOS to make a copy of the reader disk. On the copy delete everything apart from the GUIDES folder. Copy the

contents of the latest reader disk GUIDES folder to the GUIDES folder on your database disk – some files will be overwritten each month, this is normal. Optionally add a copy of ST-GUIDE.ACC and ST-GUIDE.INFO to create a standalone database boot disk.

Turtle v3.2

Public Domain •
George R. Woodside

Backing up data is tedious enough so a program like Turtle which minimises the hassle factor should be welcomed with open arms. It's another classic.

Disks B to H

Timeworks 2

Exclusive • Commercial

Timeworks is the classic Atari Desktop Publishing package that has been used to create everything from address labels to entire magazines! This exclusive version is the full package – it's not a demo and nothing has been disabled. See ST Source for a complete tutorial.

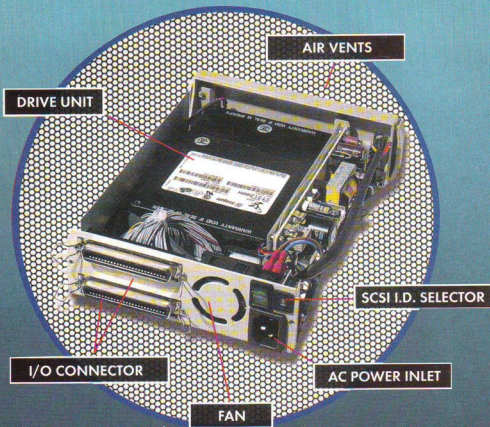
Reader Disk problems

In the unlikely event that a Reader Disk won't load or gives you any other problems, disconnect all peripherals, switch off your computer for at least 20 seconds and try again. If this doesn't solve the problem, return the disk to the *Atari World* Disk Sales address, including a stamped self-addressed envelope, clearly labelled "Atari World faulty disk". Your disk will be replaced as quickly as possible.

Should you require technical help, call the *Atari World* disk helpline (01206 852602) on any Wednesday evening between 7pm and 9.30pm. Please don't call outside these hours as we won't be able to help you.

SEE PAGES 48-49 FOR ORDERING INFORMATION AND BACK ISSUES

Ladbroke Computing



Datapulse Micra 353Mb

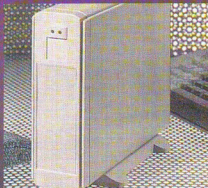
£269.99

includes ICD LINK 2

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Please call for details



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Datapulse 353Mb Micra	£180.00
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Datapulse Micra Dual Speed	
CDROM Includes Extends	£230.00
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CDROM Includes Extends	£290.00
ICD LINK 2	£89.99
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Picture shown is of PC screen display, ST displays borders. Actual screen size 10.75 inches

- Fully compatible true high resolution monitor
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- Includes ST Adaptor with built in sound
- 3.5mm Line out jack included
- When connecting to an STE we recommend using amplified speakers as STE monitor sound output is very quiet.

Only £99.99



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Star LC240 24 Pin Mono	£134.99
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Citizen ABC 24Pin Colour	£169.99
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HP DJ320 Colour capable inkjet	£229.99
HP DJ540 Colour capable inkjet	£269.99
HP Colour cartridge	£26.00
Centronics Printer cable	£3.00

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Ladbroke Computing International are one of the longest established home computer dealers in the UK. 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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Our Atari trained technicians can repair ST's in minimum time at competitive rates. We can arrange for fully insured courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and, subject to fault completed the same day.

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Quotation	£15
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Marpet upgrades for the STRM are plug in and require no soldering providing MMU and Shifter chips are socketed (phone for details).

The Marpet board allows connection of standard "SIMM" memory boards (see prices below).
Unpopulated Marpet. £26.00

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290 dpi switchable ST/Amiga mouse. 2 microswitched buttons. Free mouse mat.

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All SIMM upgrades come complete with test disk and instructions. Most STE's are compatible with SIMM's however please check existing boards before ordering (phone for details)

2 x 256K SIMM's	£4.99
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- Microvitec 1438 Monitor
- Displays Low/Medium and high resolution

- Includes ST Switchbox.
- 14" Colour monitor with tilt swivel stand

Now Only £279.99

Letters

The more I look at the lurid pink front cover of issue 3, the more convinced I am that you have indulged in a cynical publicity stunt more worthy of the sleaziest of tabloids than a 'serious' computer magazine.
Mike Fairnes, Cardiff

The front cover was a poor choice... how can someone spend time converting a small kid's toy into smut?
Stuart Liam, London

An article like this doesn't affect me - how can you view such pictures in 16 colours in low resolution anyway?
Jon Carment, Birmingham

As a father of two young children, I find the article on pornography unacceptable. We all have a moral obligation to protect children from this - I have torn the page from the magazine myself.
J Walton, Oxon

The article on computer pornography seems to me to be presented as a blatant invitation to surf the Internet for porn by those not already aware that it is there.
Cecil Ockenden, Dunstable

You may feel that it is necessary to "discuss" computer pornography in your magazine (I myself do not think so) but I see no point in your printing pornographic photographs.
J Logan, Belfast

This representative sample clearly shows there are three areas of contention: the cover, the pictures within the article, and the article itself. Let's take these one at a time.

Cutting out page 43 removed three pictures, two of which showed Barbie dolls being used by an American World Wide Web site (which has since been closed down) as a joke illustration of sexual activity. The cover was based on this, but the preclusion



Issue 3 certainly caused a storm of protest - so Vic Lennard attempts to set the record straight...

of these images made the cover picture impossible to understand. A cover exists to draw your eye to the magazine, which issue 3 certainly did, and to inform you of the contents. The offence it has caused was way beyond that which I expected.

Why was page 43 removed? Two images were used as shock tactics to get the important point of this piece across. I personally selected those pictures and edited them accordingly - in no way should the author, Graeme Rutt, be perceived as being to blame. However, I was given incorrect advice regarding the legality of the picture on page 43 leading to the purging of that page. Were the pictures in poor taste? Perhaps, but would the article have resulted in such furor without such illustrations? I doubt it.

So was I wrong to run the piece? Let me give you a few facts so that you can decide. First, modem sales are on the increase across all computer platforms and many companies are becoming aware of this; you can buy crates of wine from both Tesco and Sainsbury via a modem and the Internet or Compuserve. Second, at least two World Wide Web browsers are under development for the Atari ST. Such a piece of software will allow you, or your children, to connect to news-groups containing a vast variety

of pictures with just three or four clicks on icons. Third, you don't need the extended video capabilities of a Falcon to see such pics - the Speed of Light image viewer and a TV set give astonishing picture quality from a bog-standard ST. Fourth, the advent of cable TV is leading to high quality, cheap telephone lines - perfect for modem use.

"If you download any kind of porn then your service provider is breaking the law and if you upload it, you are." and "If you send any type of pornography, in any way, then you are breaking the law" are two excerpts from the removed page. Do these comments sound like they come from a piece that is making light of the computer pornography issue? Did I include any World Wide Web addresses for people to investigate, as many other magazines have? No - and this was a very conscious decision. In fact, the closing comment was: "It gives any authority that so desires the perfect reason for insisting that Internet should be policed. The situation should be worrying... your local bulletin board sysop. They should be very worried indeed." which just about sums up the reason why the piece was run - as a warning to every Atari owner. And don't say that it'll never happen to you because you do not own a modem - given the

right price and available facilities, I'd be surprised if almost anyone wouldn't be tempted by the phenomenal amount of on-line information. It's a different world.

It is very sad that a four-page feature has detracted so much from a really good magazine (various people have said that it's the best ever issue of an Atari magazine), and that Graeme, the writer, hasn't received the kudos he deserves for a great deal of research.

The issue of computer pornography certainly won't go away, and while many of you may be happy to stick your head in the sand and ignore it, I have a responsibility as a journalist to inform and warn you. I too have a son of 7, who is quite computer literate; I also share the burden of protecting him from known hazards. For instance, should I allow him to look at my daily paper, *The Independent*, because it prints all swear words verbatim in quotes? And this is the crux of the matter - this article was intended to make you aware of the dangers of allowing children loose on your computer. And if not now, certainly in the future.

I am aware that my leaving the magazine will be perceived as running away from a problem I created. But we don't get to choose when we're ill, and my medical condition requires an immediate reduction in the pressure on my life, hence my total withdrawal from the Atari scene.

To those I seriously offended, I apologise; this was not my intention. To those parents who will now supervise their child's access to a modem, thank you for reading and taking note.

Finally, I'd rather you remember me for six years of Atari journalism and over 500 published articles, plus almost three years of editing *ST Review* and *Atari World*, rather than for a single article in my penultimate issue.

Write to Wright...

Send any letters to Andrew Wright at *Atari World*, either to the address on page 98 or via email to atari_world@cix.compulink.co.uk.

Squirrel hard drive

Ofir Gal puts the latest hard disk system from HiSoft to the test.

HiSoft is well known for quality software. From the creation of C and BASIC compilers to programs like Papyrus and Harlekin, the company has maintained high standards of quality. However, apart from various plug-in cartridges like video digitisers, the company hasn't ventured into the hardware market. That has all changed in recent months with the launch of the new Squirrels – a complete range of hard disk systems for the Atari.

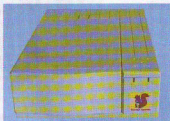
The Squirrel drives are cased in a plastic box measuring 250 by 165 by 60 mm. Unlike some, the unit cannot stand upright, only horizontally. The fan is located at the back of the unit, with the vent facing sideways on the rear left. At the back you will find the

SCSI ID selector, two SCSI ports and the power switch. There's a variety of latest generation Quantum Lightning drives starting with 270Mb sizes and larger drives are also available, as are SyQuest versions. The drives and fans are very quiet.

The system is supplied with the optional ICD Link 2 host adapter with ICD utilities for STs, or a SCSI 2 lead and AHDI for the Falcon. HiSoft supplies the drives internally terminated, but can also supply an external terminator on request. HiSoft also gets full marks for a clearly laid out manual that covers all details of



installation as well as some background information about SCSI. The unit performs well, as one would expect, and it is competitively priced.



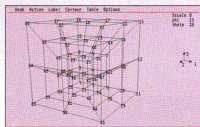
SQUIRREL HARD DRIVE	
SQUIRREL HARD DRIVE	
UK Distributor: HiSoft Contact: 01525 718181 RRP: £249 for 385Mb model (plus £69.95 for ICD Link 2 or £34.95 for Falcon cable)	Requirements: Any Atari computer Pros: Compact design • very low noise level • good documentation Cons: None we can think of!

FEM Designer

Joe Connor takes a glimpse at a ground-breaking application – finite element analysis on the Atari.



Starting with a computer model of a design, finite element or FEM analysis can model the behaviour or the structure and indicate areas of stress. It's usually cheaper to fine tune a computer model than manufacturing a series of prototypes and explains why



Join the dots? Nah, that's finite element method analysis in action, mate.

FEM analysis is growing in popularity. FEM Designer starts with an ASCII text datafile describing a structure and organises it into 'elements' joined together at 'nodes'. A collection of elements is called a mesh to which 'restraints' and 'loads' can be applied.

Using the 'Build model' option pre-processes the ASCII datafile and generates the finite element model. After a successful build the model can be analysed using the 'Solve model' option which sets up, then solves, a series of simultaneous equations.

After solving the model the results can be 'postprocessed' which is a technical word for viewing the results. FEM Designer displays results in tabular, 2D or 3D form, depending on the model. A zoom tool makes it easy to inspect the model in detail by dragging a selection rectangle around any area and a single left mouse click restores the view to neatly frame the model. Unfortunately FEM Designer's interface is still in the dark ages compared with modern GEM applications and is the major limitation of the current release.

FEM DESIGNER	
Product name: FEM Designer Publisher: JG Design Services Contact: 01324 627777 RRP: £95 (Introductory offer)	Requirements: Any Atari, 0.5Mb or more memory, medium resolution or higher. Pros: It's available! Cons: Poor GEM implementation • only for techies

Flash, Bang, Wallop!



Imagecopy returns, boasting an improved interface and page layout facilities. Nial Grimes gets to grips with the essential Atari utility...

Imagecopy is generally regarded as one of the most useful utilities that you can buy for an Atari computer. What started life as a very basic screen grabbing program has matured into an accessory that will quickly display almost any picture you care to throw at it, and output the result to your printer in glorious colour. But what improvements does this latest version offer?

Initial impressions do little to betray the major changes that have gone on behind Imagecopy's familiar dialogue box. However, much of the work that was started in version 3.5 has been carried through to fruition in this latest release.

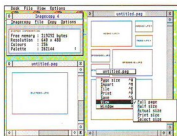
Pop-up menus are strongly in evidence and you can save, print and adjust an image by simply clicking within its window and choosing the appropriate button. The cataloguing option has been lavished with similar attention and thumbnails can be viewed or converted without having to go wading through piles upon piles of windows. A healthy reduction in loading and dithering times make this and most other areas of the program a real joy to use.

More ambitious photo-montages are a possibility thanks to Imagecopy's new-found page layout facilities. Pictures can be freely moved and sized on a window-based canvas and squirted to your printer with Imagecopy's customary flexibility. The images themselves aren't displayed on screen, but this makes the whole operation very quick. The only drawback is that "layout" pictures are handled one at a time, and therefore you need to run the paper through inkjet or dot matrix printers twice to output images that sit next to each other on the page. Lasers are unaffected.

On the up...

Of course, Imagecopy still possesses all of the features that made it such a good utility in the first place, and many have been tweaked to provide just a little extra punch.

Screen-grabbing, colour printing, format conversions and the slideshow are all present and correct. Changes include the ability to recognise pictures with incorrect extensions and to grab from programs that fiddle with the screen resolution. One or two extra file



Page layouts are easy to put together with Imagecopy 4 and the print quality is sensational.

formats have been added to the list and there's better support for non-standard video modes. You'll also find a copy of Textstyle included with the package, which is handy for adding headlines to image layouts.

All in all, version 4 adds some very powerful features to Imagecopy's armoury. Sure, some of the bells and whistles are not going to appeal to everybody, but the improved speed and slinky interface alone make it well worth the (affordable) upgrade, particularly if you are still using version 3.



Thumbnails can be viewed or converted via pop-up menus - no more window juggling!



The legend lives on - Imagecopy will load, convert, adjust and print almost any image file you can lay your hands on.

IMAGECOPY

Publisher: FAST CLUB
Contact: (0115) 945 5250
Price: £34.95/£39.95 (Upgrades available).
Requirements: Any ST, 1MB memory.

Pros: Loads almost any image file • superb print quality
 • easy to use
Cons: Uses a lot of memory • getting expensive

Twilight zone

Who turned off the lights? Carl Löfgren examines the Twilightscreensaver with his virtual flashlight...



The purpose of a screensaver is to extend the life of your monitor, by blanking the screen when the computer isn't being used. Twilight from Delirium Arts in Germany, is one of the most popular ones and it has finally found its way to the UK.

Let's start by looking at one of the most important aspects of a screensaver, the question of compatibility. Unfortunately, with many screen savers, it is too often forgotten in the rush to provide fancy, colourful animations. Too many of them corrupt the screen, ruin MIDI data and even crash the system. I have used Twilight together with many so-called "dirty" GEM and non-GEM applications without any problems. It is even possible to make it work with Cubase.

When it comes to checking for activity, Twilight is very flexible. It can check normal activity such as mouse movements and input from MIDI, joystick, serial and LAN ports. You can also configure how it should react to activity such as GEM-DOS/VDI graphics, text or dialog boxes.

Twilight is a modular screensaver. When it is installed it only occupies about 60 kilobytes of memory, as it only loads the saver module itself into memory when Twilight is activated. If no module was selected or if there is little free RAM, Twilight uses its built-in module, either inverting or fading the screen.

It is also possible to configure how much processor time Twilight is allowed to use. This is very useful when the computer is doing something else in the



Just an example of one of many colourful modules. (Falcon 16 colours)

background like downloading from a BBS.

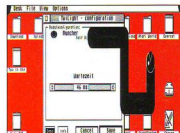
Modules galore

Each module is a small program that is executed when the screensaver is activated. There are around 30 modules included in the package but over a hundred different modules are available and more are coming out. The list includes melting the screen, drawing fractals, colourful patterns, starfield, a user definable spotlight effect, puzzle, firework, clock and even a Pong game! Most can be tweaked with several different options such as the number of visible objects, speed, colours and so on.

For the programmers out there, Twilight is very well documented and there are several examples of how to write your own modules in C, Assembler and Pascal. Thanks to the Animator module, it is equally possible for non-programmers to create their own animations — all you need is a paint/animation program that supports IMG files.

As in most other screensavers, Twilight supports both sleep and awake corners and password protection. The protection even remembers if anyone tried to fool around with your computer while you were absent! Many modules have their own sound effects. If you use the commonly supported module player Paula, and run it as a desk accessory alongside Twilight, it can play music modules while Twilight is active.

At the time of writing, the manual is only available in German but an English

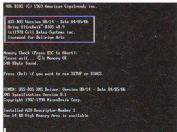


Hmmm, I wonder how my Atari World folder tastes... (ST Medium)



Twilight's main menu.

manual should be available by the time you read this. The program is completely Anglicised and so are most of the modules. Unfortunately the UK price hadn't been settled either but JCA say it is likely to be around £30 which is a lot of money for this type of utility. It is also a shame that it must run from a hard disk. On the other hand, if you want something attractive, amusing and compatible with existing software, Twilight is likely to become the screensaver for Atari computers.



This is what DOS is all about, I believe. (ST High)

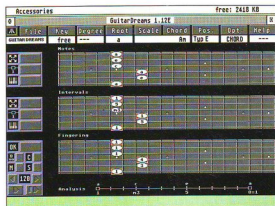
TWILIGHT 1.29

Product name: Twilight 1.29
UK distributor: JCA Europe Ltd.
Contact: 01734 452416
REP: CIBA
Requirements: Any Atari (not TOS 1.00), 0.5 Mb or more memory, any resolution.
Pros: Compatible with most software • highly configurable • beautiful to look at
Cons: Expensive • requires a hard disk



Guitar Dreams

If you wanna twiddle like Eric (Clapton, that is) or groove like Hank (Marvin, that is), you have to practise your licks as Ian Waugh finds out.



The three fretboards on *Guitar Dreams*' main screen show the relationship between the notes, intervals and fingering.

Most music teachers build up a collection of examples and exercises for their students over their years of teaching. Some put them into a folder to give their students and a few publish them as a book. Wolfgang Widder went one better and converted his ideas into a computer program — *Guitar Dreams*.

Scale	Channel	Velocity	Sound	MIDI	On/Off
Guitar	2	64	24	---	Off
Acoustic (Steel)	---	74	---	---	Off
Ukulele	10	64	8	42	Off
MIDI	---	---	---	---	Off
Transposition	---	---	---	---	Off
Export-track	2	---	---	---	Cancel

The MIDI setup window defaults to General MIDI but you tailor the output to suit any instrument.



The main screen contains three fretboards. The top one shows the note names, the middle one describes the chord in terms of intervals and the bottom one indicates the fingering. The ability to see these three aspects of a chord or scale at the same time reinforces the connection between the practicalities of music and the theory.

If you connect the computer to a MIDI module, the program will play the chords in chord or arpeggio styles with the notes lighting up

traditional notation and as they would appear on a piano keyboard.

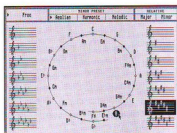
The program also contains a sequencer where you can arrange guitar chords into a lead sheet, add rhythms and play arrangements in a loop to improvise over. You can load and save sequences and edit them, and when you're happy with the result you can save it as a standard MIDI file for loading into a proper sequencer.

Verdict

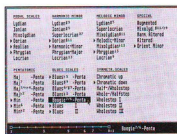
I'm acutely aware that there's been one major recurring criticism of some of the software I've been looking at recently — the manual. The *Guitar Dreams* manual is, unfortunately, no exception. The print is tiny, there's no index (although there is an excellent contents section) and there are very few illustrations which make it a rather dry read even though there are excellent onscreen displays. It comes across very much as a music text book rather than a fun, you-too-can-be-the-next-Mark Knopfler book which, I suppose, it is.

Finally, the program assumes some degree of knowledge on behalf of the user. In fact, the manual suggests that beginners and children should use the program with the assistance of a teacher which must make it less attractive to the newcomer.

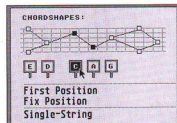
However, the program contains a wealth of excellent information and I'd really hate to dissuade anyone from trying it. Wolfgang has just put about every aspect of chords, scales and harmonies into it. The guy knows his stuff and for sheer content you'd have to go a long way to beat *Guitar Dreams*.



Guitar Dreams includes a very comprehensive and interactive "Circle of Fifths" diagram.



Select one of the scales and see it displayed on the single-string at the bottom of the screen.



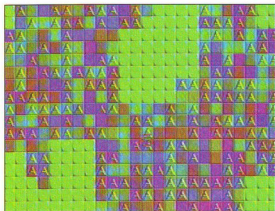
You can see the chord shapes of the five most common guitar chords by touching the names with the mouse.



Publisher: **...**
 CD-ROM/Software: **...**
 Price: **...**
 Requirements: **...**

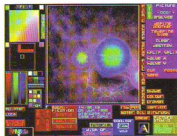
Price: **...**
 Date: **...**

Over the Rainbow



Built-in entertainment! – Rainbow II comes complete with its own Minesweeper clone.

Apex Media has pretty much sewn up the high-end Falcon graphics market, but there's still plenty of room left for low-cost art packages that can make good use of the machine's abilities. The original Rainbow slipped nicely into that category. Sure, the interface was a little flaky, but it did provide fast access to the Falcon's true-colour screen modes at an



Natural drawing tools enhance the power of Rainbow's picture studio.



You can move freely between Rainbow's five studios without fear of losing any data.

affordable price and Rainbow II Multimedia aims to continue the tradition. Hmm – let's take a look, shall we?

Despite its multimedia pretensions, Rainbow II is still very much a traditional art package. Lurking beneath that familiar interface (complete with its itchy font) you will find a picture studio similar to the original Rainbow. In fact, "ruddy identical" is the phrase that springs instantly to mind, but look a little

closer and you will find a number of new features, including some rather whizzy natural drawing tools (oil, crayon and the like).

The photo studio has been treated to a wee bit more attention. Several image processing effects are available – including contrast, glamour and smooth – and you can also design your own filters through a matrix. The DSP is obviously being put to good use – filters are applied in a matter of seconds and the whole program is exceptionally fast.

Beyond this point, the new version of Rainbow edges onto untrampled ground. Programmers will no doubt appreciate the ability to produce sprites easily and the authors have also included a limited sampled sound editor and

Nial Grimes kicks his Falcon into overdrive and experiences multimedia, courtesy of Rainbow II. Take it away Zippy...



even a Minesweeper clone. The slideshow studio backs up these facilities with a token contribution towards multimedia. Yes, you can unite your artwork, sprites and sound effects in a "presentation" (Rainbow-speak for a picture with a sprite floating over the top) but the lack of any textual abilities does dampen creativity on this front.

Pot of gold?

At first Rainbow II seems like a major upgrade, but mentally strip out the parts that you will never use and you'll probably find that you're left with the picture and photo studios, both of which were included in version one (albeit in a more limited form). At the original price point of £29.95 you could



Several image-processing filters are available, and you can design your own through a standard matrix.

The sprite studio will no doubt appeal to programmers but "normal" users will probably find it less exciting.

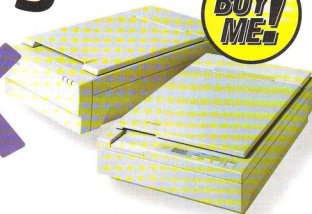


excuse the slightly tacky interface and limited features, but when you're looking at close to £60 – a 50% stake in a copy of that giant atom art multimedia programs known as Apex Media – these things do start to matter, big time. Might I respectfully suggest that you take the demo version for a test drive before splashing out the cash?

RAINBOW II MULTIMEDIA	
<p>Product Name: Rainbow II Multimedia Publisher: Addition Software UK Distribution: JCA Europe Ltd Contact: 01734 452416 RRP: £59</p>	<p>Requirements: falcon030 • 4Mb memory. Pros: Speed • realistic drawing tools • Apex Media – these things do start to matter, big time. Cons: Tacky interface • too pricey • where's the multimedia?</p>



Get a good look



Ofir Gal looks at the latest incarnation of GT Look, the top end scanning package from Digital Arts.

DTP enthusiasts will be glad to hear that System Solutions now offers a complete scanning package for all Atari computers. The system is based around the best-selling Epson GT range and Digital Arts' excellent GT Look software.

The Epson flatbed scanner range starts with the budget GT6500 (£699) which has an optical resolution of 300 dots per inch (dpi), through the GT8500 (£799) at 400 dpi, right up to the GT9000 (£899) with a superb resolution of 600 dpi. All three models use hardware interpolation to achieve reso-

lutions that are four times higher. The 6500 uses three light sources while the other two feature four light sources to give even better quality scans. Extra options include a transparency adapter and an automatic sheet feeder.

Making a connection

The scanners can connect either to the parallel port or the SCSI port, depending on which computer you are using. The ST uses the parallel (printer) port but since the Atari hardware differs slightly from the industry standard, an additional lead must be connected to either the MIDI or the serial port. If you have a Falcon or a TT, your best option is to use SCSI which is faster and this option also works under MagiCMac.

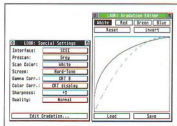
GT Look may be a little pricey but it is an outstanding piece of software with all the bells and whistles you could ever wish for. The first time you run the program you are asked which port the scanner is connected to. The program is fully GEM-based, featuring a non-modal interface which is very friendly and easy to use.

The first step is the pre-scan. This produces a quick preview image that enables you to crop the image, adjust brightness, zoom in and out or use the optional modules to adjust image

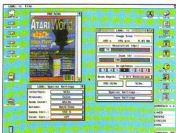


colours. You can also choose to scan in monochrome, greyscale or full colour.

Once you have made all the necessary adjustments you select the scanning resolution and carry out the scan itself. The resulting image is then displayed in a window and clicking on the image produces a menu that offers the option of saving the image in one of several formats, including TIF and TIC. However, if you don't have enough memory, GT Look is able to scan directly to disk.



The scanned true-colour image can be saved in TIF, TIC or TGA image format and later imported into a DTP or image manipulation package for further processing.



After the pre-scan is displayed on screen, you can crop the image and select the final options for the scan.

Added value

There are currently two optional modules at £49.95 each that add extra facilities to the GT Look software. The optimiser module lets you adjust image contrast and brightness as well as colour balance using the pre-scan image, which is useful for correcting under or over-exposed prints.

The changes are shown in real time in the preview image and this can save you the need for a dedicated image manipulation program. The photocopyer module transforms the system into a photocopyer where you can scan and print at the same time.

GT LOOK

3 -2 -1 0 +1 +2 +3

Product name: GT Look	RRP: From £999.00 for Epson GT6500 with GT Look
Publishers: Digital Arts	Requirements: Any Atari
UK distributor: System Solutions	Pros: Powerful scanning facilities • good user interface
Contact: (0181) 693 3355	Cons: Cost

The GT Look software offers various preset colour correction curves optimised for screen display or printer output. The gradation editor can be used to create additional custom gradation curves.

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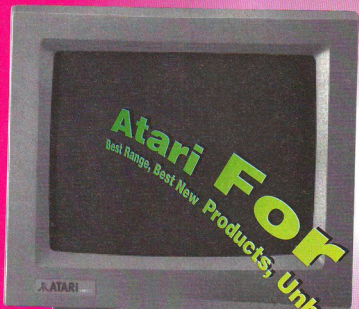


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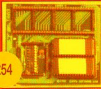
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UPGRADING AN STFM

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A real Gemulator



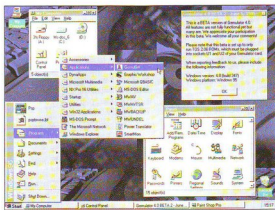
Atari emulation on the PC takes two steps forward and one step back as Joe Connor explains...

The Gemulator, which was originally released in 1992, enables Atari software to run on a PC using a combination of a PC expansion card fitted with standard Atari TOS chips and special emulation software. Gemulator 4.0 marks a significant change in direction, being the first version to run directly under Windows instead of DOS.

Although Gemulator 4.0 is optimised for Windows 95, Microsoft's new operating system, it also works with OS/2 Warp or Windows v3.1 upgraded with the 32-bit file extensions. Using the Windows 95 much vaunted plug and play setup wizard installation couldn't be easier. Our test PC, a 66 MHz 486DX2 fitted with 8Mb memory, IDE Mitsumi CD-ROM, Spea Mirage V7 video card and a single Gemulator card was correctly identified and Gemulator ran first time.

Two steps forward

When you launch Gemulator a Windows setup dialog (instead of a DOS menu)



Windows 95, the end of the DOS era for Gemulator?

More or less Mega STe level performance on a fast 486.

Multiple Gemulators running different resolutions and accessing a CD-ROM under Windows 95!

Emulate an ST - or several if you like.

File	Test	Min:	Max:	Statistics
MEM (Kilobytes)	20,480	470	Display: 610	
MEM (Free)	20,576	190	CPU: 2400	
MEM (Used)	10,128	180	Average: 1800	
MEM (Free)	21,408	140		
MEM (Used)	10,128	180		
Group Division:	4,080	920		
Free Space:	20,736	60		
RAM Access:	4,252	210		
Free Time:	4,840	170		
CPU Access:	4,428	180		
Free CPU:	12,768	100		
IO/Floppy Text:	22,752	180		
IO/Keyboard:	1,672	180		
IO/Mouse:	1,088	140		

offers various options so you can emulate any Atari model from a 520ST up to a 14Mb Mega STe at 1600x1200 resolution with a stereo sound and a Blitter. Gemulator will even emulate the joystick, MIDI, serial and parallel ports. Deciding which features to emulate is crucial and generally speaking the higher the spec the slower the emulation. Typically a fast 486 outperforms a Mega STe while a top of the range Pentium turns in TT level performance.

Because Gemulator 4.0 is a native Windows application it can, in theory, access any system resource available to

Windows and support for graphic cards, sound cards, CD-ROM drives, removable media, MIDI, serial, parallel and joystick ports are all planned for the release version. Additionally the mouse, keyboard, date and time are all managed via the Windows control panel just like any other Windows application.

The Atari desktop can be used instead of Windows Explorer or the Program Manager which makes it possible to launch Windows and Atari applications side by side from any drive, including a CD-ROM player.


For Atari users raised on a diet of monochrome and medium resolution and looking to play Doom or surf the Internet while continuing to use their favourite Atari software, a Gemulator-equipped PC is the perfect solution.

One step back

Gemulator's display speed under Windows has always been slower compared with running directly from DOS but with Gemulator 4.0 there's no longer a choice. You can get maximum display speed by running an earlier version in Windows' 'Single MS-DOS Application Mode' but this means trading access to Windows resources in exchange for display speed. Using a software screen accelerator such as NVDI, Warp9 or the built-in options makes the display speed bearable but Gemulator really needs faster hardware.

No doubt this is one of the reasons the minimum system requirements have been revised upwards from a fast 386 to a 486 - but I'm saving hard for a Pentium!

GEMULATOR



4.0 TOS 2.06 2M 320x200x16

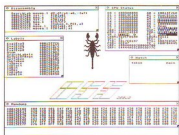
<p>Product name: Gemulator 4.0 Publisher: Branch Always Software UK distribution: Fast Club Contact: 0115 845 5250</p>	<p>EEP: £119, excluding TOS ROMs, TOS 2.06 ROM £39.95 Requirements: 486 or Pentium PC, 8MB or more memory, 16bit or more virtual memory and either Windows 95, Windows 3.1 with Win32s or OS/2 Warp.</p>
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BSS Debug

Graeme Rutt dons his programmer's cap and goes Falcon bug hunting.

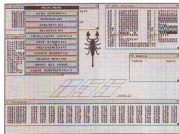


BSS Debug is a direct spin-off from the development of Apex Media, the best-selling Falcon animation and art package. Written by the same team that brought us Apex, Black Scorpion Software, this Falcon-only debugger was designed to cope with the burdens put on your average debugger when the machine tries to change resolutions. The Black Scorpions aren't just programmers, though they're people with



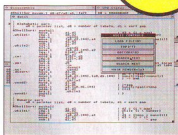
The main debug screen - yup, you really do see windows and gadgets.

an eye for graphics — and an eye for interfaces. While coding Apex they didn't want to bounce into the text-only wasteland of an ordinary debugging screen. They wanted windows, they wanted mouse support — in fact they wanted GEM but everyone knows you can't debug GEM programs with a GEM debugger because they tend to crash a lot.



Hit Help or right click on the desktop to get to the main menu.

The only option was to develop a windows based system of their own. With BSS Debug, windows can be moved, re-sized, full-sized and closed all with the click of a button. If you hit Help or click the mouse button on the desktop then you're presented with the main menu. This lists a number of



If you want a bigger view, in this instance the ASCII window, just resize it.

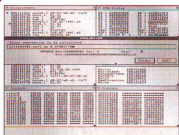
important options — many of which lead to dialogue boxes with buttons, text fields and so on. BSS Debug does lack a file selector and you have to type in the path and name of any file you wish to load or save.

In practice BSS Debug works extremely similarly to Hisoft's Mon — even down to sharing the same keyboard shortcuts. This is a great boon to those of us brought up sucking the Hisoft teat. It does offer some more window types and has the rather neat capability for the executable to set its own breakpoints and watched labels via unused trap calls.

Window shoppin'

The windows types are memory dump disassembly, watch, CPU status, labels and ASCII. Watch and labels will be unfamiliar to users of Mon; the former enables you to keep track of specific memory addresses (direct or indirect) single dimension arrays and the latter is a list of all labels.

All of the standard breakpoints, tracing (single stepping, until or conditional), disassemble to disk, and search memory commands are in place and work very well. The expression evaluator is first class, enabling you to give expressions in just



Dialogue boxes aplenty — this one's for evaluating expressions.



Keeping tabs on specific labels is pretty easy to do — and very useful.

about any of the popular bases, mixing in labels and you can even give any memory address a cast (short, word, longword).

The fact that the functionality hasn't moved on a long way from Mon isn't important. I don't believe that you could enhance the functions of that industry standard by much. The difference here is not one of functionality.

On the down side the lack of a file selector and the fact that it can't run on an Atari mono monitor like the SM124 do count against it. There is also a problem with debugging GEM when using BlowUp. This caused amazement at BSS HQ and is being worked on even as I type. I would also have liked it if the program had linked into Devpac a little better — in a perfect world it would be possible to use Alt-D to slip easily into debugging a Devpac assembled program.

To me these are all of minor importance. The fact remains that BSS Debug is a first class debugger, has a great interface and can withstand a Falcon resolution change — all of which will sound like nirvana to Falcon programmers everywhere.

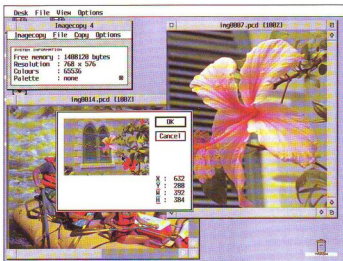
AUDIOMASTER

Product name: BSS Debug v1.1
 Publisher: Titan Designs
 Contact: (0121) 693 6669
 RRP: £30
 Requirements: Atari Falcon, 1Mb or more, any

VGA/RGB colour display.
 Pros: Great interface • survives resolution change • Mon compatible
 Cons: No file selector • no SM124 support • BlowUp bug

are in place and work very well. The expression evaluator is first class, enabling you to give expressions in just

Have your **Pictures** just how you want them



If you want to capture, view, convert, or print images on your Atari computer then you need Imagecopy. All major image file formats are supported, and images can be printed in monochrome or colour on all popular printers: 9-pin dot matrix to 720-dpi inkjet printers.

Two of the major new features in version 4 of Imagecopy are Page Layout and Catalogue.

The Page Layout facility allows multiple images to be arranged on a page using the mouse or by typing coordinates. Individual images can have their own colour settings, and can be freely moved and resized (as in a publishing program). This option can also be used to do colour DTP work by overprinting output from a monochrome publishing program, or you can use text images from Textstyle to create greetings cards or posters.

The interactive screen *Catalogue* feature displays thumbnail miniatures of images which can be clicked on to view, print, or convert the original images.

For an exhaustive list of the features in Imagecopy 4 - and for details on other versions of Imagecopy - just phone our 24-hour catalogue line on 0115-945-5250 and ask for a copy of our 24-page Product Catalogue, or if you prefer you can mail us your name and address.

Prices

Imagecopy 4: £34.95
Imagecopy 4CD: £39.95

Upgrades

From Imagecopy 3.5: £ 6.95
From Imagecopy 3.5: £ 7.95
From Imagecopy 3.5: £17.95
From Imagecopy 3.5: £22.95
From Imagecopy 3.5: £24.95

For upgrades please return disk 1, plus CD disk if applicable. Textstyle is supplied free with Imagecopy 4; add £5 to receive a copy of Textstyle with an Imagecopy 4 upgrade. Add £5 to the upgrade price if you want to upgrade to Imagecopy 4CD from a version of Imagecopy other than 3.5CD.

FaST Club

For users of Atari ST & Falcon computers

7 Musters Road - Nottingham - NG2 7PP
Tel: 0115-945-5250 - Fax: 0115-945-5305

Imagecopy 4

The ultimate Image utility for Atari computers



Syndicate - who would have thought that world domination could be so bland?

missions can take considerable time to finish although some, such as assassinations, can be completed quite quickly. As you progress you gain access to better weapons and equipment such as gauss guns and pass cards which can get you into secure areas as well as identifying you as an enemy policeman.

After a successful take-over, you can adjust the taxes in your new territory to help fill your corporation's coffers. Don't be too greedy though as higher taxes can unsettle the population making it easier for competing corporations to retake your land.

You can save your current position after each mission has been completed. There is only one save slot though so you can't have different saves at the same time.

Handy manual

Every button on the Jaguar's controller is used to manipulate your team. There are even several key combinations resulting in a bewildering array of options. It's probably best to have the manual handy and open on the controls page. Unfortunately, Syndicate doesn't come with a controller overlay which is a major omission in such a complex game.

The graphics don't really do the Jaguar justice either. They have been slightly improved over the versions on other platforms but they are still fairly basic.

There is a new zoom feature which can be very useful and while the scrolling is still done in jumps, the animation of the agents is very good. The various still images look rather chunky and have surprisingly few colours but the sound is much enhanced with a suitably moody soundtrack and lots of spot sound effects and samples.

It's good to see third party games beginning to appear for the Jaguar but it's a shame to see straight ports of existing games with little attempt to make use of the Jaguar's powerful sound and graphics. There is a lot to do though and there are enough options to keep you busy. Syndicate is a competent game but whether it's worth nearly fifty pounds is questionable.

Syndicate

Take over the world with Iain Laskey and Ocean's new Jaguar game, Syndicate.

Syndicate is set in a future where the world is run by huge corporations. Your job as an executive in a syndicate is to gain control of world territories. This involves sending your eyeborg agents out on missions that, if successful, will ultimately enable you to conquer the world.

You start each mission by equipping your team with weapons and equipment. At this point you can also invest money in research to upgrade your eyeborgs later on. It's best to keep an eye on the corporation's balance and each mission should be carefully budgeted. When you are happy with your team, you can start the mission.

The missions involve such tasks as killing other agents or coercing enemy scientists over to your syndicate with your Persuadertron. To achieve this you can use individual agents or group them together. You then try to find your targets. A scanner is pretty much an essential piece of equipment for your eyeborgs as it helps to identify who's



Inconspicuous trench-coats in hand, it's time to find out what to do - send 'em on!

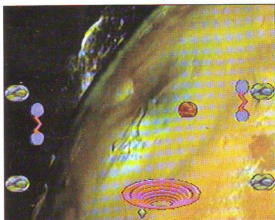
who. Guards can be killed easily but enemy agents can be a bit tougher.

A good way to handle them is to travel in a vehicle and use it to run them over. Your agents can have their perception, intelligence or speed temporarily boosted by drugs. Beware of overuse though as they become used to the drugs and start to need larger doses to achieve the same effect. The various



The scanner to the right of the screen provides a good overall view of the surrounding area.

SYNDICATE	
<p>Product Name: Syndicate Publisher: Ocean Telephone: 0161 832 6633 RRP: £49.99</p>	<p>Pros: 50 plus missions • plenty to do Cons: Graphics could be much better fiddly to control</p>



Power-up crystals float around the screen, but you're usually far too busy watching the ball to notice them.



Ping 2000 combines traditional arcade gameplay with modern graphics and sound effects, but is it any good? Nial Grimes investigates...



Slick graphics and sound effects can't hide Ping's basic gameplay flaws.

Tempest 2000 is living proof that golden oldie games can still grab attention if they're presented in the right way. Ping aims to cash in on "2000 fever" by reaching way back into gaming history and resurrecting the title that started it all – Pong! It offers classic, modern and "duel" game styles along with graphics to die for and even manages to make the most of the Falcon's sound hardware...

In terms of basic gameplay, Ping 2000 is very authentic. Sure, the bats at either end of the screen have been given the 256-colour treatment and slick backgrounds are present at all times, but essentially the aim is still to whack the ball backwards and forwards across the screen.

To ensure that the game keeps your attention for a reasonable amount of time, a level system has been introduced. The first stage hurls you back in time to 2,000,000 BC and the scenery changes as you work your way through six different ages. And the originality doesn't dry up there – each level

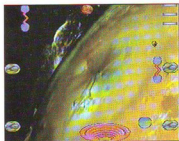
features its own set of obstacles and power-ups float across the screen from time to time. Upbeat, dancey tunes also add a good dollop of nineties atmosphere.

Sounding divine

It all sounds divine until you actually install the game and begin to play. The main problem is the lack of proportional controls – only the joystick and Jaguar Powerpad are supported.

That means that if a fast ball makes a run for the top of the screen and you happen to be lurking near the bottom at the time, you're stuffed – it's as simple as that.

Yet more disappointment is in store when you see how the ball reacts with the edge of the bat. Ping refuses to allow proper deflections and the overall result

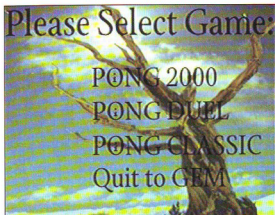


Battle your way through 20 levels and you'll arrive at the second stage – I hereby give up!

is a game of chance, rather than skill. You will progress through the levels if you stick at it, but you'll also encounter a good deal of frustration along the way.

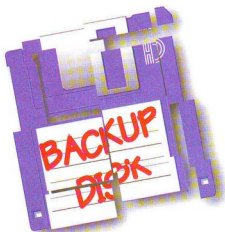
In my opinion Pong never oozed long term playability and sadly Ping 2000 doesn't do much to improve the situation. The 2000 game looks superb and sounds even better, but it's hard to recommend a sequel that can't even muster as much playability as the original. Ping isn't all bad but it is yet more proof that good graphics do not a great game make. Nuff said.

Ping mimics Tempest in offering classic, duel and modern game styles.



PING 2000	
Product Name: Ping 2000 Publisher: Holland Game Design UK Distribution: Merlin Contact: 01452 770133 RRP: £19.90	Requirements: Falcon320, 4Mb memory, hard disk. Pros: Neat presentation + good music Cons: Frustrating play mechanics + little long term playability + no mouse support

Get your Back UP...



A dodgy floppy or hard disk can destroy months of work. Nial Grimes emerges from his underground media storage shelter with a report on backup techniques...

Believe it or not, data is the most precious part of your computer system. Keyboards, monitors, hard disks and modems can be replaced at a price, but it's practically impossible to place a value on the months of creative work nestling deep in your disk collection.

Admittedly the 720K of data held on a single floppy disk may not seem like an awful lot in today's multi-megabyte world, but think of it in terms of several books or enough midi files to earn Michael Jackson an extra million or two, and it's clear that even home users need to consider the safety of their work. The case for preserving your data is stronger still when it comes to hard disks that can contain many times more information. Yes, your disks contain a considerable investment in time, and there's plenty that you can do to make sure that the investment remains safe.

A flexible friend...

The best way to safeguard your work is to keep copies – what's commonly known as a backup. Floppy drives are very reliable (much more so than the audio cassettes that preceded them) but disasters can still happen. A rogue program might decide to corrupt the direc-

tory of a disk, or you might simply make a mistake and click the format-button with the wrong disk in the drive – either way, work is lost, unless you've made a backup.

If you work with a floppy disk system, backing up data is extremely simple. In fact, you needn't spend a single penny on software, because the desktop contains all of the necessary tools. Just format a blank floppy disk, drag the necessary files on top of its icon, and within a few seconds you'll reduce your chances of losing any work to virtually zero. A much faster solution is a disk duplication utility such as FastCopy Pro. This is a much better solution overall because you can take a copy of all of your floppies, including those that contain programs and simply update the data disks at the end of each session. This operation takes well under five minutes in most cases.

Hard lines

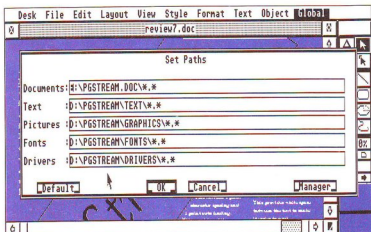
Hard disk owners have more options to consider. You can still use floppy disks as your safety cushion, but a good dollop of organisation is needed. The best strategy is to separate the programs from the data on your hard disk, either by using different partitions, or a sensible folder structure. In this way data

and programs can be dealt with separately, and if you opt for an "incremental" backup, only the files that have changed will be copied. It's perfectly possible that only a dozen or so data files will actually change during a week, and therefore the time taken for a backup is relatively small.

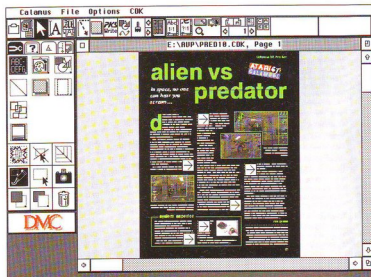
It's only when you start to deal with very large data files, such as those churned out by colour desktop publishing packages, that backing up to floppy disks becomes totally impractical. Once you arrive at this stage, SyQuest removable hard disks, Iomega ZIP drives and tape streamers begin to look very attractive – see last month's Atari Pro for details of these devices. A second hard drive can even be used as a fast backup device.

Safety first

This latter method does highlight a problem though – security. At the end of the day, it doesn't matter how many backups you've made if a thief can simply waltz in and swipe the lot. For this reason, removable – and therefore "hideable" – media is the best bet. If security is a problem, it's wise to keep two backups (one at home and another offsite) or at the very least keep one set well away from the computer.

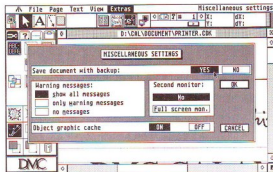


A recent backup can save the hassle of reconfiguring dozens of re-installed applications.

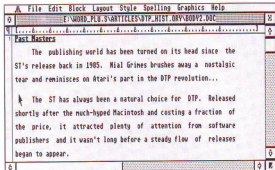
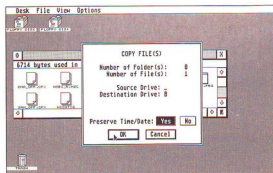


Colour DTP files can eat their way through masses of hard disk real estate – time to buy a tape streamer!

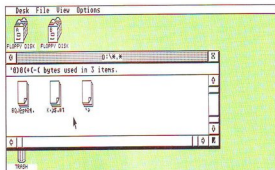
BAK files can often prevent major data disasters – if your software offers the option, use it!



The desktop is capable of copying files and can take on the role of a simple backup utility.



Even a floppy disk can hold an awful lot of text – back up your work or risk losing it!



When this happens, it's too late to think about backing up your hard disk – you have been warned!

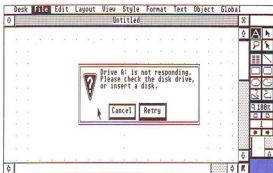
The durability of the media itself is also a consideration – if your work disk can fail, so can the backup. Admittedly, the probability of this happening is very small, but it does make a strong case for testing your backups regularly and also for treating them in the right way; it's a good idea to store your disks in a plastic bag, with a few sachets of silicone drying agent. As with all magnetic media, large speakers or any other strong magnetic fields should also be avoided.

The exception to this rule is magnetically-to-optical disks, which hold a similar durability status to CDs. As the drives work by using a combination of heat and magnetism, the disks are unaffected by moisture or magnetic fields, and have to get very warm before data is lost.

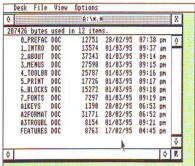
How long?

Having examined what's involved in backing up your work, the only question that remains is "how often?". Ideally you should only work with as much as you can afford to lose, but in the real world that's rarely possible. Most computer users don't backup their data as often as they should (and I include myself in that category) but even an old backup can save several days' work in setting up applications and so on. It's just a case of developing

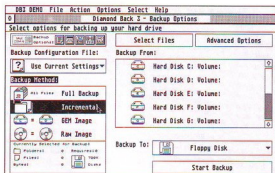




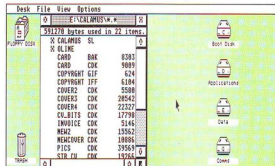
Floppies wear over time. If you keep your main disks in good condition, you will probably never encounter the above message.



The desktop's text display shows exactly when each file was created - ideal for backup purposes.



An incremental backup only deals with files that have changed - it's therefore quick and painless.



Backups are much easier if you separate the data and applications on your hard disk.

a routine that will lessen the blow when disaster strikes.

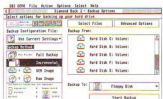
And like it or not, disaster will strike eventually. Backing up may be a chore, but you can look on it as the computing equivalent of locking your door as you leave the house. Ignore the risk and you're asking for trouble - and that's speaking from experience...

A bad image...

Essentially, there are two methods that can be used to backup a hard disk: an image of the whole structure can be taken and spread across a number of floppies, or each file on the drive can be pulled individually. Both approaches have their advantages.

Image backups are much faster per megabyte and can deal with non-standard partitions (such as those used by the Spectre Macintosh emulator). The file-by-file system on the other hand lends itself to incremental backups and it's also much easier to recover a single file - essential when it comes to sliques in the "trash" department.

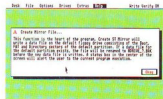
Image backups are fast, but not very flexible when it comes to updates.



Protect and survive...

It's a fact that many people simply can't be bothered to get into a routine of backing up their data, and rely on luck to see them through. If you fall into this category, there are a few simple things that you can do to minimise the risk of losing any work. The main consideration when using floppies constantly is wear, because the drive head actually touches the disk. Taking the time to duplicate a fresh work disk every few months will ward off many problems. Extended disk formats can also be a recipe for disaster. You are perfectly safe with a 9 or 10 sector format, but stretch to 11 and it becomes a case of "when" data will be lost - there's no "if" about it.

Hard disks on the other hand are more durable, but corruption is always a danger. In the vast majority of cases, many of the files are intact, but the ST can't find them because the file allocation table (a road-map to the contents of the disk) and the directory are damaged in some way. The solution is a program that copies these vital areas of the disk onto a floppy for safe-keeping - it takes no more than a few seconds to complete and can sometimes rescue the contents of a hard disk. Think about it! You can improve your chances of recovering a hard drive partition by "mirroring" the FATs and directory to a floppy.



Disk scanning is just one of FastCopy's many talents - ideal for testing the integrity of backup disks.

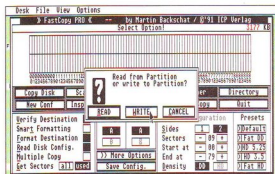


Turtle's verification option forces the ST to check every byte of data it writes - you know it makes sense!



Softly, softly...

Good backup software can make an extremely tedious job a whole lot easier and the ST is not short of packages that slide nicely into that category. Here are the five main options...



FastCopy Pro

The ST Club • 0115 945250

FastCopy Pro knows no equal in the disk copier stakes, and is therefore ideal for backing up data disks. It has options to read only sectors that are used and can also deal with just about any format you throw at it (unlike the desktop copier). Hard disk owners aren't left in the cold either, because FastCopy will stream an "image" of any partition to floppies in its traditionally speedy manner. Unfortunately, no form of compression is used, so backups can demand quite a number of disks.



Backup tips - home user

As a home user, your floppy disk collection probably won't contain huge amounts of vitally important data, but it's still wise to take some sensible precautions...

"It won't happen to me."

Keep backup files on your data disk! Most applications have an option to create "BAK" files and it can be a life-saver.

"I'm doing the right thing."

Create copies of all of your main program disks and duplicate your data disks at least once a week.

"Go ahead punk - make my day!"

Follow the above advice but backup your data at the end of every session, and make sure it's not stored near the computer.

Recommended software: GEM Desktop/
FastCopy Pro

Recommended hardware: Second floppy drive



Turtle (hard back - geddit?) offers extremely fast file-by-file backups.

Turtle

Public domain

Turtle is a file-by-file backup program with a difference. Instead of copying files in the usual fashion, it uses a large memory buffer and then writes to disk track by track. However, the speed gained by using this approach is counterbalanced by a lack of features elsewhere. Although you can opt to ignore files with certain extensions, it's not quite as flexible in this department as Vault, or Diamond Back for that matter.



Vault's clean interface and incremental backup facilities make it ideal for hard disk owners on a budget.

The Vault

Shareware

If you looking for a straightforward backup utility at a bargain price, The Vault is well worth consideration. Underneath the slick interface you will find support for incremental backups plus proper file filtering, and a superb on-line help system rounds off the deal. Vault cannot restore files, but the author has released a separate program called The Key that serves that purpose.

Backup tips - enthusiast

Enthusiasts usually spend a huge amount of time tinkering with their ST system. A recent backup can save an awful lot of painful setting up...

"It won't happen to me."

Copy any current data files to a different hard disk partition at least once a week. You'll have something to fall back on should a partition take a dive.

"I'm doing the right thing."

Create and maintain an incremental backup of both your data and applications. Be sure to enable verification on the backup.

"Go ahead punk - make my day!"

The above advice covers most eventualities, but ensure that the disks are kept in a safe place.

Recommended software: Diamond Back 3

Recommended hardware: Iomega ZIP

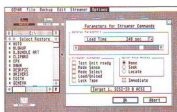


Diamond Back is fast, flexible and reliable - what more could you ask for (except perhaps a lower price)?

Diamond Back 3

HiSoft • 01525 718181

If you have a large hard disk and value your sanity, Diamond Back 3 is the package to go for. It supports most tape streamers and SQuents in addition to plain old floppies and also boasts more features than all of the aforementioned packages put together. It happily performs image and incremental, file backups, and can also compress data, thus reducing the amount of disks and time needed to complete each operation. It's the best.



Gemar is a quality piece of software - a shame then, that it only supports tape streamers.

Gemar

Shareware

Gemar is a very accomplished backup utility with only one drawback - it's designed to work exclusively with tape streamers. On the bright side, a good number of devices are supported and users on the Net really do rate the reliability of the program. If you do decide to give it a try, be sure to dig out the English resource file - it makes all the difference!

Backup tips - professional

Professionals can rarely afford to lose any files, especially if clients' work is involved. Consider these options...

"It won't happen to me."

Backup your data directories at least once a week. Applications can usually be reinstalled from master disks if the worst comes to the worst.

"I'm doing the right thing."

Keep an image backup of your application partitions, and treat your data in the same way as often as you are able.

"Go ahead punk - make my day!"

Keep two regularly updated backups and store one in a safe place, well away from the location of the computer.

Recommended software: Diamond Back 3/Gemar

Recommended hardware: Tape streamer or mageto-optical

Insider dealing

Joe Connor explains how non-commercial software fits into the Atari marketplace and provides an exclusive insight into the various support schemes that handle your registration fee...

Atari software today is better than ever. The days when commercial software was considered somehow superior to non-commercial software vanished along with the companies that published it. Now we're left with a small pool of dedicated commercial developers who tend to concentrate on heavyweight applications and established utilities, leaving plenty of room for talented programmers to carve a niche for themselves.

Some of the most popular utilities around are non-commercial and find their way onto most systems. The issue isn't how they're marketed but whether they've been paid for. With commercial software the position is comparatively straightforward but the "try before you buy" nature of non-commercial software makes it all too easy to delude yourself and put off registering.

Your mission, should you choose to accept it, is to delete any non-commercial software you haven't registered from your hard disk and survive for a week without it. If you can't, you'd better register it because each unregistered copy is another nail in the coffin of the Atari platform.

Students on computer science courses account for much of the output

from German Universities onto the Internet and Denesh Bhabuta, the *Atari World* contributor who looks after the Atari and Mac file areas at Lancaster University, is well placed keen an eye on the latest releases:

"I scour the German Atari sites most days and reckon I'll find an impressive new package around once a week. That's a lot of software and unless we look after these guys they'll move onto other platforms and we'll lose another potential Atari developer," Bhabuta explained.

Although many authors receive little or no support, the rewards for the right software can be considerable. One of the popular utilities available in several languages with local support has netted the author over £18,000! Successful English releases will be doing well if they receive more than fifty registrations in the first year.

Local support schemes remove the hassle factor and provide three key benefits, speed, safety and cost. Sending cash abroad and coping with bank charges, exchange rates and international reply coupons isn't for the faint hearted. It's also useful to have a shoulder to cry on if something goes wrong, without adding insult to injury by forking out for international phone calls!

The Internet plays a crucial role and allows us to keep in touch with each other. We're effectively a rapid reaction force reporting problems as they occur. Often the author will explain reported problems and sometimes even provide a fix the same day! Although we're an anarchic bunch pulling in different



directions there are some ambitious plans afoot...

Sven Bornemark, says: "I'm involved with trying to set up a pan-European support network with an area where non-commercial authors and support services can get together and coordinate efforts to avoid the massive duplication of effort that currently occurs. I love the

ability to register new users by sending their software key by e-mail — it's so elegant! I can even send new versions directly onto the Internet or steer users to an ftp site where they can download the latest version."

Graeme Rutt: "The Internet influences everything I do with a computer. Without a modem and an Internet con-

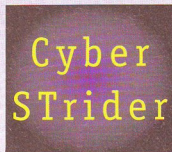
nection I don't think I'd ever touch a computer again!"

Denesh Bhabuta: "When I find a program I'd like to support I can often arrange a deal using e-mail via the Internet within a few days. Handling keys, updates and feedback by post simply isn't practical."



Who's who

Denesh Bhabuta (CyberSTRider)



"I already look after over twenty programs and I'm actively seeking more. Non-commercial software brings the users much closer to the authors and is the way forward for the Atari platform. From July 1st, Joe (InterActive) and CyberSTRider will be offering a joint registration service which should make it even easier to register as you'll only have to send one cheque to register a whole suite of programs."

Contact: CyberSTRider, 203 Parr Lane, Unsworth, Bury, Lancs, BL9 8JW
Internet: danny@micro.hensa.ac.uk

Joe Connor (InterActive)



"I've launched InterActive to provide a framework allowing me operate the joint registration scheme with Denesh and cover the other aspects of my business making it easier to diversify in the future. With over twenty programs to support rarely a week passes without a new version to beta test, translate or release and keeping over 850 registered users happy is pretty much a full time occupation."

Contact: InterActive, 65 Hill Road, Colchester, CO4 5LJ, England.

Internet: jconnor@cix.compulink.co.uk

Andrew Lee



"I support Gempooler — I use it, it works, and I like to spread good news. Gempooler was the first disk based spooler and the programmers are very open to suggestions for improvements. I've just launched support for WinCom (Window Commander), an add-on utility for Magic that adds lots of extra features. Watch out for the review!"
Internet: aji@cix.compulink.co.uk

Graeme Rutt (Sabbath)



"I'm an Interface Junkie and I support GEN-View and Edith because, in my opinion, they feature two of the most beautiful interfaces around."

Internet: sabbath@cix.compulink.co.uk



Sven Bornemark (Sven Bornemark Musik)



Sven looks after *Atari World* subscriptions in Scandinavia but still finds time to support and translate some familiar programs into Swedish including *Address*, *Backward*, *BoxKite*, *Everest*, *Freedom*, *GENBench*, *GEN-View*, *Selectric* and *Stoop*.

"There's so much impressive Atari software around I thought it'd be a shame not to let fellow My Swedish Atarians in on the good stuff," he said. "I run my shareware support in parallel with my commercial music business and believe I've struck exactly the right balance here. Although my six month old scheme got off to a sluggish start I'm now noticing an increased willingness from Swedish users to actually register."

Contact: Sven Bornemark Musik, Lergodsvägen 79, 238 04 Oxie, Sweden
Internet: sven@dada.ct.se

Dag Dao (Dada)



"Rather than fight it out with Sven and Tom, I decided to specialise. I look after the comms stuff which is undoubtedly an expanding area. If you're on-line in Scandinavia I've got all the good stuff including: JetMail, Semper, Avalon, LED, Connect, Octopus, GS2K2 and ESSCode, so drop me an e-mail...
Internet: dag.dao@dada.ct.se

Tom Thomason



"I've only recently started my scheme offering support for No-desk and Towers 2," he said. "I've been an avid Needex user since 1989 but I'm really hooked on No-desk. I was so surprised to be the first registered Swedish user that I decided to encourage others to register. So far the response to Towers 2 has been disappointing but as Sven pointed out it takes time to raise the awareness."

Internet: tom.thomason@fpc.ct.se

Ruud Sint (The Central Shareware Registration Point for The Netherlands)



The scheme operates via the Dutch Atari-only Free Atari Network with its headquarters at BearBeard ST BBS and links with the Fido and Nest networks. It plays a major role distributing software from around the world in the Netherlands.

"We offer a registration and beta testing service for developers collecting contributions and passing them on at no extra cost to either the users and the developers," explained Sint. "We need to stimulate developers to continue developing Atari software. Why not log into BearBeard and take a look?"

Contact: Ruud Sint, Centralpoint Shareware Registration for The Netherlands, Anna van Burenstraat 9-1, 1055 VK Amsterdam, The Netherlands

Andrew Lee "I wouldn't consider supporting a program unless the programmer is connected to the Internet. Local support for on-line users is of secondary importance because they can easily e-mail the author direct but when it comes to posting a cheque local support really comes into its own."

Ze language barrier

Unsurprisingly the Internet is totally dominated by the English language which means most people can read English but it doesn't mean everyone is happy using English language software all the time. I was pleased to discover that my English language translations act as the catalyst for other languages...

"At the risk of inflating Joe's ego, whenever a German program is given the Connor treatment, it opens the door for Swedish users and usually leads directly to a Swedish version," commented Bornemark.

Added Bhabuta: "I feel like the poor relation because I'm the only one who doesn't understand German, French or Swedish but I don't let a little problem like that stand in the way of supporting great programs! Armed with my trusty copy of Ruffrade and a dictionary, I go for it! OK, so maybe I take a bit longer but it doesn't really matter so long as I get the job done."

Leap of faith

We're all amazed how trusting authors are. Often they get an e-mail out of the blue and days later you can be handling cash on their behalf! A few authors have been ripped off and there have even been hackers deliberately cracking software keys, although anyone using a cracked key from a friend's copy wasn't likely to register anyway so it's not a serious problem. Sometimes the author releases the key generator to local support schemes:

"Getting the key generator gives me a good feeling of trust and encourages me to try that bit harder on the

behalf. The real winners are the users who get their keys by return of e-mail," explained Bornemark.

The bottom line

Since the "gang of four" — Denesh Bhabuta, Graeme Rutt, Andrew Lee and myself — became active in the UK registrations have risen dramatically. Currently UK shareware registrations account for between 10 and 30 percent of the overall registrations with freeware outperforming German registrations in some cases.

All of the software covered in this article is available from your friendly PD/shareware library, direct from the author or via the appropriate support schemes.

Variations on a theme

Shareware

Shareware covers a diverse range of marketing strategies but broadly speaking it's try before you buy software. Shareware may be fully functioning or restricted using any combination of screens, locked features, time delays or limits. There's often a reward for registering which may include access to beta versions, printed manuals, user only features and support.

Licenceware

Similar to shareware except distribution is restricted to licensed vendors who pay a royalty to the author on each copy sold and no further fee is expected from the end user.

Postcardware

There are dozens of shareware variants that ask not for money but for postcards, bars of chocolate, donations to charity or just plain feedback about the program. There seems to be a competition among authors to come up with the most ludicrous or amusing scheme. They're generally tongue in cheek, light hearted jibes at the shareware scene.

Public domain

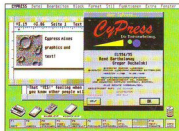
PD is totally copyright free and anyone can use and distribute the software so long as the program and credits remain intact.

Freeware, fairware, demoware

Similar to PD except the author retains the copyright and often ask for voluntary donations. Sadly, without missing features, nag screens, timeouts and so on, an author isn't going to get a good response.

Crippleware

Software which overdoes the nag screens, time limit or registered user only features runs the risk of being dubbed "crippleware". There's a fine line between releasing something users can evaluate fairly and releasing a commercial demo under the guise of shareware!



Full circle! CyPress, a popular German document processor has just been re-released as Shareware in Germany.

Enter the lottery

Unlike the lottery it's easy to improve your chances of success in the shareware scene. Here are a few pointers:

Publicity

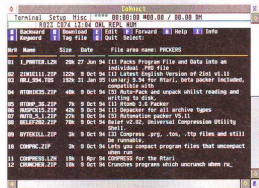
Send a copy to the PD/shareware libraries and a support specialist and upload it to as many on-line services as possible. And don't forget Atari World! If you're not on-line enlist the help of someone who is! Frequent minor upgrades (so long as they're not all bug fixes) will help keep your software in the limelight.

Get on-line

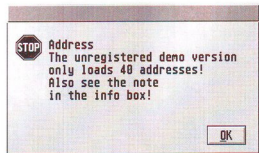
The natives are friendly and helpful and it's the perfect way to release new versions, ask questions, offer support and talk about your software relentlessly!

Originality

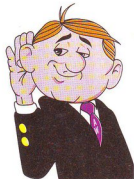
If you're re-inventing the wheel, do try to make it exceptional. A quick glance through a few PD/shareware catalogues or BBS listings should give you an idea of what you're up against.



Without publicity and originality your software will probably get lost in the crowd.

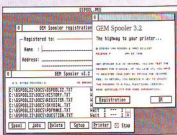


Address, in common with many other programs, reserves a few features for registered users.



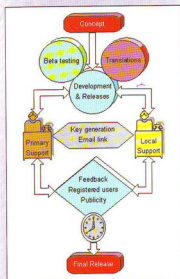
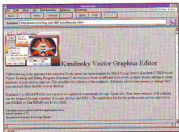


This nag screen appears each time Everest is started, it only takes a tender to get rid of it.

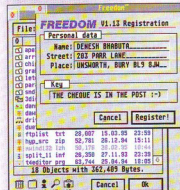


GemSpooler is fully functional but the unregistered version has a 130KB limit on file size.

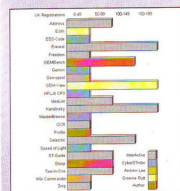
Kandinsky enjoys shareware support with its own page on the World Wide Web.



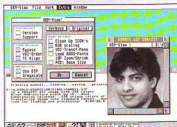
A typical program life cycle.



Freedom includes a separate utility to create a personalised copy for registered users.



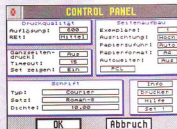
Here's the level of UK support for some popular non-commercial software.



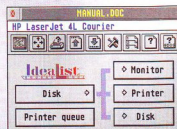
Graeme reckons GEM-View has a 'beautiful' interface, it's just Danny I'm not so sure about!



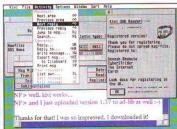
GSZMZ must be personalised for each new user by your local support site.



Register to get the English version! Hmm, I wonder whether unregistered German users get the English version...



Idealist is shareware yet completely functional.



Freeware doesn't mean poor quality — this optical character recognition utility knocks spots off its commercial rivals.



On-line utilities, such as Kivi, have a smaller potential market which makes shareware the distribution method of choice.

A bad workman always blames his tools, damn Ruftradel!

Speed of Light spots registered user only features with horizontal bands. That's Sven Bornemark by the way...



Connect logged into the HQ of the Central Shareware Registration Point of the Netherlands.



2B or not to be?

That is the question — thanks largely to MagiC and NVDI. Ofir Gal met up with Sven Behne for an exclusive *Atari World* interview.

There's no doubt that the continuing development of MagiC and NVDI offers a ray of hope for Atari users all over the world. Behind these phenomenally successful programs are the Behne brothers, Sven and Wilfried, otherwise known as 2B.

NVDI has become the best and probably most popular screen accelerator for the ST and Falcon. In fact, it is much more than a mere accelerator. It is a complete re-write of the most versatile part of TOS — the VDI. The VDI is responsible for almost anything you see on your screen and printer output too. The first question I put to Sven was how the idea for NVDI came about.

"After getting my ST, I spent some time reading the German Atari bible — *The Atari ST Profibuch*. I started experimenting with some basic graphics routines and realised that TOS was far from efficient. In fact, I discovered that many functions like text display were not utilising the full power of the machine," he said.

Full power

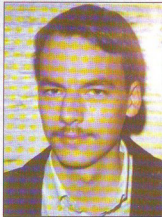
Instead of following the route taken by some other screen accelerators, Sven teamed up with his older brother, Wilfried. Their task was to be a complete re-write of all the display code in TOS.

"Because of the way the VDI works, we had to write most of the underlying

code before we could start testing it," recalled Behne. "We then implemented one drawing routine at a time until we had a working version of NVDI. An important part of the project involved emulating several TOS bugs for compatibility."

The first version of NVDI was released in Germany around Christmas 1990. Initially, it only worked in ST High resolution. With the availability of the TT, Behne released version 2 which also had colour support. The success of NVDI and constant encouragement

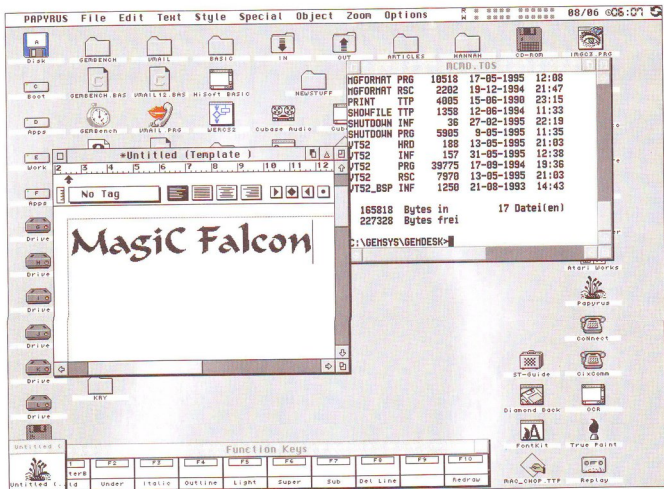
The Behne brothers



Sven and Wilfried Behne have been leading figures in the German Atari scene for years. Apart from writing NVDI and contributing to MagiC, they have also taken part in the development of ScreenBlaster and many graphics cards including *Crazy Dots* and *Matrix*.

Wilfried is 28 years old and Sven is 21: indeed he was only 16 when he started work on NVDI! They live in the countryside on the outskirts of Hanover, a city known for its large fairs, one of them being CeBIT. When they are not busy programming they spend their time playing in a band.

I had the pleasure of hearing Sven play the guitar and he certainly knows how! He says he even practices while waiting for NVDI to compile. He is totally unconcerned with the business side of things and simply writes programs for the love of it.



from users helped bring about the current incarnation of NVDI that also provides TrueType and Speedo font support.

Works like MagiC

Next, I went on to ask Sven about MagiC, the multi-tasking operating system. "MagiC was really Andrea Kromke's baby," explained Sven. "We were only involved in the development of the VDI parts of MagiC 1".

MagiC was launched at CeBIT in 1992. At the same time Atari unveiled a pre-release version of MultiTOS, announcing that a final version would be available in a matter of weeks.

"That was a blow to the MagiC project," said Behne. "Atari took another year before releasing MultiTOS, and MagiC only achieved popularity when people realised that MultiTOS was not going to be developed further."

In the mean time, the team carried on working to improve MagiC. Version 2 featured pre-emptive multi-tasking and an improved file system. Other features included the VTS2 program, enabling users to run TOS programs in a window and flying dialogue boxes. The Behnes were getting more involved in the project, extending their contribution

beyond the VDI.

MagiCmac

MagiCmac was certainly a surprising product, especially as it was released before a Falcon version was available. I asked Sven why they decided to port the operating system to the Mac and not the PC which is much more popular.

"A PC will be much slower, because it uses a different CPU," explained Behne. "On the Mac there is no need for emulation because MagiCmac is an alternative native operating system."

Other factors also contributed to their decision.

"The user interface of the Mac has a lot in common with GEM which might be important to users. Apple also have a wide range of machines and the Powerbook is the ultimate portable Atari when running MagiCmac."

It is worthwhile noting that the MagiC team had the full support of Apple Germany who were keen to capture the large Atari user base.

The future

I asked Sven about their future plans. He replied: "We are always developing NVDI, looking for ways to improve the

user interface and facilities it offers. We plan a font management utility that will allow you to preview fonts even if they are not installed."

Next question — is there any way to make NVDI even faster than it is?

"We always try to make things as fast as possible but any speed increases at this stage are very small," he answered. "We also add new functions to allow programmers to make better use of NVDI. We have spent a long time writing the NVDI programmer's guide.

It is 130 pages long and is freely available. We want to encourage programmers to take advantage of the features of NVDI and to use the VDI correctly. The guide is in German but we hope to have an English version soon."

I explained to Sven that many Falcon owners were very disappointed with the pace of development of the Falcon compatible version of MagiC. He explained that as strange as it may seem, the Falcon version required more work than the Mac version due to the many additional DSP and audio functions.

He added that Falcon MagiC is already being tested but it is not yet ready. Just watch this space...

The long awaited Falcon MagiC is still under development. The current test version looks promising.

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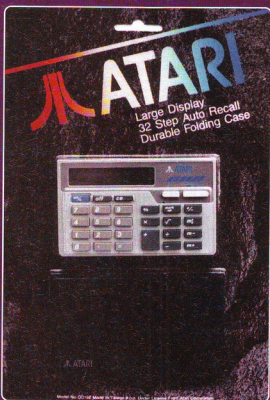
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As soon as you use this months Atari World Readers Disks you will discover the amazing **Timeworks Publisher**. A great program except for one thing - its limited built in fonts.

The solution? **SPEEDO GDOS 4.0** and **Timeworks 2.04** exclusive to Atari World! Speedo GDOS was produced by Atari as the solution to the lack of fonts on the ST, TT and FALCON030. Timeworks 2.04 is a previously unreleased version of Timeworks Publisher that supports SPEEDO GDOS 4.0 and lets you specify font sizes from within the Timeworks program itself.

- ◆ Speedo GDOS 4 is the only font scaler on the Atari ST that works with Timeworks 2.04
- ◆ Comes complete with 14 Bitstream Speedo fonts, 8 different styles some in different weights.
- ◆ Comprehensive range of printer drivers including all standard 9 pin dot matrix, 24 pin dot matrix, inkjet, laser and Atari SLM.
- ◆ Requires a minimum of 2MB of RAM and a hard disk.
- ◆ Timeworks 2..4 is fully WYSIWYG (What you see is what you get) on screen when using Speedo GDOS 4.0
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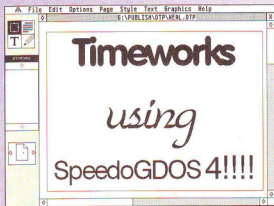
Timeworks 2 manual

GST, the producer of Timeworks Publisher 2, were always renowned for the quality of their manuals. The Timeworks 2 manual is a model of clarity and will help any user get the best from this great program. We have the original manual available for just £14.99.

The full manual for just £14.99

About fonts

The full version of Timeworks on the Atari World readers disks uses GDOS, the forerunner of Speedo GDOS. This means the fonts it uses are all bit map fonts, ie the font contains a collection of dots that go to make up each character. The fonts are therefore all fixed in size. For most DTP applications this is not very satisfactory. Whilst you can change the size of a bit map font using a font editor, the normally results mean a drop in quality. Having created a new bit map font it can also be tricky to get Timeworks to recognise it. Speedo GDOS 4.0 solves all this by using Speedo outline fonts. An outline font is a font that is stored as a collection of mathematical type expressions, ie lines, curves etc, not as a collection of dots. Speedo GDOS takes an outline font and generates a bit map font at any size you specify - subject of course to you having enough memory in your computer. Some outline fonts have hint information in them. Hint information is used to improve the quality of fonts at smaller point sizes. This means that when you use a good quality original font you will get better quality at small point sizes than you would using an un-hinted font. The Speedo outline font format supported by Speedo GDOS has hints. However other outline font formats common on the ST such as Calamus fonts and Calligrapher fonts do not have hints. If you are using either of these programs you will see an improvement in output quality by switching to Timeworks 2.04 and Speedo GDOS 4.0.



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Extra Speedo Fonts

Although Speedo GDOS 4.0 comes with 14 fonts, any serious DTP user will soon want more variety. That report, menu, invitation, newsletter or advert can be easily livened up by a change of font. COMPO have two font packs with more than enough fonts to suit all but the most demanding Atari owner. Font Pack Office is designed for the designer producing documents typical of the office environment. It contains fonts ideal for reports, thesis, direct mail etc. Font Pack Gold is more for the 'designer DTP' type applications such as adverts and greeting cards. Both packs contain around 100 fonts each. The Office pack gives you a wider range of variants on the same font whereas the Gold pack contains more variety of font styles.

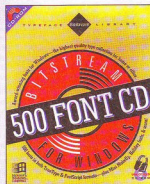
The number in brackets () gives the number of different styles of each particular font.

The fonts in the Office pack...

Futura (17)
Humanist Slabs 712 (4)
Blackletter (1)
Americana (4)
Bernhard Modern (4)
Caslon 540 (2)
Blippo (1)
Bernhard Bold Condensed (1)
Bernhard Tango (1)
BALLOON (3)
Bruce Old Style (2)
COPPERPLATE GOTHIC (5)
Bookman (2)
Caslon Openface (1)
Caslon Bold (2)
Futura Black (1)
Compasta (1)
Humanist 970 (2)
Humanist 521 ((11))
Aldine 721 (7)
Humanist 531 (3)
Bernhard Fashion (1)
Humanist 777 (7)
Caslon Old Face (3)
Aldine 401 (4)
Bitstream Amerigo (5)

The fonts in the Gold pack...

Amazona (1)
Jupuls (1)
Bitstream Cooper (10)
American Text (1)
Brush 445 (1)
Egyptian 505 (3)
Zapf Calligraphic 801 (4)
Egyptian 710 (1)
English 157 (1)
Impress (1)
Poster Bodoni (2)
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UMBRA (1)
Gleister Open Face (1)
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Exotic 350 (3)
Zapf Humanist 601 (8)
MAXIMUS (1)
Goudy Handtooled (1)
Goudy Catalogue (1)
Hobo (1)
Wedding Text (1)
Freeform 721 (4)
Freeform 710 (1)
STENCIL (1)
University Roman (2)
INFORMAL OTI (2)
SHOTGUN (2)
Candida (3)
Cloister Black (1)
BANK (2)
Vineta (1)
Ercadway (1)
Goudy Old Style (1)
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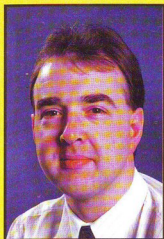
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ONLY THE BEST

Welcome to issue 4. For me this is one of the most exciting issues of any Atari magazine I've ever been involved in. This month's Reader Disks - all seven of them - contain a complete, unadulterated copy of Timeworks 2 Publisher 2.

The original Timeworks program was a legend, one of the most popular DTP programs of all time on the ST. Many a budding desktop publisher cut their teeth on it - including me!

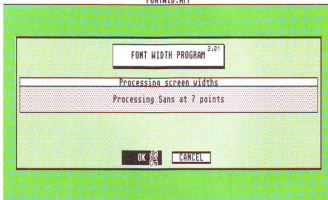
Inevitably things have moved on but the fact remains that if you want quick and easy document design, Timeworks is pretty well unbeatable. Version 2 is also pretty powerful too and if you want to get stuck into real DTP, it won't hold you back. To prove the point, we've brought in well-known Atari DTP expert Gunter Minnerup to help out with our in-depth tutorial...

Andrew Wright

FS Mark Baines' A to Z series will be back again next month.

Installing

FONTHID.APP



Andrew Wright shows you how to install Timeworks 2 from this month's Reader Disks.

Timeworks 2 might be nice and easy to use but installing it is a laborious process and there's not much you can do about it. In fact, on a floppy based Atari, it can take up to half an hour. What you can do is make sure you only have to do it once and that you do it properly the first time round.

If you're installing to a floppy drive, you'll need three blank disks formatted and ready. If you happen to have another seven blanks lying around it would be a good idea to make a back up of the original Reader Disks before you start.

Label your three installation disks before you start as having lots of unlabelled disks lying around is a recipe for frustration. Name one Startup and Overlays, one Fonts and the third Data. Note that if you already own Timeworks 1, you should not attempt to install version 2 on the same disks. Keep them as they are, just in case.

The first thing to do is boot your system without any accessories or Auto folder programs and then insert Master Disk 1. Open a window and double click on the program called INSTALL.APP.



Figure 1: double click on INSTALL.APP

Skip through the next dialogue box (about the manual) until you get to the dialogue box in Figure 2. In this case, we're going for single floppy installation but if you have a second external floppy drive or a hard drive, choose whichever is appropriate.



Figure 2: select your setup.

Skip through the next dialogue box, reminding you about the number of floppies required (Figure 3) and when you see the New Installation dialogue box, click on OK. Note that the other option was never actually added so you can't modify an existing installation.



Figure 3: we're getting closer!

Next we come to the first major decision (Figure 4). Screen type is important because Timeworks has to decide which screen fonts to install. In general, you will choose ST Medium Resolution if you have a colour monitor or TV, or ST High Resolution if you have a mono monitor such as the Atari SM124, SM125 or SM144. If you have 1Mb of RAM or less you will only be able to install the basic set of fonts. We'll go into more detail about the fonts later but if you have 2Mb or more, I'd advise you to install the full set, so choose Additional fonts.

Timeworks 2



Figure 4: select the type of screen and which fonts to install.

The next dialogue box asks you to select a printer (Figure 5). If you have a 9 pin dot matrix printer select Epson FX as most of them are Epson compatible. If you have a 24 pin printer select Epson LQ. If you want to print at 180 dots per inch (dpi) or Epson 50 for full 360 dpi resolution. If you know your printer is NEC P series compatible, select one of those drivers instead.

Clearly if you see your printer on the list, all you do is select the resolution you need and off you go. If you don't see it, you may have to experiment or think laterally. The Deskjet driver will also drive HP compatible inkjets like the Citizen Project while the Laserjet II driver should work with most modern laser printers as virtually all of them now emulate the Laserjet at some level. Note that if you have an Epson Stylus you should select 24 pin Epson 50 at 360 dpi because although it's an inkjet it will emulate a 24 pin dot matrix.



Figure 5: select a printer from the list.

The next screen (Figure 6) lets you change your mind before the long process of copying files from the master disks to the installation disks begins.



Figure 6: last chance to change your mind!

Once you click on Install the copying process begins. The installation routine looks for the files that are needed, according to

your choices of printer and screen display, and copies them over to the Startup, Fonts and Data disks you have already prepared. It does seem to take forever but be patient! You will be prompted to insert various disks when the need arises (Figure 7). Just stay alert and you'll speed things up.



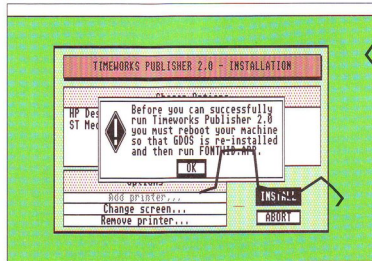
Figure 7: there's plenty of disk-swapping...

Once the installation is complete you'll see a message as in Figure 8. This means you should reboot your ST with the newly-created Startup disk in the drive A. This loads GDOS, the operating system extension that handles the fonts and on-screen graphics in Timeworks. When you see the desktop, insert the Fonts disk, open a window and double click on the FONTWID.APP program. This creates two special files on the Fonts disk relating to the fonts you have chosen, called PUBLISH.WID and SCREEN.WID. Once that's done, you're ready for action...

Figure 8: get ready to reboot.



Figure 9: running FONTWID.APP



Hardware

Timeworks 2 will run on any ST, STE, Mega STx or TT, whether accelerated or not. Unfortunately it won't run on a Falcon nor will it work with alternative font handling systems like SpeedoGDOS or NVDI 3.

Memory is important to Timeworks. Although it will run on a basic 0.5MB machine, the more memory it has the faster it will run and the less disk swaps you'll have to put up with. If you have a second floppy drive or a hard drive, you won't have to swap disks at all.

Time for *work!*

Get to work with Andrew Wright as he shows you the ins and outs of the ST's best-known DTP program.

To run Timeworks, boot your system with the Startup disk in drive A. Make sure you have either a medium or high resolution screen display and then double click on the program file PUBLISH.APP. With a single floppy drive, you may have to swap the Startup and Fonts disks several times if you have 1Mb of RAM or less but eventually you will see the Timeworks opening screen.

On the lefthand side you'll see the toolkit with several icons and along the top the drop down menus just as in most GEM programs. An explanation of what the toolkit icons represent is shown in the accompanying panel.

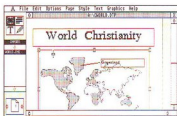
In the frame

Timeworks is a frame-based DTP program which means that unlike a word processor or drawing program, a page is created by laying empty frames on a blank page and then adding text and graphics to each frame as required. It is perfectly possible to have a single frame document but more likely you will have separate frames for headers and footers, the main text, diagrams and pictures, and various other embellishments.

Pages can get quite complex so you need to be able to change the way you look at the page — under the Page menu you'll see six different view modes, from half size to double size with full page and twin page modes too. Often you will need to switch between full page and actual or double size views depending on whether you want to see

the overall effect of an operation on the full document or get up close to make minute changes.

Frames can contain text or graphics.



Complex documents like newsletters are made up of dozens of different frames.



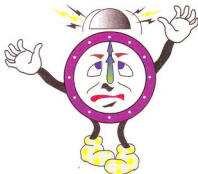
Perfect prints

What use is a DTP program if you can't print properly? The first thing to do is check you've installed the right printer driver. Under the File menu, choose Open, insert the Data disk when asked to do so, and select the file named TEST-CARD.DTP.

This shows you the range and types of font available.

Once it has loaded (there may be more disk swapping), select Print from the File menu and press the OK button. Don't worry about all the other options at this stage.

Once you've printed the TEST-CARD.DTP document, measure the distance between the edge of the paper and the four lines making up the main box. Now choose to the Set column guides... option from the Options menu and note the difference between the actual margins you've measured and the margins that should have been printed. If you're lucky they'll be the same but it's more likely that they are slightly different.



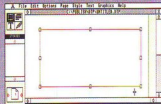
If your left margin is too wide (and the right one is correspondingly too narrow), enter the difference in the horizontal page offset box and make it a positive adjustment.

If your left margin is too narrow, make it a negative adjustment.

If your upper margin is too wide (and the lower one is correspondingly too narrow), enter the difference in the vertical page offset box and make it positive.

First steps

Let's look at the basics of designing a document.



To create a frame go to frame mode and using the mouse draw a frame on the page. It really is that easy... Note that at this stage you don't have to know what's going in it.



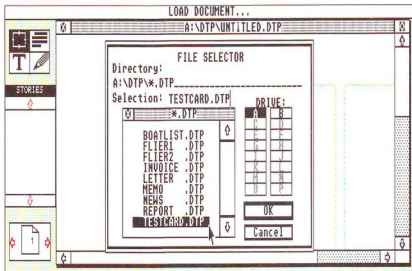
Click on the text mode icon and when you see the mouse pointer change to an "I" shaped cursor, click on the frame you've just drawn and type some text.



Now add a second frame, click on Import picture and then choose TIGER.IMG. You now have a simple document with combined text and graphics. Follow these principles and you can build up complex documents with up to 100 frames a page.



I designed this form for a previous employer about six years ago - it's still in use today, proving beyond doubt that Timeworks has got what it takes!



Opening the TESTCARD.DTP document.

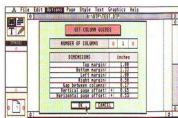
If your upper margin is too narrow, make it a negative adjustment.

Once you've done this, you can print it out again just to check. If you've got

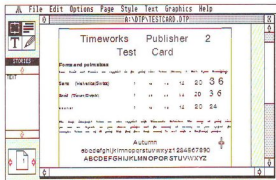
the right settings, I suggest you write them down somewhere for future reference.



The TESTCARD shows you all the available fonts.

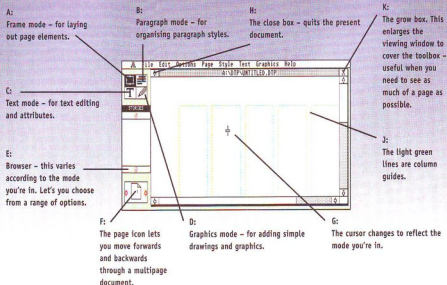


Adjusting the print position.



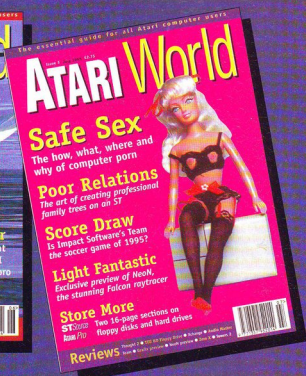
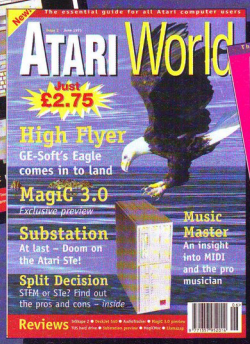
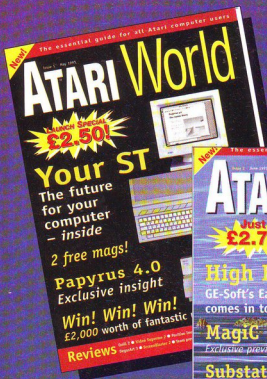
Timeworks essentials

Once you've got to know the Timeworks main screen, DTP life is a doddle. Timeworks has four work modes, each of which is accessed by clicking on the related icon in the toolkit: a browser for making selections from a list of options, a page icon for multipage documents and a standard GEM window with scroll bars.



Readers Disk &

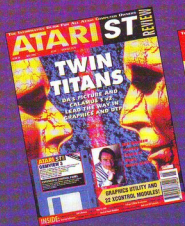
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Just for you - a Reader Disk rundown

- Issue 1 (1 Disk) ST-Guide Release 4, ST Guide Creator 4, Darklord v3.1, Pinhead v2.1, PacShell v2.59, Profile v2.08, TurboBlanker v1.24
- Issue 2 (2 Disks) Speed of Light v3.8, Bootsie v1.74, World Clock v1.0a, GDOS-Check v2.0, Maus-Window v1.32, Duet v1.0e, Vericard v1.0, Thing v0.31e, Thing Utilities, Atari World Profile.
- Issue 3 (1 Disk) Thought 2 Demo, GD-Flag v1.15, IdeaList v3.6, Fastcopy III, Kivi v1.37a, Atari World Profile.
- Issue 4 (8 Disks!) Address v2.2, AVFM v1.0, LED-Panel v3.1, Mouse23 v2.3, Atari World Profile, Turtle v3.2, Timeworks 2

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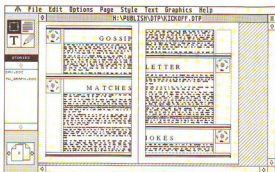
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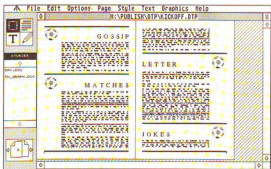
Publisher power

Time spent on planning the design of multi-page publications is time well spent, as Günter Minnerup demonstrates with his DIY rival to "When Saturday Comes"...

The "spare" outside column can be used to offer a visual guide to the different sections of text. Note the plentiful space left around the headings, too.



The column guides can be a little confusing to switch them off in the Options menu for a clean, uncluttered impression of your work.



With all the publishing power put into the hands of ordinary Atari owners by DTP software like Timeworks 2, it is easy to forget that the publishing industry has traditionally been one of the most skilled, its ancient trade secrets jealously guarded by their practitioners. You may be able to have your Timeworks files output to glossy paper stock by the most expensive high-tech printing equipment, but it won't look professional unless you take the trouble to assimilate at least some of the time-honoured principles.

professional printing methods. A case in point are the football fanzines which have sprung up all over the country: once largely back bedroom scissors-and-paste operations, many of them are now slick magazines with fully computerised design facilities and typeset output. In most cases, the initials DTP stood at the beginning of their rise from obscurity to fame.

So let's look at some of the issues involved by producing our own football fanzine, using nothing more sophisticated than an ordinary ST running Timeworks DTP. The general principles can, of course, be equally applied to publications with a different content or audience: parish magazines, political newsletters, or music fanzines – in fact all periodical, multi-page publications.

White space

Since space is usually as tight as the finances, the first pitfall to avoid is to try and cram too much into the four, eight, or sixteen pages which you may well start with. The temptation is almost irresistible, since most of us have been taught not to waste paper

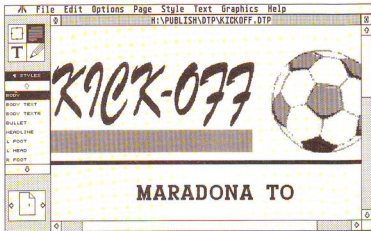
and make prudent use of resources. Strange as it may seem, the most efficient use you can make of paper in design terms is to leave quite a lot of it virgin white.

Perhaps this is precisely because it is a little wasteful: the message of white space is "I'm class, I don't need to count every square inch". But white is also the opposite of the principal printing colour black and therefore the most effective means of highlighting, framing and emphasising the printed word or picture. So the first thing we need to do when planning our page layout is to provide for generous margins and ample "breathing space" for pictures, captions and headlines.

Timeworks offers the Master Pages feature to help impose a consistent design style on multi-page publications. Items such as page numbers and headers and footers which are to appear on every page are placed here, but you should also use the column guides to establish a basic "grid" to help with the positioning of text columns and pictures.

One of the best ways of ensuring that there is plenty of well-used white space is to adopt an asymmetrical page design, with the outer margins being significantly wider than the inner margins so that left and right pages mirror each other's layout. This is a little bit more difficult to work with than a symmetrical layout, but gives a nice "dynamic" feeling to your publication – just what you want to project your favourite football club!

To do this, you need to have selected



The masthead is composed of a couple of imported images – the football in pixel format and the "Kick-Off" title as a vector image. The bar underneath was created with Timeworks' own drawing tools.

columns for an extremely flexible design grid, even on a smallish A5 page!

For "real" columns, of course, anything over two would be excessive on ordinary A4 paper as there is a close link between column width, type size and readability. Very narrow columns require extremely small type to align properly, and unless you plan to issue your readers with free magnifying glasses the minimum type size for the bulk of your text should be 9 or 10 points, depending on print quality, thus restricting you to one or two columns only.

Another invaluable feature in Timeworks 2 is the Paragraph Styles. They are not only labour-saving in enabling you to quickly ring the changes for all text "tagged" with the same style, but they also help impose design consistency. A typical beginner's mistake is to cram dozens of different typefaces and timesteps into a single publication, in the desire to show off "what the computer can do", or the mistaken assumption that it adds style and variety to the document. All it does, in fact, is to give readers a headache.

The best advice to all newcomers is not only to restrict the number of typefaces used to a very few, but to try and make do with one! Contrary to what you may be told, it does not matter all that much which typeface you use as long as you avoid the obviously unsuitable ones. Any one of the standard serif or sans-serif body text types will do, and the best way to learn about them is to try and meet all your requirements with variations of the basic typeface: different weights, styles, spacings and even special effects such as outline or shadow. You'll be surprised how much can be achieved without recourse to any other fonts!

Master pages

Mastering your masters is good Timeworks practice.



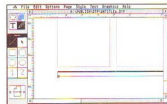
The two-page view is essential when planning multi-page publications.



In most cases, the headers and footers dialogue box is used for automatic insertion of page numbers.



The column guides form the basis of the design grid. An uneven number of column guides makes for a dynamic, asymmetrical design.



The "M" symbol denotes the automatic page numbers defined in the Headers and Footers dialogue box. A ruler line drawn on a master page will appear on every page of the actual publication.

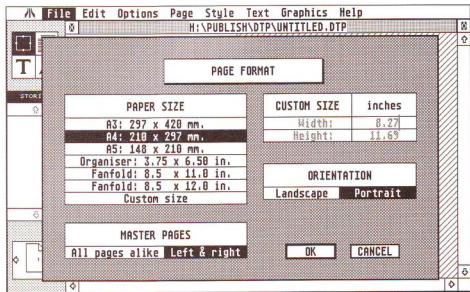
"Left & Right" in the Page Format dialogue box that pops up whenever you start a new publication in Timeworks. You will then get two master pages and can set appropriate "mirrored" margins. Alternatively, you can leave equal margins all round and instead use a fairly large number of narrow columns with the intention of leaving the "outside" columns blank to achieve the same effect.

The advantage of this approach is that the blank marginal column remains available for special purposes such as the odd illustration or pull quote: anything placed in this column will be highly effective precisely because it is surrounded by so much empty space!

Column guides

The column guides therefore need not coincide with actual text columns. There is nothing to stop you from dragging text and picture frames over several columns, varying their widths but using the column guides for precise alignment. It can sometimes make sense to define the maximum of 9

Different left and right master pages are only necessary for asymmetrical layouts and when the headers, footers and page numbers are not centred.



Text of skill

Entering text into Timeworks DTP can be as easy as typing ABC, but to take advantage of its full power you need to know about paragraph styles. Günter Minnerup reveals all.

Rockface is a good, slightly unusual typeface for all purposes suitable for low-resolution printers because of its even lines and blocky letter shapes.

Once you have set up your page and columns, you may be tempted to just open a text frame and start typing away. In most cases, however, that is not a very good idea. Timeworks is a desktop publisher, not a word processor, and you'll soon notice the difference.

It is a lot slower, the letters and words leap about on screen as



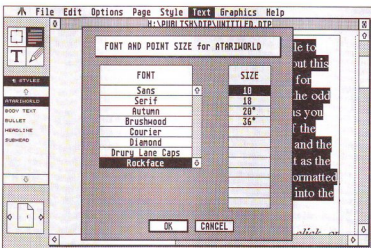
"Centred" justification is normally used for headlines and short bits of text, such as captions, as it can be difficult to read over long stretches.

Timeworks formats them into the columns, and editing features commonly found in word processors such as a spellchecker are not available.

Headlines, picture captions and last-minute corrections apart, you should get into the habit of preparing your text before you even fire up Timeworks.

Import filters

This is particularly true when you are the editor of a club newsletter or magazine, as much of your copy will be supplied by other contributors, often on disk to save you having to retype it all. As long as their disks are compatible with ST disk drives (most PC disks are) the text import filters provided by Timeworks are likely to cope: Microsoft Word, Locoscript, Protex, First Word



Plus most common PC and ST formats are entered for. If all else fails, you can always ask your contributors to supply ASCII files.

The import filters preserve text attributes such as bold, italic and underline but not typographical features such as fonts, font sizes, line spacing or justification. All these have to be defined from within Timeworks DTP.

There are two means of doing this. Beginners usually have no difficulty with the "manual" method of highlighting a letter, a word, a sentence or more with the cursor and then choosing the required effect for the highlighted text only. Intuitive as this is, it is also highly inefficient.

Just imagine your text has many subheadings and you have set all these subheadings in the Serif font at a size of

18 points and underlined. You show your first attempt at desktop publishing to a designer who tells you that underlining is not a very good idea so you decide to get rid of it. Using the "manual" method, you would have to track down all your subheadings and change them individually a lot of clicking. And if you should then decide to have the subheads centred rather than ranged left, you'll have to do it all again...

Style counsel

Fortunately, Timeworks offers an easier way: paragraph styles. A paragraph style contains a number of typographical settings that can be applied to a paragraph with a simple mouseclick. Just change into paragraph mode, select a paragraph style from the browser underneath the mode icons, and click on some text.

The entire paragraph will be highlighted and assume the typographical characteristics defined in the style. Even better, all paragraphs formatted in the same paragraph style will change along with any changes made to the style definition. In the above example, dropping the underlining from the style and changing the justification to "centered" will alter all subheadings simultaneously. Easy when you know how!

All imported text will automatically be formatted in the "body text" style. If you don't like the default settings provided by Timeworks, create your own styles and save them in style sheet files. Once you understand how your styles work, you can save further time by entering so-called "tags" into your word processor files even before importing them into Timeworks. In the following example:

```
<headline>PROMOTION AT LAST!  
<subhead>Melchester Rovers in  
the Premier League  
<bodytext>After forty years  
in the wilderness, Rovers  
finally gained promotion to  
the elite division of English  
football by beating Crewe  
Alexandra in the Wembley  
play-off final.
```

Timeworks will correctly interpret the bracketed tags at the beginning of each paragraph always provided, of course, that identically-named paragraph styles have already been defined.

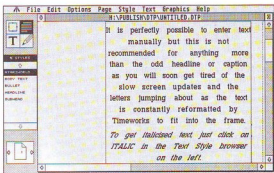
Text flow

When you import a text file it will be translated into Timeworks' internal format and appear in the Stories browser. To place it into a text frame, just select the frame and then click on the story name in the browser. The text will fill the first column initially, but with "Autoflow text..." activated in the Text menu it will worm its way through to the end, creating new frames and pages as needed. To flow text manually over several frames, just repeat the procedure as for the first frame.

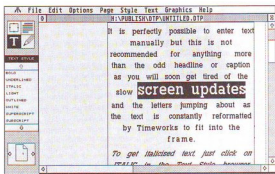
When you define your styles, take care to choose appropriate fonts for each. It is best to keep to one or two, making good use of variations in size and attributes such as bold and italic rather than switch typeface too often. Of the fonts supplied with Timeworks, Sans, Serif and Rockface are all good body text choices.

The others are really decorative typefaces for special occasions such as advertisements, party invitations or greeting cards. It is possible to add your own fonts to the list a topic we might well turn to next month...

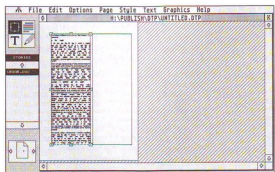
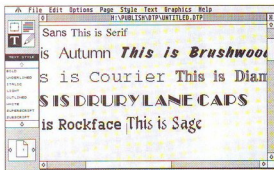
With the Paragraph Mode icon highlighted, our new style is easily applied. Note how the original italicisation of the second paragraph remains.



Paragraph styles can be overridden by manual changes, for example to increase the point size of certain words.

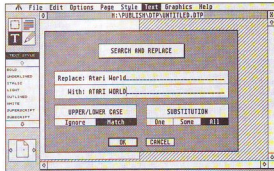


Don't use Drury Lane Caps for body text! Some of these supplied fonts are strictly for special, decorative purposes.



Selecting a frame and clicking on the story name will place as much of the text as fits into the first frame.

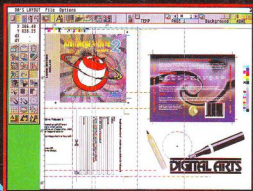
Timeworks is no word processor, but it does have a search-and-replace function which can be useful to ring global changes throughout an article.



DA's Layout TC

DA's Layout is a sophisticated DTP and Graphics package, boasting features such as ...

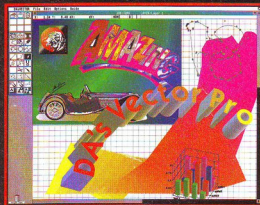
- Modular design. Modules include Barcode, Picture Catalogue, Font Editor, Colour Correction and Graphic Compose.
- Flexible page layout, including crop marks, register marks, calibration strips and photo boxes.
- Powerful text handling with macros for text style and format.
- Large Clipboard for pasting between pages.
- Very flexible help and grid lines. Set up the magnetic attraction's strength to allow free movement elsewhere on the page.
- Irregular Text Flow.
- Works on all Atari computers with at least 2Mb of Ram, and a resolution of at least 640 x 400. Works in all mono and colour modes, including graphics cards.
- Fully Magic & MagiCMac compatible.
- B&W version for users who don't need colour.



DA's Vector Pro

DA's Vector takes Vector Graphics into a new generation. This package has established its name as the number one Vector Creator on the Atari platform.

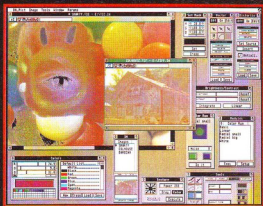
- Five separate menus: Vectorising, Vector Editing, Vector Effects, Graphic Charts, and Vector Animation.
- Imports CVG, DIG, EPS, GEM, and RVP Vector formats, also CFN, DFN and Postscript Type 1 Vector fonts.
- Highly advanced Vector point and line movements, using realtime onscreen visualisations.
- Rotate, Re-size, Distort, Add Perspective, Extrude into 3D, Multicopy functions.
- Powerful printing methods producing very vivid colours on colour printers.
- Gradient Fills with straight line or circular directions. Vector gradient morphing between several shapes.
- Add colour textures inside Vector objects.
- Works on all Atari computers with at least 2Mb of Ram, and a resolution of at least 640 x 400. Works in all mono and colour modes, including graphics cards.



DA's Picture

DA's Picture is an all-in-one Bitmap Art and Retouching package. The user friendly interface allows anyone to create professional-looking colour artwork.

- Floating toolbox with configurable left and right mouse button actions.
- Undo buffer for each picture in memory.
- Click and drag zoom boxes to instantly magnify any area of a picture.
- Airbrush and Paintbrush functions with configurable pressures and sizes.
- Powerful Printing methods producing very vivid colours on colour printers.
- Modular design. Modules include Contrast and Brightness, Special Effects, Texture Tiling, Photo CD Import, JPEG Import, Vector Objects and Colour Runs.
- Supports Virtual Memory for files larger than available RAM.
- Works on all Atari computers with at least 2Mb of Ram and a resolution of at least 640 x 400. Works in all mono and colour modes, including graphics cards.



DA's Layout TC 5.5

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DA's Layout Light

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DA's Picture 1.2

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DA's Layout CD 4.250 to DA's Layout TC 5.5

DA's Layout TC 5.3 to DA's Layout TC 5.5

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System
Solutions

Please phone and ask for prices of other upgrades to Digital Arts software, along with prices for new Modules for DA's Layout TC and DA's Picture.

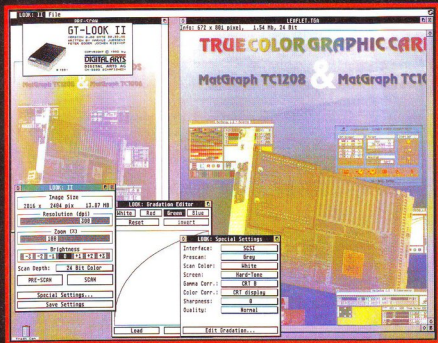
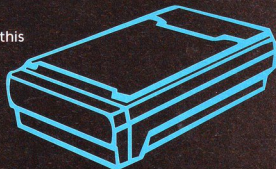
Colour Flatbed Scanner for the Atari

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The GT series of flatbed scanners from Epson gives you stunning lifelike colour scans from any colour picture up to A4 in size. The scanners range from 600 dpi to over 800 dpi, each with hardware zooming to give up to 2x the scanning resolution. These scanners will plug directly into the SCSI port of the TT or Falcon. For Atari ST/STE and Mega ST/STE owners the scanner plugs directly into the parallel port with one extra lead to fit into the MIDI port.

Our package comes complete with DA's GT Look 2. With this software you can scan either directly into RAM or on to hard drive. This is the easiest to use scanning software on any computer platform, giving you access to all of the features built into the scanner, and some new ones. Just put in the image to be scanned, click on PRESCAN, select the portion of the picture you want scanned, then click on SCAN.



GT Look 2 is now modular with the first module available being a photocopy option. Use your scanner and printer simultaneously to produce photocopies.

The GT range of scanners is not just for colour work. GT Look allows you to scan in 24 bit Colour, Greyscale or Monochrome. In Monochrome, GT Look 2 gives you a wide range of dithering effects to produce shades of grey from coloured areas of the image. You can even set the scanner to adjust the colours to suit Inkjet and Dot matrix printers.

System Solutions

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Please phone for information about the GT 8500, GT 9500 and other GT Scanner packages available for Atari, Mac and PC. Ask for information on the Photocopier Module & the Optimiser Module for GT Look 2

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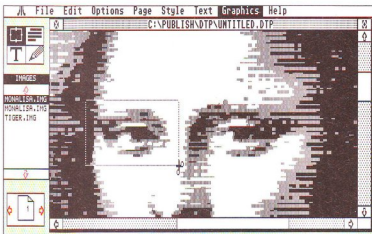
Tel: (0181) 693 3355

Picture this!

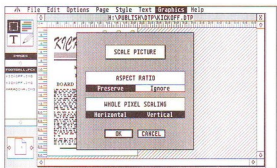
Who wants to read endless boring columns of text?

Graphics are the key to attractive design, but also the source of many headaches. Günter Minner offers some painkilling advice.

To crop a picture, in other words remove unwanted parts of it, you select Crop from the Graphics menu. With the scissors you then rubber band the area you want to keep.



Enlarging or reducing pictures will lead to distortions unless the aspect ratio is preserved, so that the width is kept proportional to the height.



A picture says more than a thousand words but pictures will often cause more troubles for the desktop publisher than many thousand words of text. The main reason for these problems is that there are so many different graphics formats, and the decent reproduction of graphics is a far more technical business than the printing of text.

Ten point body text in Times Roman, for example, will print out much the same whether you use your clapped-out Desktop or a typesetting bureau the Tiger

picture supplied on the Timeworks disks definitely won't!

The problems therefore span the entire process from input to output, but the intended final output the reason for all your labours, after all must be the first consideration. Much computer art is composed of dot patterns and looks fine on screen at the average monitor's dot density. But transfer it to the much greater dot density another word for resolution and your impressive Degas or IMG graphic may well shrink to the size of a postage stamp. Enlarging it will cure the problem but at the price of making the image much coarser as the number of dots remains unchanged and they only get bigger!

Pixels and vectors

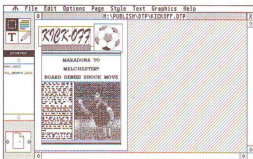
The obvious answer is to use pictures that were produced at the same resolution as the intended output device: 300dpi

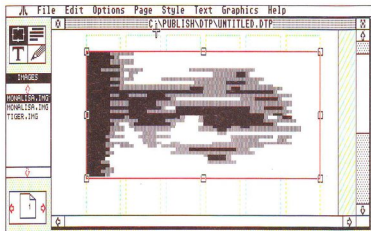
for a laser printer, for instance, and much more for typesetters. At these densities, however, large graphics gobble up enormous disk space and a full page scanned photo, for example, will far exceed the capacity of a double-density floppy. Before you rush out to buy a hard disk and a scanner, however, consider the alternative to dot patterns: vector images.

Vector images are made up of mathematical instructions to draw various combinations of shapes. These shapes can be drawn at any dot density, on a fairly coarse monitor as well as on an expensive typesetting machine this is what is known as "resolution independent".

They are compact little files that fit onto any floppy and will reproduce at the same size whatever the resolution. The only real drawback of vector art is that it is composed of stark geometrical shapes and therefore unsuited to photographic material or anything else

Largish scanned images like this picture of one Diego Maradona can quickly gobble up memory and disk space at higher resolutions, so don't try this at home if you only have an unexpanded ST with a single floppy drive...





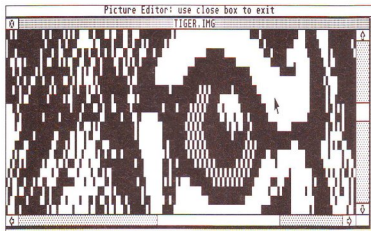
After cropping the remainder of the image in this case the Mona Lisa's eye now fills the same frame.

other people's work for your own purposes.

Nobody's going to drag you through the courts for a pinched image in a small-circulation school magazine, but anything sold more widely may well attract the eager eyes of the copyright lawyers, so be warned!

The file import filters offered by Timeworks cover a number of formats that are popular on other machines, so you could always borrow from your less enlightened friends with PCs, Macs or Amigas. There can be problems sometimes due to different versions of the same file format Timeworks would not, for example, load an IMG file saved in PaintShop Pro on the PC. Image converters such as the excellent Imagecopy should sort these out.

The widely-used Encapsulated Postscript (EPS) format is a special case as Timeworks will happily accept EPS illustrations but not display them all you get is a crosshatched box indicating the picture's dimensions and position. You'll also need a PostScript printer to make it appear in your output.



Images can be edited pixel by pixel if necessary although it would be better done in an image editing application.

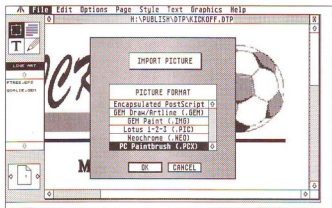
Kept in proportion

The import procedure itself is very simple: select the "Import picture" item from the File menu, choose the desired file format, and pick the image from the file selector box. It will then be listed as available in Timeworks' browser list on the left of the screen. The next step is to create a frame for your picture and click on the browser entry. Hey presto, but there's a little problem: the image will almost certainly be distorted to fit into the shape of the frame.

Do not worry, because this will be put right if you doubleclick on the "Scale picture" item in the Graphics menu. Scaling a picture is a frequently required operation, as is "cropping" eliminating unwanted areas of the picture by cutting out what you really want.

Scaling is usually done with the "Preserve aspect ratio" option enabled, unless you want to achieve interesting distortion effects by disproportionate scaling. For cropping, your cursor turns into a very suggestive pair of scissors very intuitive indeed!

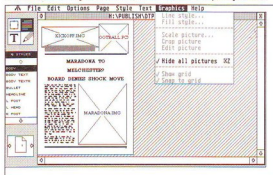
With a little practice, you'll soon master the art of adding impact to your documents without needing any artistic talent yourself. Once the pictures are safely placed on the page, you can edit them pixel by pixel (but this won't work with vector images!) in Timeworks' built-in editor, and use the program's drawing facilities to add further interest with frames, rulers and a range of basic shapes and fills.



Pixel and vector formats are both well covered by the vast range of picture import filters. Of the selections shown here, EPS and GEM are "object oriented", vector formats.

Involving subtle shades. For line art, technical drawing, symbols, logos and cartoons, however, vector images are the solution to the problems posed by dotty "bitmapped" pictures.

Screen redraws can be significantly faster when the display of pictures is switched off. They're still there, of course, and will print just fine.



Import business

Timeworks can import a range of different file formats of both types, vector and bitmap. Unless you are unusually gifted in the artistic department and therefore capable of knocking up your own illustrations, you will usually rely on two major sources for graphics: clip art libraries and a scanner. Clip art can be found on bulletin boards, in public domain libraries and is often supplied with printing and drawing software. Such clipart can be in either pixel or vector format and should be free of copyright, but if you are lucky enough to own a scanner you should be aware that it is not entirely legal to rip off

Term time

Confused by points and picas, lost in the menu maze without the manual? Günter Minnerup tackles the Timeworks terminology.

ASCII

Text without formatting codes for bold, italic and so on. Most wordprocessors can save ASCII files, but Timeworks has so many import filters that you can usually preserve the typesyles as they appear in your favourite wordrunner.

Bullet

A graphic symbol such as a heavy dot, mostly used for emphasis before every line in a list.

Column guides

Columns are the vertical arrangement of text on a page — books usually have only one column, newspapers several. Column guides help you plan the layout and position text frames accurately, especially with the magnetic "snap" switched on.

Crop

Reducing the size of an image by cutting away unwanted areas.

Font

Strictly speaking, a complete set of characters of the same design and style. Often confused with "typeface", a particular type design which can have many variations such as bold, condensed, italic and so on.

Footer

A line of text that appears at the foot of every page.

Frame

A rectangular box in which text and pictures are placed.

Handles

The small squares around a selected frame that are used to reduce or enlarge the frame.

Header

A line of text that appears at the head of every page.

Hyphenation hot zone

An invisible area at the end of every line that is used to determine where the

hyphenation falls. The smaller the hot zone, the more evenly edged the text column will appear.



The most important paragraph formatting option concerns justification — whether your text has a straight edge on the left, right, or both, or even sits in the middle.

Justification

Not an excuse, but the method of arranging text within a column. Justified text is evenly spread across the full width, whereas left or right-aligned appear ragged at the opposite edge. Centred text is normally used for headlines and keeps an equal distance to both column edges.

Kerning

Adjusting the space between pairs of letters to create a more pleasing effect, especially with large point sizes.

Leading

The distance between the baselines of two lines of text.

Lower case

Text in small letters.

Margin

The white space around the text and pictures on a page.

Master page

Master pages are not printed but act as a "template" for the actual pages. Any element placed on a master page will also appear on all other pages.



Paragraph styles are at the heart of Timeworks' handling of typography.

Paragraph style

Timeworks treats text paragraph by paragraph, and a particular style consisting of a font, point size, indents and other characteristics can be assigned to all text between two paragraph marks. This speeds up work enormously as any changes to a paragraph style will be immediately applied to all paragraphs defined in this style across the document.

Pica

A traditional typesetters' unit of measurement equal to 1/6 of an inch.



The rulers displayed at the top and left of the work area are indispensable for an accurate placement of page elements. The professionals use the traditional pica and point units, but most ordinary mortals are better off with inches or centimetres.

Point

A typesetting unit, mainly used for letter sizes, equal to 1/72 of an inch.

Repel text

To make text run around the outline of a frame, usually a graphic.

Scale

Enlarging or reducing a picture.

Serif

A typeface with short lines or curves attached to its characters.

Snap

To make the column guides act like magnets in attracting text and picture frame. Useful for accurate positioning, but can be switched off when irritating.

Style sheet

The master page and paragraph styles for a given document. Can be saved to a file and reloaded.



Remember MultiMate? Not a reference to promiscuity but a once popular word processor — Timeworks' text import filters are more versatile than any other Atari DTP program.

Tint

The underlying shade or pattern of a frame.

Typeface

See under font.

Upper case

Text in CAPITAL letters.

SALE SALE SALE SALE

SALE SALE SALE SALE SALE SALE SALE SALE SALE SALE

SALE SALE SALE SALE SALE SALE SALE SALE SALE SALE

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SALE SALE SALE SALE

Get Compatible

Ofir Gal has a few pointers for programmers out there who want their programs to be as compatible as possible.



Atari computers have their operating system (OS) in ROM. This was seen as an advantage in the 80s because loading the OS from a floppy was a painfully slow process. However it's a major headache for programmers – there are ST owners using half a dozen different versions of TOS. Even the Falcon hasn't escaped – there are no less than three versions of TOS 4.0x in everyday use. On top of that there are no less than three different multitasking systems.

Add to this the variants of GDOS available, from v1.1 to SpeedoGDOS 5 and NVDI and you have a real mess. The average programmer is faced with the impossible task of making his program work under all these systems. So how is it done?

TOS is there for you. It provides a

way to interact with the hardware without hitting the hardware directly. You could for example read the boot sector of a floppy and determine its format. But TOS lets you read the data using an OS call. The same applies to finding out how many drives are available. You could read the system variable `_drvbits`,

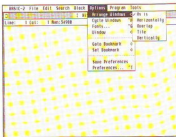
but a much better way is to use the BIOS `Drvmap()` function. It's even possible to output to the display directly

by writing to screen memory. It's certainly fast, but is going to fall apart if your user has a graphics card or even a patch like OverScan.

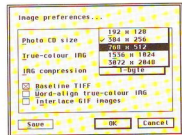
What this approach gives you is more or less a guarantee that your program will work on any configuration. Even someone running MagicMac or a Gemulator will be able to enjoy your program. The basic rule is assume nothing and check everything.

The basic rule is: assume nothing and check everything.

The HiSoft BASIC editor is one of the very few that actually uses hierarchical menus. Most other applications implement their own or simply avoid the issue completely.



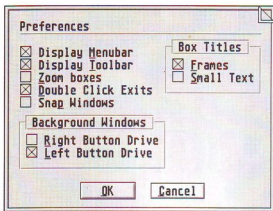
Imagecopy, like most programs, uses its own popup menus. When implementing these, look closely at how they work in other programs first. Subtle differences can confuse the user.



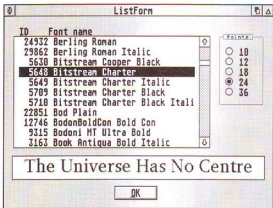
How things stay the same...

As much as the OS evolves, certain things tend to stay the same. GEMDOS and the BIOS have not changed since TOS 1.00. There have been a few bug fixes through the years, but basically everything works exactly the same on any TOS based system. GEMDOS has been expanded with MINT/MultiTOS to allow for file sharing and process control and some of these features have been implemented in Magic3, but the basic functions still work as expected.

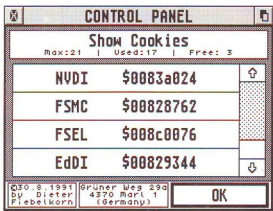
Similarly, the VDI has not seen much change since v1.00. With the release of SpeedoGDOS and NVDI 3, some new functions were added to allow scalable text and off-screen bitmaps. To make proper use of these extra features you must consult the documentation which you can find in books like The Atari Compendium or included with NVDI 3. Full documentation of NVDI 3 is available freely, but only in German. Most programmers will find this useful anyway as C source code crosses the language barriers quite well.



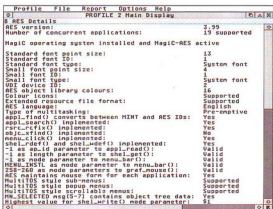
This dialog box is made up from non-standard screen objects. Implementing these requires a careful study of both AES and VDI. It's easy to get things wrong.



SpeedoGDOS and NVDI open a whole new world of possibilities. They greatly simplify the use of fonts and printing.



The Cookie Jar was introduced by Atari with the STe. It enables the programmer to get information about specific features of the system. Use it to check things like the availability of stereo sound and FPU or system enhancers like NVDI or a replacement file selector.



Profile, the system analyser, displays the information available to the programmer by calling `Appl_getinfo`. Always use this call if it is available to obtain data about the AES. Never make any assumptions about GEM, always ask it what it can do or you will be caught out.

... and how things change

The AES has seen more changes than any other part of the OS. Until MultiTOS and the Falcon, the only changes were minor, the most noticeable being the improved file selector in TOS 1.04. Many new features were added with the introduction of MultiTOS AES v4.00 and the Falcon's AES v3.30.

The 3D effects in TOS 4.01 (AES 3.30) were implemented by Atari by using the extended object type (found in the high byte of the object type field). This was enough to break a number of applications because this field should never have been touched. The 3D effects flags were quickly moved into the so far unused object flags bits in TOS 4.02 (AES 3.40).

The Falcon and MultiTOS AES also feature popup and hierarchical menus. This was far too late. The only known programs to make use of these were the HiSoft editors. All other programs use their own popup menus which make them more backward compatible. If you want to use popup menus in your programs your best bet is to use an existing library such as E-GEM or create your

own. Hierarchical menus are a little more difficult to create and are rarely needed.

The XBIOS is traditionally used for hardware specific functions such as the DSP on the Falcon. Make sure that the hardware is available before attempting to use the XBIOS.

Clean programs

The message is: always use the OS, even if you think you can do better. Your quick hack may work on your system, but will probably fail on another. If users complain about speed, make sure your code is as efficient as possible and recommend NVDI. The current diversity in the Atari market can only survive if programmers follow the guidelines.

Otherwise, we will see the market broken into smaller camps that do not stand a chance of survival. I highly recommend The Atari Compendium to any Atari programmers out there. Despite some inaccuracies, this is the best source of programming information there is. Mark Baines, author of the system analyser Profile, has compiled a list of errors in the compendium which is available on various bulletin boards.

AES information

Recently, a multitude of operating systems and AES enhancers have become popular. It is increasingly difficult to keep up with the variations and differences between MagiC, Geneva, WinX and the rest.

Luckily there is an AES call to help you out - `Appl_getinfo()` is a flexible inquiry function that provides information about the capabilities of the AES. It tells you things like the system language, which windowing features are available and how to launch other programs in parallel.

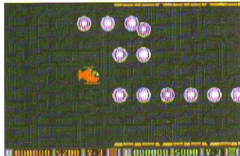
Unfortunately, this function was only included in MultiTOS (contrary to some documentation, it is not available on the Falcon) and attempting to use it when not available causes an AES error.

`Appl_getinfo` is available in MagiC and Geneva. The German developers have come up with a partial solution which is to use the AES call `Appl_find` looking for an application called "TAGI" which indicates the availability of `Appl_getinfo`. Additionally, `Appl_getinfo` is also available under MagiC 2 which does not respond to the "TAGI" technique.



Step right up...

Wanna expand your games programming horizons? Nial Grimes explains what the STe can do for you...



Some ST games scroll well, but the STe can achieve better results in less time given a little effort.

The ST is a damned fine games machine, but it provides very little assistance for programmers when it comes to the flashy effects used by entertainment software. The STe breaks many of the bonds associated with games programming on the Atari.

Fast, smooth scrolling and crystal clear sound are all possible with relatively little effort, as titles such as *Obsession* and *Team* are never too pleased to prove. Let's take a brief look at what's involved in making the most of the STe, from a programmer's point of view...

From blitter experience...

The biggest overhead in any ST game is the scrolling. It guzzles processor time and the results are never very satisfying, no matter how hard you try (sync scrolling excepted). The STe is much more flexible in this regard and allows the screen address to be changed freely. This immediately opens up the possibility of smooth vertical scrolling. Just subtract 160 bytes from the screen address, and bingo – smooth downwards movement!

Horizontal scrolling is a little bit more tricky and a complete explanation could easily fill both of these pages. However, the basic principle is that data can be skipped at the end of each scanline, and this means that the display can act as a window on a very wide bitmap. Soft scroll registers allow you to slide left and right in single pixel steps.

Team is probably the best example of multi-directional hardware scrolling. Ralph Lovey of Impact Software explains: "We use a 768x1024 bitmap of the pitch and simply scroll around it as necessary – it's not particularly efficient in memory terms, but it's fast!"

The blitter makes a good contribution towards speed too, as Chris Dillon at Caspian points out: "We reaped a 20% speed increase in *Zero-5* through using the blitter. It handles bitmaps very well." This second point should not be underestimated – sprites needn't be pre-shifted! And of course, the increased colour palette means that those sprites can be far more effectively shaded.

Sounding off!

Crisp, sampled sounds are needed to back up the fast graphics in most ST

games. While the hardware can't offer the Amiga's true four-channel playback, it can deal with a single stereo track through hardware. That simply leaves the programmer to deal with interpolation, or "mixing" the tracks; again, faster on the STe because two channels – left and right stereo – are available. The DMA sound hardware helps the



Smooth vertical scrolling, as seen in *Obsession*, is a piece of cake on the STe.

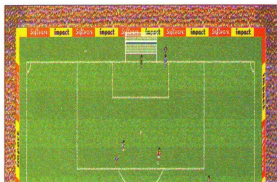
programmer, and also rewards the player with much clearer sound.

Just how nice your effects or music sound depends on which replay frequency you choose to use. The STe provides four settings: 6.25kHz, 12.5kHz, 25kHz and 50kHz. Very high quality sound effects are no problem, but music can be more tricky, because the higher the frequency, the more data you're going to have to interpolate. *Obsession* settles for 25kHz tunes, whereas *Team* forges in-game music and uses 50kHz sound effects.

It's not really worth struggling to write your own music routines, as



SubStation makes good use of stereo sound – another trick that the STE hides coyly up its sleeve.



Horizontal scrolling is achieved by moving the display "window" along a wide bitmap.

plenty are available in the public domain and it's just a case of seeing what you can squeeze in without dropping a VBL (vertical blank). Also bear in mind that high quality samples can quickly zap the memory you've saved by using the blitter to shift sprites.

Ball control...

The power of the STE's hardware serves a dual purpose. Not only does it provide

a much smoother gaming experience for the player, it also eases the burden on the central processor, thus allowing more complex game logic.

As Ralph at Impact says: "Team includes intelligent opponents, 'solid' players and proper ball physics". The effort put in by the blitter, soft scroll registers and DMA sound hardware no doubt help to support such features. They also allow more time for tricks such as overscan (border-busting) and palette switching.

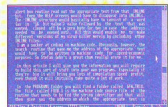
The STE has a lot to offer programmers and it's only through the effort of independent software houses such as Unique, Impact and Caspian that we are seeing just how far the machine can be pushed. Learn from their example, and who knows? Your name could be on the title screen of whatever knocks Obsession or Team off their respective pedestals...

Information alley...

STE programming information is available from a number of sources. A good starting point is a document called "The Atari Register List" which lays bare both the ST and STE's innermost secrets. Tutorial articles can be found in ST News and Maggie, which should be available from your favourite public domain library. The advantage of articles featured in disk magazines is that they're usually backed up by sample code, which can be hacked into your own programs. ST Applications, a magazine produced by Fast Club, has also covered various aspects of the STE in its Programmers' Forum section.



A comprehensive register listing for the STE, TT and Falcon is just one of the programming documents available in the public domain.



ST News and its peers include programming articles from time to time, some of them STE specific.

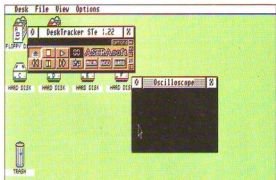
Mind your language

Almost any programming language can be used to exploit the "e", to a greater or lesser degree. In fact, vertical scrolling and sampled sound effects are very easy to implement with most versions of Basic, or with C for that matter.

However, for the ultimate level of control, you really do need to go for assembly. Not only does it maximise the amount of speed you can gain by pushing the STE, but it also makes it easier to tie in soundtracker replay routines, which are invariably in assembly language.



If you want to make the most of the STE's hardware, assembly language is the best bet.



Many tracker programs are supplied with replay source code – why reinvent the wheel?



All of Zero-5's bitmapped graphics are handled by the blitter. The result? A 20% speed increase!



Palette switching is used to display over 40 colours on screen in Zero-5.

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On the bench

Ofir Gal reveals how GEMBench works, how to use it and what the results really mean...

GEMBench started as a quick hack to let me test four different screen accelerators for my first ever Atari ST Review article. The other benchmark programs available at the time were less than satisfactory and I had no way of telling what they were actually testing.

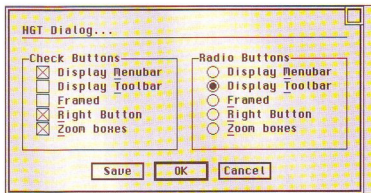
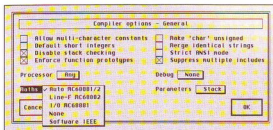
If it sounds as though it was a five minute job, let me put you straight! I am not your average programmer. I never studied software design and due to my relative ignorance, it took me much longer than it should have done.

As I expanded GEMBench I became interested in user interface concepts like non-modal dialogue boxes. And so the program developed on two fronts – the actual test code and the user interface. Both started off pretty crudely but they were gradually refined as my understanding of the subjects improved.

Display benchmarks

Originally, GEMBench only tested three GEM functions – text display, basic graphics and dialogue box display. I added the other tests later. All the display tests do the absolute minimum of non-display work, thus showing the

The old and the new. GEMBench tests the performance of GEM by drawing both traditional dialogue boxes and modern flying dialogue boxes.



effect of a screen accelerator on the display. This means that GEMBench can claim that text output is five times faster with NVDI installed but in fact a real text editor will not see such a remarkable speed increase.

There are a few tests in GEMBench that can be misleading and will probably be changed or replaced in a future version. The GEM window works well in a single-tasking system. Under a multi-tasking system however, the test result is affected by other programs. If you place a complex window like a Papyrus document in the background the test is slowed right down. Even if you close all windows, the desktop icons are redrawn behind the test window.

A partial solution, suggested by Sven Behne, is for GEMBench to install its own desktop. I am hoping to add this in a future version.

Next on the list is the Blitting test which gives misleading results with graphics cards. The test works by copying screen memory to ordinary RAM. On a standard ST or Falcon that's fine but on a system with separate video RAM it can give unjustly slow results.

The next test – VDI Scroll – is the "real" blitting test, taking advantage of a graphics card as most GEM programs would.

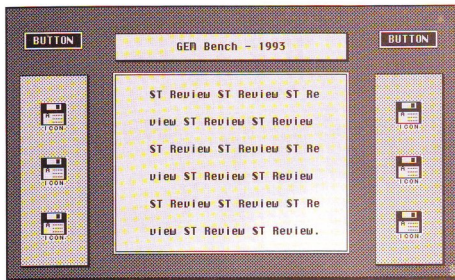
The VDI Enquire test obtains information about the current VDI state, something that every program does in "real" life. The catch is that most programs only do it once during start-up and even then it only takes less than a tenth of a second. So you could argue that it's hardly worth checking.

Many people have asked me what the New Dialogues test does. This simply uses custom dialogue boxes as used in many of today's programs. Their appearance is inspired by the German program Interface. This gives an idea about the performance of GEM with these modern looking dialogue boxes. The dialogue box uses PROGDEFs and also screen buffering using VDI calls in a similar manner to the shareware patch Let 'Em Fly. It's obvious that the "new" dialogue boxes take longer to redraw but they do offer useful things like keyboard shortcuts.

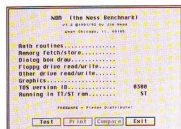
CPU tests

Benchmarking a CPU is close to impossible and some would say even pointless. As with the graphics based tests, results can be misleading, but for completely different reasons.

The Integer Division test was originally written in BASIC which, for unknown reasons, produced



The Lattice C compiler has several options that handle floating point maths. The GEMBench test uses the auto detection option which does not give the FPU a chance to show its true power.



The Ness Benchmark never caught on as it has some fundamental problems. The graphics tests, for example, draw over the full screen size making systems with expanded graphics appear slower than they really are.

GEMBench v4 has become very popular and is used by magazines in several countries to test new products. I have no doubt that careful design of the user interface has contributed to its success.

inconsistent results. I later had the test, as well as the RAM and ROM access ones, rewritten in Assembler by Eric Northwood. The test only accesses the CPU registers and it is thus a true indication of the power of the processor alone.

A 32MHz 68030 will be exactly twice as fast as a 16MHz one. A real-life program can hardly ever work without accessing memory thereby introducing other factors such as bus bandwidth and caching. So don't be fooled by the Integer Division test.

For a true overall indication of performance look at the RAM Access benchmark. All it does is to read long, aligned words from memory. My extensive testing, using real applications, from DTP to code compilation have shown that this single figure that GEMBench produces is the best indicator of overall system performance. When Sven Behne had a look at the code, he pointed out that the processor spends almost half the time incrementing the memory pointer during the test.

Even so, I left the code untouched.

The ROM Access test uses the same code as the RAM Access one but it reads from memory locations in the TOS ROMs. The results it obtains are somewhat meaningless - most applications do not read directly from ROM. This test will probably disappear in the next version of GEMBench. A possible replacement for it would be a combination of sort algorithms. Many pro-

grams use sorting, including the desktop and file selector.

The FPU test was written using the automatic FPU detection option in Lattice C. What this means is that the code will run on an ST without an FPU or one with an I/O mapped unit. It also runs on any 68030 system with a proper FPU and even on the built-in FPU of the 040.

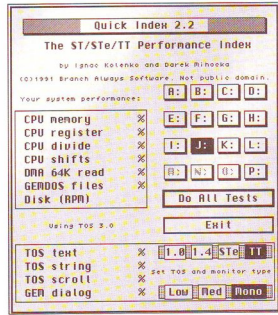
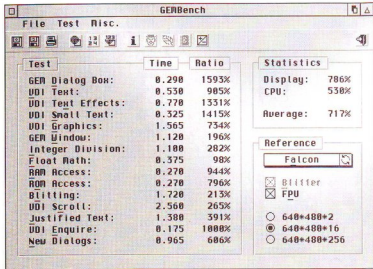
The code is rather inefficient because it has to check for the existence and type of FPU for each instruction. Code specifically compiled for an FPU will be many times faster. Even so, it is still many times faster when an FPU of some description is detected.

On a Falcon, GEMBench shows that an FPU crunches floating point numbers 15 times faster than the 030 alone. If the test was compiled without detection the figure could be as high as 100 times but then it would simply crash on an ordinary ST.

At the time of writing the original version of

GEMBench, Quick Index was the most popular benchmark utility. Its testing of GEM was limited to a single function - dialogue box display.

The other display tests use lower level BIOS and GEMDOS routines which are never used by GEM programs.



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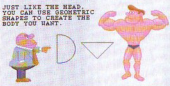
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Doug Little looks at ways of getting the most from that DSP chip...



DSP designs

There is no way to describe and explain the operation of the DSP56001 in less than 200 pages so I'm not going to try. Instead, get ready for a barrage of hints and tips that you might just find useful.

The DSP is RISC based, and therefore has a few interesting quirks — namely the way it uses registers and references memory. The DSP also has a highly parallel architecture, and allows up to three complete operations in a single instruction cycle, of which there are 16 million a second. This makes the DSP very fast indeed.

Strangest of all, the DSP has three memories, x, y and p. It also has a fourth make believe memory called l which just uses x and y at the same time to store longwords.

The three memories are parallel and simultaneous. If you look in x memory at location \$100 and do the same in y memory at \$100, you will see different values there. The memory is also made up of 24-bit words (no bytes at all) and 48-bit longwords where necessary. A longword is just a location that uses 24-bit x and y memory to make up the two parts of the longword at the same address in RAM. This is called l memory and it can be used anywhere in x/y memory you want.

The p memory is where the program code is and it can be ignored up to a point — all you need to know is that x,

y and p do not interfere with each other so long as you keep everything below address \$200. Go above this and you are in external RAM (32Kb) but here the x, y and p memories overlap in interesting ways.

More importantly, RISC design limits arithmetic and logic operations to accumulators. The DSP has two 56-bit accumulators, a and b.

Here is a simple example of a typical DSP instruction:
`add b,a x0,b; add b to a and move x0 into b`

This demonstrates a simple example of a 56-bit add and a 24-bit move taking place in a parallel manner. We know the add will be a 56-bit operation since the a and b accumulator registers are 56 bits wide and the move is a 24-bit operation since data register x0 is only 24-bits wide.

The really fancy part is that the move from x0 to b is not effectively taking place until after b has been used as the source in the add — this avoids register corruption where a register is both a source and a destination during the same instruction.

Here is a second, more complex parallel example:
`add a,b x:(r0)+,x0 y:(r4)+,y0
 mac x0,y0,b #>1,a
 adda,b`

This looks a bit scary, but I will explain. While a is being added to b in line 1, x0 is being fetched from x mem-

ory using r0 as the pointer and y0 is being fetched from y memory using r4 as the pointer. Both r0 and r4 are incremented (the plus sign) after use, so they point to the next value in RAM for later use.

On line 2, the mac instruction (mac stands for signed multiply-and-accumulate) multiplies 24-bit registers x0 and y0 (which were set up in line 1) together and adds the result to b while placing the value l in a for later. Then a is added to b on line 3 which was the purpose of loading a with l earlier.

Example

Here is a simple commented DSP program that reads a value from the 68030 and plays with it before writing the data back to the CPU. The code to handle the 68030 end of things is also supplied to allow you to test this out.

The official Motorola ASM56000.TTP is assumed to be the DSP assembler. You must use CLD2LOD.TTP and LOD2BIN.TTP to create the raw *.BIN code format required for the following example.

If you don't have the above, then you will have to track them down — they are necessary. It's also a good idea to get a hold of the full XBIOS driver library (a small fragment is supplied here) and the Motorola DSP56000/DSP56001 User's manual — it's essential reading for DSP programming.

```

FPC equ $FFED
HSR equ $FFEE
HTX equ $FFEB

cpuread macro var ; macro to read data from CPU (host).
    _rd jclr ; #0,x:<HSR,_rd; jump to _rd while bit 0 of HSR is
movepx: <HTX,var ; clear, and then write HTX to var
endm

cpuwrite macro var ; macro to write data to CPU (host).
    _wr jclr ; #1,x:<HSR,_wr; jump to _wr while bit 1 of HSR is
movep var,x:<HTX ; clear, and then write var to HTX.
endm

org p:0 ; p:0 is the code-boot address.
jsw _start ; this makes the DSP jump to your code.
org p:$4 ; first valid program address ($40).

code_start:
mydsp:
    hclr #2,omr ; turn off sinewave table at y:$100
                ; and the logarithm table at x:$100
_lp: cpuread a ; read data from CPU into register 'a'
    asl a ; shift a left by one bit
    cpuwrite a ; send data back to CPU
    move a,x:var1 ; put a in var1 (x-ram) for a laugh.
    move a,y:var3 ; put it in var3 (y-ram) as well.
    move a,l:var4 ; put it in var4 (as a longword) too.
                ; check these out in DSPDEBUG!!!!

    jsw _lp
    org x:0 ; the following variables are in x-ram.
var1: ds 1 ; this variable is at x:0
var2: ds 1 ; this variable is at x:1 (this is easy)
    org y:0 ; the next vars are in y-ram.
var3: ds 1 ; this is at y:0, but doesn't clash with
                ; var1 at x:0, as it's in a different
                ; memory (x and y ram are separate).
    org l:3 ; longword memory (uses x and y at once)
var4: ds 1 ; this uses x:3 and y:3 to make a 48-bit
                ; value. We can't use l:0, since x:0 and
                ; y:0 are used by var1 and var3 above!
    
```

Talking to the DSP

OK, here is what you need for the 68030 to talk to the DSP chip and send or retrieve values. Devpac is assumed to be the 68030 assembler.

```

dspread macro ; macro to read data from the DSP
    _d% bstat #0,$FFFA202.w ; wait for hostport to be full
    beq.s _d%
    move.l $FFFA204.w,l1 ; read 24-bit data from DSP.
endm

dspwrite macro ; macro to write data to the DSP
    _d% bstat #1,$FFFA202.w ; wait for hostport to be clear
    beq.s _d%
    move.l l1,$FFFA204.w ; write 24-bit data to DSP
endm

myprog:
    setup ; usual setup (get your own code!!)
    supervisor ; supervisor mode (D.I.Y time again)
    jsr IsDspDrv ; initialise DSP driver system
    move.l #CODE,a0 ; address of DSP binary code
    move.l #CODE_LEN,d0 ; size in bytes/3 (24-bit words)
    moveq #1,d1 ; this is required for the Xbios call
    jsr DspExecProg ; transfer and execute DSP code
    dspwrite #256 ; send value of 256 to DSP.
    dspread d0 ; read back the DSP's answer! (should be
                ; a value of 512.)

breakpoint:
    user ; get back to user mode (D.I.Y)
    clr.w -(sp)
    trap #1 ; exit program
    
```

A fragment of the DSP Xbios interface driver now follows:

```

GETWORDSIZE=7
EXSCPPROG=13
dspcall macro
    moveq \1,d0
    add.w dsphandle(pc),d0
    move.w d0,-(sp)
    trap #14
endm

IsDspDrv:
    move.w #500,dsphandle
    ber DspGetWordSize
    cmp.w #500-GETWORDSIZE,d0
    bne.s .ok
    move.w #96,dsphandle
    ber DspGetWordSize
    cmp.w #96-GETWORDSIZE,d0
    bne.s .ok

.no: moveq #0,d0
.ok: rts
dsphandle: ds.w 1
DspGetWordSize:
    move.l a2,-(sp)
    dspcall #GETWORDSIZE
    addq.w #2,sp
    move.l (sp)+,a2
    rts
DspExecProg:
    move.l a2,-(sp)
    move.w d1,-(sp)
    move.l d0,-(sp)
    move.l a0,-(sp)
    dspcall *EXSCPPROG
    lea l2(sp),sp
    move.l (sp)+,a2
    rts

section Data
CODE: incbin "mydsp.bin" ; this is the DSP code
CODE_END: even
CODE_LEN:-(CODE_END-CODE)/3
    
```

This lot should be enough to get you started, but I don't think anybody is going to get far without the programmer's handbook or the Xbios driver code. You should now know what it looks like at the very least! Have lots of fun and remember — good DSP code is wicker in your text editor than it is high!



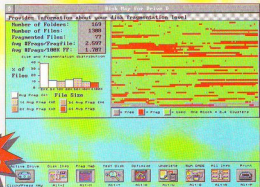
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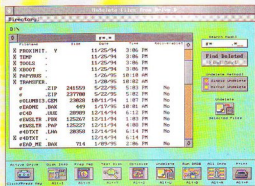
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Diamond Edge 2: un-deleting files is a piece of cake

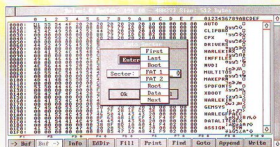
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Diamond Advanced Disk Editor

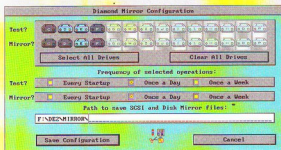


DADE - the powerful disk editor included in Diamond Edge 2

There are other disk editors, but none as powerful, flexible, and easy to use as DADE. Specifically designed with time-saving and impressive features to aid any editing or recovery effort, there is no other disk management system that offers as much, including Physical Device Level Disk Editing. The ultimate in data recovery and low level power tools.

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- Convenient function button bar. Many with special time saving features when double-clicked.
- Easy-to-use Directory Edit window decodes the information for you with a trace feature for FAT entries for a file. Very nice!
- Flexible Fill function.
- Powerful search and replace function.
- Rebuild lost files sector by sector.

Diamond Mirror 2



The Diamond Mirror Configuration dialog

Diamond Mirror 2 (use regularly to 'snapshot' your drive) has been greatly enhanced to include complete testing of disks at boot time as well as keeping backup copies of Mirror Files.

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Never mind the *language*



Are text-only interfaces terrible?
Jon Ellis looks at interfacing TOS
and TTP programs...

Occupying the middle ground between Auto folder patches and full GEM applications, TOS and TTP programs are the simplest kind for the beginner to write.

There's no need to wade through reams of complicated GEM documentation — just print to the screen and read strings of user input from the keyboard. This can be done using fundamental commands in any language: PRINT or INPUT in BASIC and printf() and scanf() in C.

Such character-based interfaces are ideal for little development tools that don't require the sophistication of dialogue boxes and windows. One of my favorites is a program written by Timothy Purves over eight years ago to report on the ASCII and scan codes associated with any key on the keyboard. It has a neat interface which does the job efficiently; anything more fancy would be complete overkill. Keeping the interface simple in this way allows you to concentrate on program functionality.

The only difference between TOS and TTP programs lies in the way they are treated by the desktop. TTP programs expect to receive information from the user via the command line (see the separate panel) whereas TOS programs do not. Accordingly, before running a TTP program, the desktop displays a dialogue box to allow the command tail to be entered. All programs, including GEM applications, can and should provide at least limited support for command tails.

The most commonly encountered TTP programs are probably file archivers, used to create and maintain *.LZH, *.ZIP and *.ZOO files. Other packages suited to the TTP style are file format converters and analysers, assemblers, disassemblers, even whole C compilers! Any software that can be given its input data and instructions and then be left to get on with it can easily be written as a TTP program. The danger with this approach is that you lose user-friendliness, an issue we will look at in next month's article, with some dos and don'ts for TTP program design.

Background briefing: the command line

Until relatively recently, the command line interface was the standard means of communicating with programs running on multi-user computers. Even on PCs, before Windows became widespread, all programs were launched from the DOS command line. The Mac, and then later the ST were the first widely available computers to move away from this approach, by adopting a more friendly graphic interface.

Command line interfaces are managed by programs known as shells. These are responsible for taking input from the user, analysing it to see what is required, and then executing the relevant program. Also most shells provide extensive facilities to control where output from programs is sent (to the screen, the printer, a disk, a file or whatever) and a good range of basic file handling commands.

A typical command line operation might look like this:

```
C>LZH -X ARCH.LZH
```

The `C>` is a prompt, a short piece of text issued by the shell to let the user know it is ready for more input. Often the text tells you something useful, in this case that the current default disk drive is drive C.

The remainder of the text has been typed by the user. It consists of two elements: "LZH" and "-X ARCH.LZH". The first of these is a command to the shell to locate and execute a program with the filename "LZH" (In this case, a file archiver). Notice that the user has not specified an extension for the program: is it LZH.TOS, LZH.TTP or LZH.PRG? It's up to the shell to find out, which it usually does by searching for each of these possibilities in turn.

The second part of the user's input is information to be given to the program as it starts. This is called the command tail. The command tail format is entirely up to the utility's programmer, though there are some general rules that most follow. The command tail is made up of pieces of text called arguments, separated by spaces. In the example, there are two arguments, "-X" and "ARCH.LZH".

Frequently, a program will require an input file to work on and some guidance as to which of several possible operations is wanted. As a matter of convention, input filename (and sometimes output) filenames appear unadorned, whereas the

choice of operation is indicated by one or more arguments introduced by a special character, often the dash or minus sign.

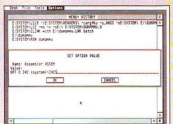
These are known as switches. In our LZH example, -X is the switch signalling that the contents of the named archives should be extracted. Other possible switches for LZH, for example, include -Y to view the list of files in the archive and -A to add a file.

How does this relate to the ST? Well, under the GEN desktop, the process of locating the file to run is actually performed by the user by double-clicking on a specific icon. All that's left is for the command tail to be added. This is easiest to do if the file is a TTP program — just type it into the dialogue box.

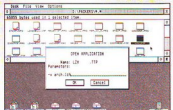
Completing our example, the required text is simply "-X CODE.LZH".

```
LATTICE C Shell: C:\> LZH -X ARCH.LZH
Directory of C:\LZH\ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
 10/17/95 09:36 AM   1280   ARCH.LZH
```

Shells can be text-only like this one...



... or a combination of text and graphics.



Using the LZH archiver from the desktop

Many development tools work fine as TOS programs.

KEYCODE v1.0, Program by Timothy Purves Copyright (c) 1987 MichTron Inc.

```
Scan = 0x25, Ascii = 0x6B
Scan = 0x23, Ascii = 0x68
Scan = 0x07, Ascii = 0x36
Scan = 0x04, Ascii = 0x9C
Press any Key, RETURN to exit
```

Cartridge directory printer v1.00
© Jon Ellis, 1995

Application cartridge

```
File: PRINTBP.TOS
554 bytes
Written at 22:47:46 on 15/02/1995
TOS program
No initialisation code
Main entry point: 500FA0026
```

1 application in cartridge.
Press RETURN to exit:

This simple program prints a cartridge directory.

Tech Tips: TOS dos and don'ts

- Do be aware of how the desktop treats TOS programs — before your program is run, the mouse will be turned off and the screen cleared to the background colour, usually white.
- Do think about different screen sizes: 40 or 80 characters wide.
- Do remember that you can use VT52 escape codes to enhance the appearance of the display.
- Do use a combination of the VT52 escapes and the XBIOS function `Cursor()` to control the appearance of the text cursor.
- Don't install vector handlers. In most cases the user can terminate your TOS program without warning by pressing `Control-C`. It is possible to prevent this happening (if you use only low-level character input functions) or to catch it (for example Lattice C provides an `onbreak()` function) but it's a real can of worms.



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Sequencing — beyond the manual



Ian Waugh looks at the ins and outs of SysEx messages in part three of our sequencer series.

Time to get your hands dirty. I know a lot of musicians who fight shy of System Exclusive messages. They may use Sys Ex dumps to save voice data and settings but they wouldn't think of entering a Sys Ex message from scratch into their sequencer.

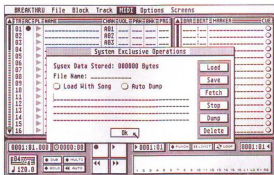
And it's not surprising. Sys Ex is the one MIDI message which sequencers can't translate into English. Look at a MIDI file in your Event List. The note messages are probably translated into note names and the controller numbers will be shown by name too. But if there are any Sys Ex messages there, the most information you are likely to see is the manufacturer's name.

What's in a name?

System Exclusive messages, as the name implies, are exclusive to a particular manufacturer and/or instrument. That being the case, there is no standard set of messages that sequencers can recognise and translate. Well, there are a couple — the start and end of a Sys Ex message and, as we've already mentioned, the manufacturer's name.

If you haven't dabbled with Sys Ex, now's the time to start. In this article we'll see how to enter a Sys Ex message that will put a GM instrument into GM mode and reset the parameters to their default values. We'll also throw in a GS reset message for good luck.

The first step is to find your sequencer's Sys Ex editor. Cubase puts Sys Ex messages in the Event Type column of the List Editor. Double click on the Comments entry and the Sys Ex edit line will appear.



Breakthru can receive and save Sys Ex dumps but there are no facilities for editing the data within the program.

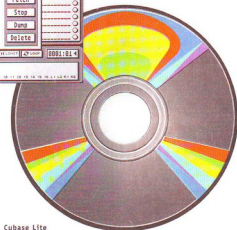
Notator Logic's Event List has two Sys Ex filter buttons. One removes them completely from the list, the other shows the header only and filters out the data — you know there's a Sys Ex message there but the reams of numbers don't clutter up the screen. Note, these filters don't remove the data from the file, they only prevent it being displayed in the editor.

In Notator you drag a Sys Ex event from the list on the left of the edit screen into the editor.

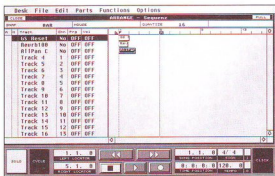
Some budget sequencers don't support Sys Ex very well at all. For example, Cubase Lite will load Sys Ex data in a MIDI file but it has no facilities for creating it or editing it. Breakthru can record and save a bulk Sys Ex dump from an instrument but, again, you can't enter or edit Sys Ex data.

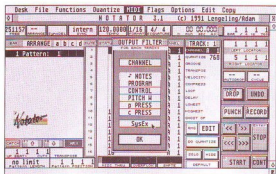
What's in a number base?

To slightly complicate matters, some sequencers expect Sys Ex data in decimal format (Logic), others expect it in Hex (Cubase). For the sake of space I will assume that you know what hex is (if you don't and would like a feature



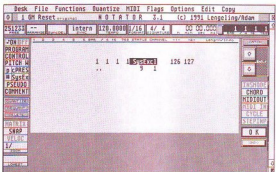
Cubase Lite can load MIDI files containing Sys Ex data but lacks an event editor to enable you to edit the data.





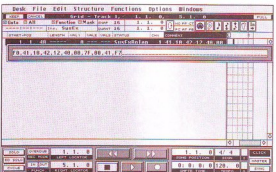
about it, tell the ed!). In any event, Sys Ex data has no intrinsic meaning so whichever format you use you simply have to type in a list of numbers.

The GM reset message in decimal is: 240, 126, 127, 9, 1, 247
And in hex it is:
F0, 7E, 7F, 9, 1, F7



Each of these figures is known as a byte. The first byte is the Sys Ex header and tells the MIDI system that a Sys Ex message is on its way. The last byte signals the end of the message.

So, to enter a message, all you do is go to your sequencer's Sys Ex editor and type in the numbers in whatever format your sequencer uses.



Sys Ex basics

Although Sys Ex data is just a list of numbers, it does follow a precise format:
 Byte 1: System Exclusive header
 Byte 2: Manufacturer's ID number
 Byte 3: Device ID number
 Byte 4: Number of bytes of data
 Byte 5: First data byte
 Byte 6: Second data byte
 Additional data bytes
 Penultimate Byte: Checksum value
 Last Byte: End of Sys Ex byte

When transmitting Sys Ex data, make sure the Sys Ex option in the MIDI output filter is enabled as it is here in Notator.

The GM Reset message as it appears in Notator.

The GS Reset message as it appears in Cubase's Sys Ex line editor.

But do read what the manual has to say about Sys Ex first. In Logic, for example, you do not have to enter the first or last bytes. These *must* be sent with every Sys Ex message and it saves you the trouble of typing them in. You must also adjust the length of the message using the left and right chevron brackets. Don't set trailing bytes to zero as this will change the meaning of the message.

In Cubase you simply type in all the bytes, including the first and last ones.

Play this message to a GM module and it will reset and go into GM mode. If your sequencer has a MIDI output filter, make sure it is set to allow the transmission of Sys Ex messages.

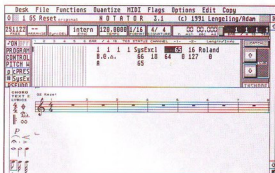
GS

If you have a GS instrument, here's the Sys Ex data to put it into GS mode:
 Hex: F0, 41, 10, 42, 12, 40, 00, 7F, 00, 41, F7
 Decimal: 240, 65, 16, 66, 18, 64, 0, 127, 0, 65, 247

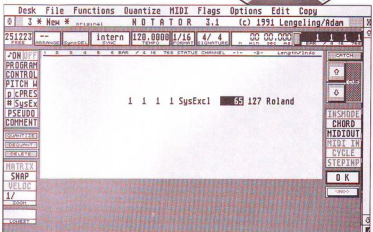
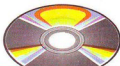
If your sequencer translates Sys Ex data into ASCII, you'll notice that the second byte, 65 (41 hex) produces "Roland". The second byte is the

manufacturer's ID number. Most sequencers have these programmed in and if you scroll through the byte you'll see which numbers the various manufacturers have been assigned.

That's enough of the techy stuff. Next month we'll do something musically creative!



The GS Reset message in Notator Logic. Notice that you don't have to enter the first or last byte.

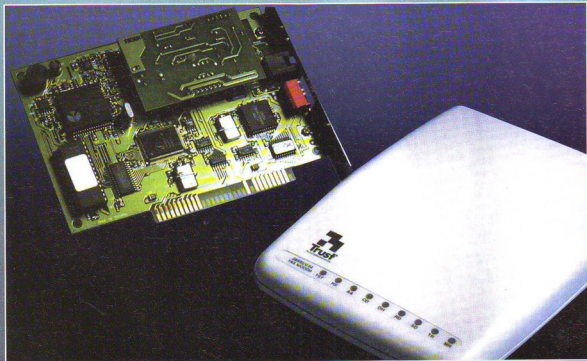


You can scroll through the first number in the Sys Ex message to discover the manufacturer's Sys Ex ID number. Number 65 belongs to Roland.

Sequencer Secrets

The tips in this series are based on the book, *Sequencer Secrets*. It contains over 150 hints and tips covering all aspects of sequencing including optimising your system, creating echoes and harmonies, humanising drum patterns, creating realistic instrument lines, producing gate effects, using controller messages, quantisation and troubleshooting. It is available from all good book shops at £6.95 or direct from PC Publishing for £6.95 plus £1.50 p&p. PC Publishing are at 4 Brook Street, Tonbridge, Kent, TN9 2PI (01732 770893).

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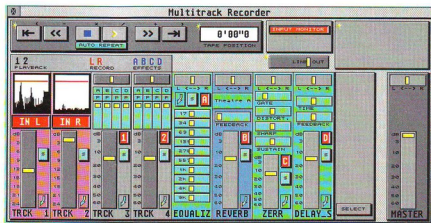
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Hire and

Hire

Ian Waugh looks at a little known way to get an Atari when you want one in a hurry.

There are many ways to make money with an Atari computer. The most obvious is to use it with a word processor or graphics package to write articles or a book, or to create or process graphic images. Musicians, of course, use it for arranging and composition and for many it's as essential a part of their studio as the synths and mixing desk. But have you thought about hiring it out?



Most items of hire equipment are expensive. People hire them because they cannot afford to buy them outright. In the case of musical equipment, if someone needs an item only for a few days in order to finish an album or to use on a gig, hiring makes sound sense.

But with a 1040 STE plus monitor available for less than £300 — less, second-hand — why would anyone want to hire one rather than buy one outright?

Hire and reward

We asked Dick Meredith, hire manager at Music Labs. He has two 1040s and one Mega 4 on his stock list and at least one of them is out every week.

"Business on them has been better," he admits, "but they are still in demand. Everyone at some time or another has used an Atari and people are comfortable with them."

But who hires them? "Studio, artists, private users," said Meredith, although for the sake of customer confidentiality he preferred not to mention any names. "Giving a name out may not seem like much but some people could get upset."

"Studios which, for some reason, have never had an Atari, hire them for individual projects. We also hire to people who have moved onto the Mac, for example, but want to remix something they originally did on an Atari.

"There's a lot of interest now in digital editing, especially Pro Tools which the Atari can't handle. Most people are looking at Macs now. If they get rid of their Atari and need one to complete some work, they come to us."

Top money

Music Labs' hire charges for a 1040 plus monitor are £35 per day. The Mega 4 is £45. Rates can vary, especially if you want to hire it for a week or longer and special customers get preferential discounts.

Software is extra and the company hires this, too. Cubase is the most popular, closely followed by Notator. Both packages are £15 per day.

Music Labs' current best-hire items are ADATs, the Postex D20B, the Lexicon 480L multi-effects unit and the Tascam DASS. So the Ataris are in good company.

Special FX

Over at FX Rentals, the story is much the same but even more so. As hire manager Nick Harris explained, "The Ataris are constantly in our top ten hire list. In June they were number seven. Our best hire item was the Alesis ADAT followed by the Tascam DSS. In third place was C-Lab's Unitor and Notator software and Cubase was fourth."

I asked Harris what were the least popular hire items. "Well, everything we have hire, even if it's only a couple of times a year. Some keyboards and samplers aren't very popular. They're updated so often that they rapidly go out of fashion. The Akai S950 seems to break the rules, as that's still a popular item."

The £1500 1040!

The company has six 1040s and five Mega 4s. The 1040s are the most popular and the computers usually go out with software. To hire Notator and Unitor costs £30 per day and Cubase is £25.

The 1040 costs £45 per day and the Mega 4 is £55, including software. If you want a system for a week, you get it for a four-day hire fee — £180 or £220. If you want it for a month, you get it for the price of 12 days hire — £540 or £660.

"One system has been out for over three months!" added Harris with a grin. You don't need a calculator to work out that — even with preferential discounts — the hirer could have bought a powerful Atari computer system with music software many times over.

Harris was, perhaps naturally in this case, reluctant to divulge names but he did confirm that most equipment went to recording artists and commercial studios. Most are hired in to do an album or specific project. The studio may not have an Atari or if the artist is travelling in from a distance they may not want to take their ST with them and expect the studio to supply one.

Bill footers

But what about these enormous hire bills? Who pays them? Both studios concurred on this — the record company ultimately foots the bill but compared with the overall cost of making a record, hiring an Atari is nothing.

There are other advantages to hiring, too. The cost is fully tax deductible unlike outlay on capital equipment which can take years to get back through tax allowances.

If anything goes wrong with the equipment, you just ring up and get another one. When the session is over it goes back. It's not cluttering up the studio or put in a storeroom where it can get broken. Studios often find it worth hiring equipment for the lack of hassle.

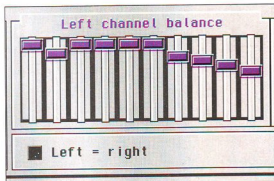
So that's another side to the Atari you don't often hear about — unless you work in a studio or hire company. Even after ten years it's still a very popular — in some cases, essential — piece of equipment for musicians in spite of the onslaught of the so-called mega

computers from Apple and PC manufacturers.

As one studio manager said, "Everyone can use an Atari. Some of these new systems (on Macs and PCs) are too complicated. You lose sight of the purpose, which is to make music. Album artists don't have time to learn how to use them. Some hire in programmers but you can't have one on call 24 hours a day. And for many artists, especially songwriters, a programmer takes them one step away from their music."

So should the unthinkable happen and your hamster eats your Atari and you just have to finish your latest recording, you know help is at hand. Most hire companies have Ataris on their stock list, particularly those in London and surrounding areas.

Alternatively, if you think there might be a demand for STs in your area and you can bear to be parted from it, you could always investigate the hire business. I think I'm in the wrong job...



Studios anonymous

I did manage to track down a couple of studios which hired in Ataris. Both asked not to be named. "If they think we don't actually have our own Atari that might possibly put us in an adverse light," said one. "Actually, it's not a problem. Nobody really knows what you've got and what you haven't — we always hire in what we need. That goes for Ataris, digital recording systems, processors, synths — whatever."

Another studio admitted, "We do use Atari a lot but we just never got around to buying one of our own. Most of the artists who use one bring their own. If they don't, they're easy enough to hire.

"To tell the truth, we thought the Atari was on its way out and it wasn't worth buying one. Certainly not now. Everyone's using Macs... Well, so we thought but a lot of clients still like the Atari. I suppose they're easy to use and the software is reliable."

Contacts

Dick Meredith, Music Labs: Tel: 0171 3885392
Nick Harris, FX Rentals: 0181 9642288

Public Arena

There's little doubt that some of the best ever Atari programs have appeared as either public domain, shareware or freeware. Public Arena brings you reviews of the best programs and games, month in, month out – and our 10 point marking system guides you effortlessly through the decision of whether to buy. Reviews by Nial Grimes, Joe Connor, Denesh Bhabuta and Carl Löfgren.

WinRec 1.41

Goodman International • £1.95 • Falcon only



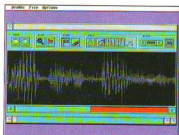
Not more direct to disk software for the Falcon? I'm afraid so but WinRec is ideal for anyone who just want to record a single channel without any fuss. It is capable of recording a stereo track from 8 kHz up to 49 kHz, with or without DSP effects. It uses the DVS format (compressed or uncompressed) and among the DSP effects there are a chorus, reverb, echo, harmoniser and a very comprehensive equaliser. The karaoke feature is also superb. WinRec also has a built-in sample editor – it's rather simple but it's there.

In Germany there is a professional version of WinRec which, not surprisingly, is called WinRec Pro. It pushes the limits even further. For example, it's possible to create completely new effects by combining up to three original ones.

I can't say anything else other than WinRec is an excellent piece of software with a very reasonable registration cost of 30DM (about £13). If you own a Falcon and you want to record things quickly and easily, then look no further — this is nothing short of a bargain!



Can D2D get easier than this? Probably not...



Perhaps WinRec isn't in the same class as Avalon and Zero-X but it's good all the same.



Address v2.02e



Goodman International • £1.95 • ST/Ste/Falcon



Address is a name and address database that runs either as a program or a desk accessory and it happens to be one of the cutest GEM applications around. All the action takes place in two main windows, the list window displayed on starting and the edit window where data entry takes place.

The list window displays and sorts using any available fields and an auto-locator makes it easy to select any desired record or records. Double clicking any entry opens the edit window and displays its fields. The record format can be customised by changing the field titles, contents of the popup fields and the address layout.

If you have a modem attached, address can dial telephone numbers and you can tag numbers so that they are always dialled using Mercury (if you use it). A password is included to protect your Mercury PIN too.

Comprehensive import and export control means any ASCII format data can be adapted for use in Address although getting to grips with the control commands takes a while. Using the Atari clipboard, it's easy to add names, address and other data to the start of letters etc.

Address is shareware and costs £15 to register.



Editing an entry in 3D mode on a Falcon.



Educational Disk LE002

Locutus PDL • £1.50 • ST/STE



This disk contains four educational programs. The main program is about the USA in the 1900s and its role in history.

Others are about the formation of the British Parliament, a French to English language quiz and a typing tutor. All programs work in ST low resolution.

1900s USA is impressive. Programmed by a GJSE student, the layout is very professional and the information is presented in nicely laid out sections that are easy to navigate through.

The program contains facts and figures about each of the American states, such as population statistics. It even tells you which were the original 13 states! The figures are accompanied by some nice bar graphs and you are provided with information about presidents, wars, civil rights and the Ku Klux Klan. 1900s USA has various quizzes so you can test your knowledge too.

The interface is functional and the top of the screen has a work panel, containing icons for each section. Help is accessed by a click on the right mouse button. If you want to learn something about the USA, or even want to learn some touch typing, then this disk comes highly recommended.



The top half allows you to select the different sections.

The LED Panel CPX options are split over two pages. A selection of possible set-ups are shown top right.



Clip art maps 1

Goodman International • £1.95 • ST/Ste/Falcon



This disk is the first in a fifteen disk collection of maps put together by Goodman International. It includes 37 maps from Afghanistan to Burundi. Each disk can be purchased individually or the entire fifteen disk set can be had for £19.95.

With a few exceptions the maps display the coastline and land borders along with labels denoting the major towns and cities. All the files are monochrome outline maps in IMG format created at 68 dots per inch (dpi). The maps range in size from 411 by 480 pixels up to a sprawling 1578 by 1755 pixels. The output quality depends on the program used to output the images.

The IMG file format is the most widely supported bitmap format on the Atari platform and is directly supported by most popular DTP packages including Timeworks, Pagestream, Calamus and Easy Text Pro.

More often than not clip art needs to be customised to

Calamus can optimise IMG files for screen or printer output.

LED Panel v3.1

Goodman International • £1.95 • ST/Ste/Falcon



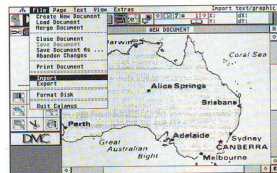
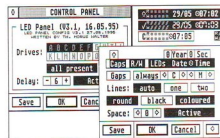
LED Panel started life as a utility to display drive read and write activity in the menu bar, making it ideal for monitoring drive activity if your floppy or hard disk LEDs are tucked away out of sight.

The latest version offers plenty of other enticements including an optional clock, date and caps lock indicator. LED Panel uses a meagre 12 kilobytes of memory and there's even a light version that occupies less than 3 kilobytes to display just the drive activity.

The LED Panel options are set using a separate configuration program, accessory or control panel extension, you decide! Any changes made are displayed immediately so WYSIWYG.

After installing either version in your Auto folder or running them from the desktop, LED Panel appears towards the right hand end of the menu bar. Any menu entries there will be overwritten by LED Panel but if this causes problems you can easily switch LED panel off using either the accessory or

the control panel utility.



your needs and there's no shortage of commercial and shareware art packages capable of editing and converting IMG files to other formats should the need arise.

If you regularly need maps this collection is undoubtedly handy to have around. Admittedly you could scan your own but finding suitable copyright free material isn't likely to be easy, as you can imagine.



Mouse v2.3

Floppyshop • £2.00 • ST/Ste/Falcon

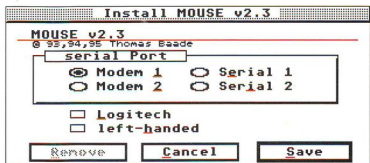


Atari computers can be modified to use PC keyboards, PC monitors and PC hard drives so it's no surprise a PC mouse can also be connected. What is surprising is that no hardware modification is needed — any Atari can control a PC mouse using this software.

Most PC serial mice are suitable. You just plug the mouse into the Atari's serial port, configure the software and then generate the driver and chuck it in your Auto folder or run it from the desktop.

The pointer feels distinctly different to a normal mouse with a curious gliding action, but is nevertheless perfectly usable. A PC mouse can be used instead of, or in tandem with, your existing mouse but it is only activated after the driver is installed. This makes it a non-starter for autobooting games and applications.

If the pointer doesn't respond to the bait it can be nudged into action using the MODEM.CPX module supplied with



Use a PC serial mouse on any Atari via the serial port!

Atari's XControl panel by entering the settings detailed in the documentation. Software that accesses the serial port is likely to cause problems but if you're already using your serial port there won't be anywhere to plug a serial mouse in, unless you're a TT owner.

The translated English documentation isn't very clear but there's not much to figure out so don't let this put you off having a play.



NVRAM Configure v1.0

Goodman International • £1.95 • Falcon only



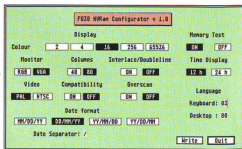
Most Falcon owners remain blissfully unaware that their machines contain a 50 byte area of Non-Volatile Random Access Memory (NVRAM) maintained by a small battery on the motherboard. This memory stores startup values which can be set using this utility.

One of the most useful options allows the boot resolution to be selected. After lashing out on a Falcon you don't expect to boot into ST low resolution! Clicking on the words Keyboard or Desktop displays further options which can be selected using the mouse.

Although this utility makes it easy to change the settings of your NVRAM it doesn't include any safety checks! Unless you know exactly what you're doing, leave this well alone or you could lock yourself out of your machine. You have been warned!

Different TOS nationalities offer different language and keyboard options so unless you know for certain that an option is available then don't select it!

One useful tip — if the worst does happen, hold down the Control, Alternate and Undo keys during the memory test. This lets you back into the system — unless you've disabled the memory test that is!



Reasons to be careful with your Falcon boot time settings!

Easy PGP Shell

Floppyshop • £2.00 • ST/Ste/Falcon



Pretty Good Privacy (PGP) encrypts files that can only be decrypted by the person it is intended for. It is so secure that it would take years for the most powerful computer in the world to decrypt it!

PGP for the Atari is available as a TTP program. You need to type in arcane commands to carry out functions such as



The info box.

encryption. However, Easy PGP Shell, a shareware program, takes away all the hard work, providing you with a slick GEM based shell. Each function is explained in

detail in the documentation and English help should be available by the time you read this.

PGP works by using two code keys: a secret key, which you securely keep away, and its corresponding public key which you distribute for others to encrypt messages with. Files can only be decrypted when the secret key is available.

PGP is useful for sending secure e-mail messages and files across the Internet and on disk.

Programmers may find it particularly useful for sending beta copies of programs out to selected people. If you think you need PGP, then take a look at Easy PGP Shell.



Extracting a key from a public keyring: type a string to search or double click to bring up a list.



Route Finder v2.1

Goodman International • £1.95 • ST/Ste/Falcon



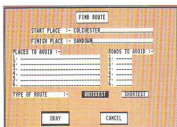
Route Finder is a journey planner capable of finding the shortest or quickest routes between any of the 2,326 locations listed in its database. Route Finder has taken the best features from Autoroute, a commercial route planner that has been discontinued on the Atari platform, and has added the ability to add and remove locations and roads to the map which allows the database to be maintained more easily.

Planning a journey couldn't be simpler. You enter your start and finish locations and any places you want to avoid or visit en route and then select the OK button. If a route is found it can be displayed graphically or as a table.

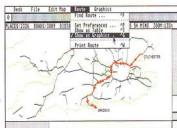
The graphical display intelligently uses different line types and colours to distinguish between road types and the zoom tool makes it easy to display local details.

The tabular display can be directly printed out on any Epson compatible printer and includes the places, roads, distances and special features such as limited access junctions and ferries.

Registration with the author costs £10 and this gets you a key to remove the occasional shareware delay dialogs and the 200 mile journey limit. The interface is a little shaky but it gets the job done.



According to the author the quickest and shortest routes are rarely the same.



Take a look at the overview then use the zoom tool to reveal more detail.

AI's Virtual File Manager 1.1

Floppypshop • £2.00 • ST/Ste/Falcon



Program launchers are a common site on the Atari platform. Unfortunately, all AI's look and function very similarly. AI's Virtual File Manager (AVFM) is different.

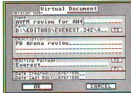
Where others limit you to a fixed number of programs in a fixed number of sets, AVFM uses a directory like file structure, allowing unlimited programs in unlimited sets (virtual directories).

AVFM uses a simple but effective way of presenting the programs. A window contains all the programs and directories which are navigated in the same way as those within a desktop window. Items can be created, deleted, moved and copied very easily.

Not content with being a program launcher, AVFM introduces "virtual documents". By using this you can give your documents symbolic names of up to 30 characters and provide them with comments. The program is actively being developed to include many interesting features in the near future. This is one of the most interesting program launchers for a long time and since it is free, apart from providing feedback, you have nothing to lose.



No need to worry about losing a file because you don't remember the filename...



The dialogue box where you assign the file a virtual name.

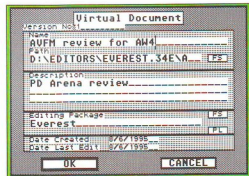
X and Chimera

CyberStrider • £15.00 • ST/Ste/Falcon



The World Wide Web (WWW) seems to be the buzzword of the 90s. It is the one thing which is making the Internet so popular. However Atari users have been left behind because no browser exists to make full use of the WWW!

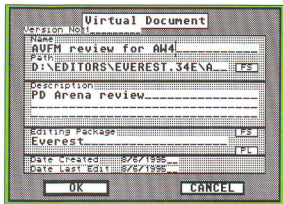
A glimmer of hope appeared when Chimera for the Atari was announced. But this was not easy to setup. To use it, you needed to setup MiNT, MintNet and the X Window System. Many people gave up half way through.



Chimera - not as nice looking as Netscape but then there is no other alternative on the Atari.

The Toronto Atari Federation have come to the rescue. They have compiled a set of seven installation disks which do all the hard work for you. All you need to have in advance is at least 4Mb of memory, a free hard disk partition with at least 10 Mb of space, a high resolution monitor, and 30 minutes of spare time. Simple and easy to follow documentation is included in the package. You will be surfing the web in hardly any time at all...

The Groove Analogue Sequencer Simulator



minute but in an odd measure of units.

The interface is as non-standard as you can get, and the first thought that comes to mind is: could this possibly be written in STOS? Yep, it certainly is, which explains why it won't run on my Falcon. And you

Goodman International • £1.95 • ST/Ste

If you're a musician, you probably know what an arpeggiator is (a chord played as individual notes) and you may even have seen an arpeggiator on an old synth.

The Groove is a MIDI arpeggiator but it doesn't work like you would expect in that you must predefine the notes to be played — and in numbers instead of notes! C3 gets 60, E3 gets 65 and so on, and even the tempo isn't set in beats per

Yes, it's written in STOS...

can't even export anything in any useful format.

An arpeggiator can be an invaluable source of inspiration when you are short of ideas. This could have been an interesting program for a rainy day but it'll need a comprehensive overhaul if it is to be of any practical use.

Oasis 1.12

Floppyshop • £2.00 • ST/Ste/Falcon



Those of you who use Demon Internet Services for your Internet connection will no doubt have noticed how user unfriendly and ugly the connection software is. Demon

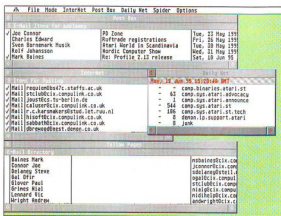
AtariNOS (Network Operating System) works well, but requires you to enter some rather odd commands.

Thankfully, this is no longer true with the arrival of Oasis. It is a GEM based shell for AtariNOS, substituting the TOS shell for all off-line functions such as

reading and replying to mail and Usenet messages. In fact, Oasis supplies its own e-mail and Usenet newsreader programs.

The e-mail software presents you with a list of whom the mail is from along with date and a subject line and you only need to point and click on a particular line to read that mail. Reading Usenet news is just as easy: you browse the newsgroups and messages with the mouse.

NOS is still used for Telnet and ftp, so you need to know a few commands but the authors are planning to change this situation in the near future. If you use Demon, Oasis will quench your thirst...



Everything is just a mouse click away with Oasis.



Simple and uncluttered interface, but no preview option.

Manualizer

Floppyshop • £2.00 • ST/Ste/Falcon

Public domain programs usually come with documentation in the form of text files on disk. Even commercial software comes with various read me files usually containing addenda left out of the printed manual.

The text files are fine provided you don't need to refer to them while running a program. Obviously the text can be printed out quite easily but wouldn't it be nice to print the documents as little A5 booklets with neatly formatted text in a font of your choice? Of course it would and this is precisely where Manualizer comes in.

Manualizer is shareware and runs in 0.5Mb, although you do need enough to hold the text file in memory. You can use any printer as long as GDOS is installed or any HP LaserJet II compatible printer if not. Results are very good but it does take a bit of fiddling to get the right results. The main problem is that there is no preview option, so you are left guessing what the final output will look like. Preparing the text for Manualizer is very easy so if you want to give a document a professional appearance, why not Manualize it?

No Limit II

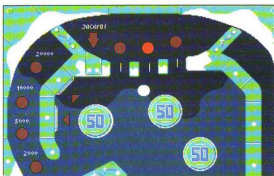
Merlin • £1.25 • 1Mb StE

Pinball simulations are in vogue at the moment. Over the past few months we've been treated to Starball,

Obsession and Pinball Dreams on the Falcon, and No Limit introduces yet another game to the fold. It's a very traditional affair and the table looks quite drab when compared to Obsession's eye-bursting alternatives.

However, the scrolling is extremely smooth and the ball also manages to behave realistically; as usual, the gap between the flippers is just a few millimetres too wide though. As for game features, there's a "tilt" facility and an authentic LED-style display and that's it.

All in all, No Limit is a very playable pinball game, but it's simply not up to Starball or Obsession standards. Mind you, if you've played both of these games to death and need another fix of seventies' arcade atmosphere it's definitely worth getting hold of.



No Limit's table may be unexciting, but it's a very playable pinball game.

F1	START GAME
F2	1 PLAYER
F3	HIGHSCORES
FALCON OPTION	
F4	MUSIC OFF
F9	QUIT

The title screen suggests Falcon compatibility, but No Limit refused to run on my machine!

World of Henry

Goodman • £2.00 • Any ST

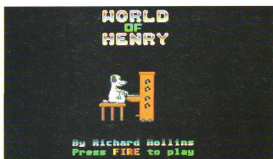
Way back in the mists of time, when "coords" were still considered fashionable and the Spectrum ruled the computing roost, arcade adventures were all the rage.

Companies such as Mastertronic churned out dozens of the things, all boasting a rather small hero and an inordinate number of usable objects. World of Henry brings a taste of the genre to the ST. The aim is to guide a dog called Henry in his quest to rescue a friend, who is being held hostage deep below Castle Caverswall.

The scenery is larger than life and Henry himself is very much like Snoopy, which lends a cartoon-like atmosphere to the proceedings. This mood is reinforced by the gameplay – one of the first tasks you need to complete involves heating some curry on the cooker to create a hot air balloon! Two items can be held in the inventory at any one time, and a prod of the fire button is enough to swing one or the other into action. There's not an awful lot of character interaction, but by feeding the monsters, you can sometimes extract a hint or two.

Henry also scores quite highly in terms of presentation. A merry little tune bops along in the background as you play on the ST, and STe owners are treated to a selection of digitised tracks. Flip-screen scrolling is the order of the day, and therefore you won't experience any of the annoying slow-down found in some STOS offerings.

World of Henry is a rather amusing game. You do need to spend a lot of time experimenting with objects, and there doesn't seem to be any way to save your progress, but if you can forgive these quibbles you'll probably spend an enjoyable few hours with this one.



Cartoony graphics and traditional arcade adventure gameplay make World of Henry well worth a look.

An awful lot of objects are scattered around the castle and it can take some time to work out if or how each can be used.



If you're lucky enough to own an STe, you can opt to have digitised music running throughout the game.

STe CHOOSE A TUNE

F1:	TUNE 1
F2:	TUNE 2
F3:	TUNE 3
F4:	TUNE 4
F5:	STH



Kev's World

Floppyshop • £3.00 • Any ST

Kev's World is the prequel to the *The Curse of Bolds* (reviewed in issue 2 of *Atari World*). It's a straightforward platform game, in which you steer Kid Kevin around a succession of screens, collecting stars and avoiding monsters.

Once again, the animation is a little slow, but the control system is precise enough to make the game enjoyable. Any particularly vicious nasties can be zapped with a few shots, and the target practice will come in handy when it comes to dealing with the end of level guardians.

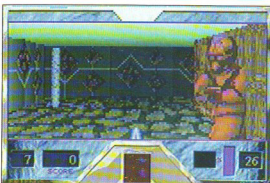
As you'd expect, *Kev's World* isn't quite up to *Bolds*' standard in terms of gameplay, but the graphics have a simplistic charm and the spot sound effects go some way in making up for the lack of a musical score. It's also quite compulsive once you start playing – just one more go and I'm sure I'll beat that damn King Kong character!



You're bored? You haven't spent the last ten minutes playing Jeopardy!

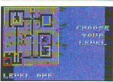


Huge monsters guard the end of each level, and believe me – they take some beating.



A fully texture-mapped environment adds to the atmosphere, but the screen updates are a little slow.

The layout of each level magically disappears from your memory the moment you start playing.



Lasers and Men 2

Goodman • £2.00 • 4Mb Falcon

Lasers and Men is a digital version of *Laser Quest*. You form part of a gang of rough and ready players and the sole objective is to wander around picking off the opposing team. A combination of mouse and keyboard controls is used, and the screen updates are just fast enough to convey that "actually there" feeling. There are 21 levels to complete, though only two are available in the shareware version. However, it's more than enough to provide a feel for the game.

Several versions of *Lasers and Men* have appeared in the past, but this is first to actually have a semblance of completeness. The textures have been tidied up considerably, fellow team members no longer look like planks of hardboard, and the levels have also been redesigned. To be honest, the gameplay doesn't make the most of the environment, but it's good for a few games.

Jeopardy

Floppyshop • £2.00 • Any ST

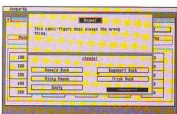
Jeopardy is a game that needs little introduction. It's a standard match the questions to the answers affair, and the sole aim of the game is to grab as many points as possible. Your score increases with each correct answer and several question categories are included on the disk.

The game was written in Germany and comes complete with English support files, but some of the translations are a bit dodgy. Try this for size – "A name for something on a computer is the same like the one of this thing". Admittedly, it's the worst example I could find, but even if you forgive this problem completely, there's still a big, multi-coloured question mark over long-term playability. I do like that interface though, even if you do need a high resolution monitor to use it.

Jeopardy				
Themes				Score: 0
Money	Special Bracket	Prizes	Clues	Pop
100	100	100	100	100
200	200	200	200	200
300	200	200	200	200
400	400	400	400	400
500	500	500	500	500

Several topics are included with the game, but you soon learn the limited number of questions.

Match the questions to the answers and amass an enormous score – thrilling stuff!



Graeme Rutt and
Alexa Robinson get
into graphics
together.

Feel like makin' Web



The very basis of the World Wide Web is its ability to present graphics. And as we know, Atari is probably the finest, as well as most affordable graphics platform in existence today.

Whether you plan on creating your own original graphics, digitising from video, capturing from Kodak CD or hand scanning, I can't recommend Apex enough for its extensive manipulation abilities, as well as output in the formats used for the Web - namely GIF and JPEG.

All graphics can be saved as GIFs and although you can use the handy

CPX conversion module supplied with the program to convert true colour Targa pictures to the JPEG format, you will certainly appreciate the flexibility of this necessary when weighing the degree of picture quality against the file size of the end results.

As an artist, I am deeply concerned by copyright issues. I strongly urge you not to steal other people's hard work from printed material, video or even directly from the Web. But having said that, using an existing graphic as the basis or part of your own graphic design, then applying a function such as Apex's morphing tool to change its original appearance, does make it your own creative endeavor.

Apex also offers a variety of screen resolutions up to 640 by 400. In my opinion this is more than adequate for a

Web site, especially if download time is a concern. I personally use 320 by 200, for creating multiple "icon" type graphics for clickable buttons that link to different features. By creating all of the icons that I plan to put on a single page on one screen, I can maintain a single palette and ensure uniform presentation.

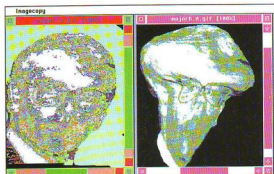
Imagecopy a must

Once you are satisfied with your graphics, an absolute must for Web building on the Atari is Imagecopy by Jeremy Hughes. Not only can you crop, copy, zoom in, zoom out, resize and convert to or from many different image formats, you also get vital facilities needed for the World Wide Web - interlaced and transparent GIFs.

Interlaced GIFs not only offer a sexy style of appearing on your Web page, they give the viewer the option to see what they are getting before waiting for the complete download. In my opinion this function is right at the heart of good Web site design.

Another wonderful little "trick" offered by Imagecopy is transparent GIFs. This means that any colour can be specified as see through, so whether you are using the groovy backgrounds described by Graeme last month, or simply have a graphic you would like to float on your page, accomplishing this is a simple click away with Imagecopy.

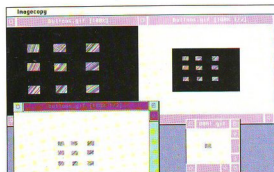
The Web is the only area of the Internet where graphic expression is available to communicate information. And as Atari users, we have all the tools to create the finest graphics the World (as in Web!) has seen!



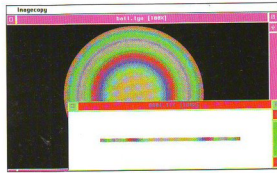
Using the Apex distortion function, a picture can take on a completely new and original look, and...



... it is easy to create a cast of characters from your original works!



With Imagecopy your icons can be resized, made transparent or cropped, then saved as Interlaced GIFs.



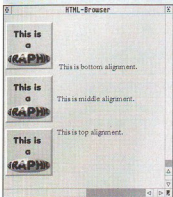
With Apex and Imagecopy, even those colourful horizontal bars, as seen on the WWW, are a snap!

Getting graphical

Apart from our rather groovy background the Atari World WWW site has a rather austere look to it. The reason for this is simple: no graphics. In this month's article we're going to talk pictures. How to create them, how to include them in your HTML pages and a few of the tips and tricks that can turn your Web site into a glittering wonderland of fun and delight.

The HTML tag that inserts pictures into your document is ``; note that there is no `` 'closer' as found on most other tags. Inside this tag the most important option is the one that points to your graphic; it's `SRC=` so `` would display a GIF picture file of that name.

Figure 1 shows the effects of the different text alignment options.



The `ALIGN=` option changes the placing of the text (or another picture) that follows the graphic in your HTML file. The choices are "bottom" (the default), "middle" and "top" (see Figure 1). For some really nice graphical options look at the Netscape Extensions boxset.

The final `` option in ordinary HTML is named `ALT=`. This enables you to include some text which is shown in place of the graphic for those on text-only browsers. This is a very important option since it enables you to have one single HTML document which works on almost any browser.

Images can also be put to work for you - just like pieces of text they can be hypertext links, they can link to other pictures or HTML pages. The construction of the anchor tag is similar but instead of a piece of text you put in your `` tag.

If we put all these things together then we get a code snippet that looks like this:-

```
<A HREF="foreword.htm"><IMG
SRC="foreword.gif" ALT="Publishers
Foreword"></A><BR>
<A HREF="editor.htm"><IMG SRC="edl.gif"
ALT="Editorials"></A><BR>
<A HREF="front.htm"><IMG SRC="front.gif"
ALT="Front Cover"></A><BR>
<A HREF="subs.htm"><IMG SRC="subs.gif"
ALT="Subscriptions"></A><BR>
<A HREF="offers.htm"><IMG SRC="offers.gif"
ALT="Reader's Offers"></A><BR>
```

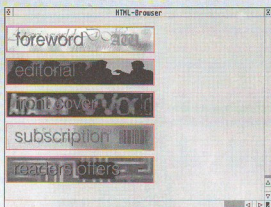


Figure 2.
Our 5 graphical links to the different areas of our Web site.



Figure 3.
Topped and tailed - it's looking like a real menu.

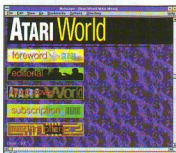


Figure 4.
In Netscape it looks more like this...

The resulting page is shown in Figure 2. Note that the `
` tag causes a line break, effectively putting the graphics one below another. If we add another picture at the top for the logo and a 'Please Click' at the bottom we have pretty much our final menu up and working (Figures 3 and 4).

Next month we'll be looking at some more graphical tricks you can use to improve the looks of your Web pages. Until then you can reach us at the following addresses:

alex@cx.compulink.co.uk and
sabbath@cx.compulink.co.uk.

Netscape extensions

The `` tag is the one enhanced most extensively by the Netscape extensions. For a full overview of the changes you should check out the Netscape site itself but the most important ones are as follows:

New `ALIGN=` options, "left" and "right" enable you to have images "floating" in your HTML page. The text (or `graph@capics`) which follow your floating image are wrapped around it — you should take a lot of care with this as it can give unpredictable results.

The `VSPACE=` and `HSPACE=` extensions enable you to set vertical and horizontal spaces around your floating image — where `v` and `h` are in pixel units.

Extension `BORDER=b` has been added, where `b` equals the size of your image's border and with `HEIGHT=` and `WIDTH=` you can even change the size of your image when displayed in your page.

The `
` tag has also been expanded to allow for floating images. The `CLEAR=` option enables you to have a break down to the bottom of the next floating image on the "left", "right" or "both".

I've used all of these additions to create Figure 5, a rather spiffing main menu - even if I do say so myself.

Figure 5.
One I made earlier...



C-LAB

FALCON MK I

The really great news is...

...that the C-Lab Falcon MK I will now start at £799 with a 4meg machine which will be ideal for use with Steinberg's

Cubase Score or E-Magic Logic (at twice the speed of the ST's) and any other Falcon compatible software. It

will also come with a Desk Accessory program which allows

the DSP audio circuitry of the

Falcon to be used for stereo effects and graphic equalisation while a MIDI sequencer is running.

Although there is no hard drive in this

computer to record audio to, the

computer will still be optimised for and tested with Cubase Audio. All that is

needed is a suitable drive and from now on, C-Lab will be supplying their 270meg

Syquest drive with Cubase Audio 16

pre-installed and a demo song on the

free cartridge. The drive has been tested

with both 8 track and 16 track mode in

Cubase Audio 16.

For further details, contact your nearest

C-Lab dealer or Digital Awareness at the address below.

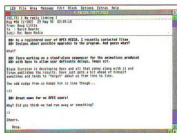


Clubbin'

Wandering minstrel Harry Sideras comes face to face with the Falcon FacTT File.

If anyone had suggested to the founders of the Falcon FacTT File (FFF) that 18 months after its launch they'd have several times the membership of the original ST registry, they would have been understandably sceptical. That they were initially disappointed with the response says much for their ambition but, as time passes, this ambition has been justified by their achievements.

After the Falcon's patchy arrival in this country, William Hern, in his monthly column in ST Applications, called for the setting up of a directory of users who could share their problems and solutions. Within three months, Colin Fisher-McAllum, Kevin Beardsworth and Roger Derry took up the cudgels using a customised version

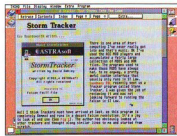


Product reviews from a Falcon perspective.

of Roger's own NameNet database as the engine to hold members' details. Due to public demand, owners of the TT and Pak030 are now admitted due to the 68030 processor they share with the

Falcon.

Membership of FFF is free and only requires you to complete an application form detailing all aspects of your setup including peripherals and software and a description of your computing interests along with an HD floppy and return postage. A signature is essential in order



The FacTT File provides a detailed rundown of members' setups and interests.

to conform to the requirements of the Data Protection Act, confirming agreement that your name may be distributed to other members on the FFF database.

In return you'll receive the NameNet demo, the updated Falcon FacTT File itself and selected PD and shareware utilities to fill the virus-protected disk. On each monthly update is a collection of product reviews, shop reports and hints and tips that have

been converted by Kevin into ST Guide format and added to the disk as members send them in.

Going online

Encouraged by Daron Brewood, the network controller of the international NeST BBS network, Colin and Kevin joined the ranks of modem-owning Falcon users and brought FFF online with its own dedicated echo named N.FALCON.FACTT_FILE. Here they now have direct, almost daily access to Falcon programmers like Doug Little and Neil Stewart of Apex Media fame and Phil Hodgkins, the author of Stoop.

More recently FFF has joined the CIX commercial BBS. This has provided access to the Internet, enabling contact with many more UK and international software houses. All this allows authoritative feedback to any member without these facilities and a service is now provided where questions can be asked online on your behalf and the responses sent on to you simply by supplying a disk and return postage.

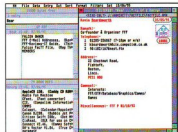
At the time of writing, FFF has now opened a dedicated BBS on 01256 895106 - speeds up to 14400 baud. The expansion continues...

Recognition

From the moment it was offered a free stand by Compo at Birmingham Atari show in '93, the FFF has been widely praised for encouraging its members. Mike Goodman has been a supportive early member, providing review software and discounts on selected products to other members through his PD library, not forgetting Douglas Communications and others.

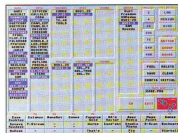
The FFF has also helped programmers by providing beta test facilities to ensure Falcon compatibility on several products such as Imagecopy, Mousetrix and Multiprint on the commercial side to Thing and Stoop in the shareware arena.

From its beginnings as a simple database to a national organisation with an international membership and access to the top programmers on the platform, FFF deserves its recognition. The time and enthusiasm that Colin and Kevin put into making the FacTT



Online support from the people that matter.

File disks both professional and informative make it a vital resource for Falcon owners. Contact them at the address shown on this page and think about sending them a review of your own. You won't regret it.



Stoop, the Falcon boot manager, was written by an FFF member.

Feedback

Feedback is welcome, as always, either at the magazine address or via e-mail to sidclery@cix.compulink.co.uk. You can also join the new online NeST support echo N.SUP.ATARI_WORLD@any.NeST.BBS. Make sure you join FacTT File echo too - it's not just for Falcon owners.

Making contact

The Falcon FacTT File is a non-profit making organisation and membership is free, so be sure to provide a stamped return envelope each time you write. An HD floppy is also needed to receive your members disk.
Falcon FacTT File
11 Pound Meadow
Whitchurch
Hampshire
RG28 7LG
Tel: 01256 896879
Internet: colinfm@cix.compulink.co.uk or kbeardsworth@cix.compulink.co.uk



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For Falcons Only

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Available from 16/32 Systems

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173 High Street, Strood, Kent ME2 4TW
Tel: 01634 710 788 Fax: 01634 295 895

Q & A

You send in the questions — Ofir Gal and his team of experts set about solving them...

Network not work?



Q I feel totally network-confused! After

I read about Duet in the Public Arena pages, I got very interested in creating a network.

Now I own a Falcon030 (4 Mb) and an STE (4 Mb). I use an external SCSI disk for my Falcon. My MIDI ports (both computers) are already occupied for my MIDI equipment, the modem port on the Falcon is occupied and soon also the printer port. And I usually have a dongle plugged in both machines.

Is it possible to create a network (commercial or shareware) between my computers, without removing any of cables? And if so, can I be 100% sure no data will be corrupted (especially MIDI)?
Carl Lofgren via Internet

A The simple answer is no, unless you opt for a dedicated network solution such as BioNet which uses additional hardware. Both Duet and the forthcoming MIDICom rely on existing ports for networking. A possible solution will be to install additional serial ports on the Falcon and STE, a possibility currently being investigated by System Solutions. *Ofir Gal*

Fancy earning a tenner?

All you have to do is send us a useful tip for your favourite program — what could be easier!

Send us your hint on a disk, saved as a text file (preferably), along with a screenshot for illustration, or possibly a drawing if it's a "you can build this" style tip. We'll pay £10 for every reader hint that we publish.

Ghostly scripts



Q I'm writing to you with regard to

some files which I've found on the Internet. They have a .PS extension and purport to be document files. I can load them into a text editor and although all the text seems to be there so does an awful lot of formatting information. I think that these are Postscript files. Unfortunately I don't have a Postscript printer but I really need to view them. Is there any way to do so on my Falcon?

Richard Straight, Glamorgan

A You are right — these are Postscript files. Postscript is a page definition language which (unlike a Calamus file for example) happens to be held in a full text format. If you knew enough about it you could even code an entire page just by typing the correct formatting information into a text editor. Noone does, of course, because it would be very laborious, not to mention pointless.

Now, a Postscript printer is just a bog-standard printer that knows how to read the language and turns it into the bitmapped image that's to be printed. If you don't have such a printer then you need to make your computer do it for you.

Thankfully there is a freeware program in the shape of Ghostscript or a more expensive commercial alternative, CompoScript. You can get Ghostscript from the FTP site at src.doc.ic.ac.uk or from most public domain libraries. The

Send us your questions

Can't find anyone to answer that nagging question? Then drop us a line. Our team of experts are on hand to investigate and solve almost anything you can throw at them. Just send your letters to:

Atari World Q&A, Specialist Magazines Ltd, Unit 3 Green Farm, Abbots Ripton, Huntingdon, Cambridge PE17 2PF

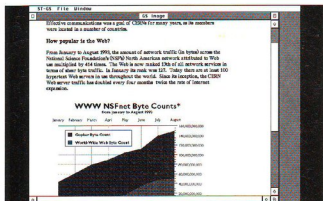
or e-mail them to:
atari_world@icx.compulink.co.uk

While every effort will be made to answer your question within the pages of Atari World, please note that individual correspondence cannot be entered into.

pathname is (wait for it!) `computing/systems/atari/umich/gnustuff/tos/ghostscript` and the filenames are GS261B.ZOO and GEMGS13.ZOO. They take a bit of setting up but if you've managed to connect your Falcon to the

Internet, then I'm sure you can get Ghostscript working.
Graeme Rutt

Here's Ghostscript rendering a Postscript file to the screen...



Hard and fast



There is a temptation to format large hard disks to one or two very large partitions of several hundred megabytes. There are some disadvantages in this. Large partitions require large sector and cluster sizes and a cluster can only be assigned to one file. If a 16Kb cluster contains, say, 2Kb of data then you are wasting 14Kb of disk space. Remember that the last cluster of every file will be partly empty and if you have lots of small files then the effective capacity of your drive is very much reduced.

Sooner or later the disk will get corrupted and 500Mb or so of data is an awful lot to lose in one go! It is quite rare for disk corruption to affect more than one partition at a time so smaller partitions mean you lose less when the inevitable happens.

Searching for data at the end of a large partition takes longer and some hard disk utilities can't cope with large partitions at all.

Mark S Bates

100 Hard Disk Formatter Version 5.14 Copyright © 1993

The screenshot shows the "100 Hard Disk Formatter" software interface. It features a table for defining disk partitions and several control buttons on the right.

No.	Start	End	Size	Type	Name	On
1	0	131063	131064	16K		✓
2	131064	262127	131064	16K		✓
3	262128	393191	131064	16K		✓
4	393192	524255	131064	16K		✓
5	524256	655319	131064	16K		✓
6	655320	786383	131064	16K		✓
7	786384	917447	131064	16K		✓
8	917448	1048511	131064	16K		✓
9	1048512	1179575	131064	16K		✓
10	1179576	1310640	131064	16K		✓

Buttons on the right: CLEAR, DEFAULT, OK, CANCEL, HELP, YES, NO, YES TO ALL, NO TO ALL, YES TO SOME, NO TO SOME, YES TO NONE, NO TO NONE.

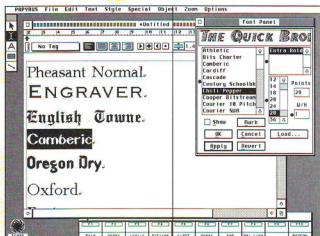
Using 1Kb sectors (2Kb clusters) gives a maximum of 64Mb partitions shown here. 4Kb sectors give 128Mb partitions and any bigger might be counter-productive.



Q The Atari just gets better and better! I've received my upgrade to NVDI and version 3 gives me

Fantastic!

Q The Atari just gets better and better! I've received my upgrade to NVDI and version 3 gives me



Papyrus Gold plus NVDI and some PD fonts.

vector font support. I'm amazed at the speed and power of the system. It just adds so much to my favourite program, Kandinsky, and lets me use the awesome Papyrus to the fullest of its abilities. So now I'm on the hunt for more fonts. Can you tell me where I can get some from?

Peter Green, Colchester

A I believe NVDI to be the best piece of software ever released on the Atari platform. It adds so much speed to an Atari and now it adds vector font support.

There are many fonts available for NVDI's two supported formats — TrueType and Bitstream Speedo. If you're not working professionally then you might like to look in the public domain and shareware scene. You'll find that almost all public domain libraries can supply you with all the fonts you could ever require. And remember, TrueType fonts are the native format of the Windows operating system, so IBM PC libraries are worth taking a look at.

If you're a professional designer or maybe just like top quality branded fonts then you'll have to go commercial. Both Compo and Systems Solutions offer a range of font packs that are excellent quality and very affordable. Compo can supply you with either the Gold or Office packs (12 and 11 disks' worth, respectively) with 100 fonts in Speedo format, each

costing \$49.

Systems Solutions will sell you the 100 font pack, which boasts a range of commercial quality TrueType fonts which will set you back £39. Both companies also sell a 500 font CD-ROM (in TrueType and Postscript format) at £49.99 and both tell me that they have other packs, in various formats, coming in all the time. Why not give them a call?

Go faster TT



Q I'm interested in TT hardware accelerators. I downloaded Cyrel's advertisements for the 68030/48 CaTTamaran but I would also like to find information on '040 cards. There's one I've been told about, called the Alligator, that could be interesting, but I've been unable to locate any specs. Do you have any info on the subject? How about a feature in a forthcoming issue?

I recently bought a second-hand TT, an altogether great machine. The only thing my model lacks is a high-density floppy drive. I remember reading some years ago that not every brand and model of HD drive works on TTs and Megs, something about a particular model by Epson being the only one guaranteed to function properly. Could you confirm this information? Before I go into a PC (yikes!) hardware store and buy the first HD floppy drive I find, I'd prefer to know whether it will work or not...

Nicolas A. Spengos via Internet

A At the time of writing, we know of two TT processor accelerators, the CaTTamaran and Powerup TT. Both of these accelerators boost the 68030 and 68882 processors to 48 MHz clock speed. As the rest of the computer motherboard does not benefit from the higher clock speeds, the speed increase is not as high as you would expect.

Theoretically the best speed increase you are likely to get from these devices is 150%, but in practice it will probably be more like 115-120%. A more linear way of speeding up the TT is to use one of the modern TT RAM boards. By bypassing the restrictions of ST RAM such as synchronising to

video timing, the newer TT RAM boards allow programs that run in TT RAM to run up to twice as fast.

You could of course add an accelerator as well to give the highest increase possible. The '040 accelerator you mention is not yet finished and the manufacturers are not ready to give any specs as yet.

As long as your TT has the Ajax floppy controller chip it will accept just about any high density floppy drive but the front panel is unlikely to fit the TT casing without hacksawing a larger hole.

Rob Perry

To Works?



Q I am 15 and I have an Atari STe with 520Kb RAM (upgraded to 1Mb). I have a fairly good knowledge of 68000 assembler, but (foolishly) not learning it on the ST, I do not know any of the specific hardware enhancements or how to access them. Is there a book about 68000 for the ST range specifically? I have been reading a book about it by J.W and R.A. Penfold, which was very good, but I definitely want to push my STe to the full, and possibly take advantage later of the 68030 in the Falcon, and especially the DSP. Where can I get information about the DSP and other hardware enhancements from? Also, where can I find some info about SpeedoGDS?

At the moment, I am waiting for a response to a letter I sent away to Microsoft, asking for their permission to convert Works to the ST range. I'm sure I could do it, but would there be any interest if I do? (If no permission is given I will try Claris Works etc.)

Peter Mash

A To get yourself set up for some serious assembly language programming on the ST, you will need a good assembler system. HiSoft's Devpac software is popular, and includes detailed documentation. For further information on the hardware and operating system of the ST, consult the Atari Compendium (also from HiSoft) — this also provides some coverage of SpeedoGDS.

Falcon-specific information can be found in the Compendium, though Atari's own documentation is a strong alternative. At the chip

level, the Motorola technical manuals offer an unbeatable coverage of the 68030 and the DSP56001, though you will find no reference to the ST at all. Call the Motorola Literature Centre on 01908 614614 and ask for their latest price list.

With regard to your choice of programming project, you might find it more rewarding to tackle something smaller than a conversion of Microsoft Works for the ST. Packages of such complexity are typically the result of many thousands of man-hours of programming time. Porting these programs from one platform to another is also a time-consuming job, requiring a detailed knowledge of programming on both source and destination systems. On top of this, assembly language is probably not the right programming language for the job. I would guess that much of Works is written in C or something similar. Memory would also be a major problem — 1Mb doesn't go very far these days.

Jon Ellis

Cartridge ports



Q I wonder if you could answer a question that has been puzzling me for some time? If all the address connections of the cartridge port are taken low, where is the data put?

James Kelly, Manchester

A If you take a look at the cartridge port pinout, you will see that there are only 15 address lines, A1 to A15. These are only sufficient to specify 32K

of locations. The cartridge port data bus is 16 bits (2 bytes) wide, meaning that the address lines actually cater for 64K bytes of memory. To add to this, two further control lines (called ROM3 and ROM4) are also present on the cartridge port. These are driven in such a way as to provide two banks of cartridge memory, producing 128K bytes in total. ROM3 and ROM4 are under the control of the GLUE chip, and are only activated when a program makes a read from the cartridge port area.

As a result, if all the cartridge port address lines are low, then the computer is reading from either SFA0000 (first bank of cartridge memory), 8FB0000 (second bank) or some other address 8xx0000 (non-cartridge), depending on the state of ROM3 and ROM4. Don't be tempted to fiddle with the cartridge port hardware unless you really know what you are doing — it's far too easy to seriously damage your computer.

Jon Ellis

Commodore connection



Q I have a question. I have a 1040 STE, upgraded to 4 Mb, and a Commodore 64 with tape drive and 5.25 inch disk drive. Is there a C64 emulator, or a support utility, which is capable of transferring programs from the C64 to the ST? Connecting the C64 or the tape drive/disk drive up to the ST? Would sound be a problem?

Thank you for your consideration.

Robert Dobbie

A There is a C64 emulator which Floppyspox can supply on disk LAN.66.

However, I'm told that it isn't particularly good — it doesn't do graphics and sound and cannot handle the standard disk images of games. There is a full emulator on the PC however.

Transferring games from tape decks can be tricky as some Spectrum users have discovered. There are ways of playing the sound of the game loading into the parallel port but this can blow the sound chip that controls the port if the volume is too loud. Text and graphics files can be transferred across via a suitable null modem serial cable and two terminal programs. As the emulator doesn't sound that great anyway why not just keep the C64?

Mark S Baines

On the move



Q I have an Amstrad NC 200 laptop which I use for WP on the move. I often import Protex files from this into Timeworks 2 on my STE, but when I tried exporting the files as ASCII to use with CIX-COMM, I got more than I bargained for, with some strange characters where the spaces should be, and no carriage returns.

I have tried using the export function and just get a long string of text which ran off the side of the page, and I have also tried switching the document type to ASCII and copying the file to disk. This was better but didn't have carriage returns and so gave a continuous file, plus the odd

characters, which was too much to edit.

Christopher Miles via Internet

A Apart from the normal Protex format, Protex can save ASCII files in three different formats — fixed, reformatable and page image using the Save As... menu item. You can safely ignore the latter when importing files.

The fixed format saves the file as you see it on screen with all the line breaks intact (usually with the file extension *.TXT). A carriage return is placed at the end of each line. This isn't ideal for DTP programs as you would have to remove each carriage return to reformat the text within your frames. Some programs, such as Timeworks, can import Protex format files and translate them into reformatable ASCII for you.

Reformatable ASCII files (saved with the extension *.ASC) don't have carriage returns at the end of the lines, except at the end of a paragraph. So, these lines can be very long as you have noticed and the program you import them into has to be capable of handling very long lines of text and reformatting them to a particular line length on screen. Many editors do have restrictions on line lengths and so may truncate the text imported. CIXREC's editor isn't very clever at reformatting text and doing it by hand is slow and cumbersome. You can set up an external editor with greater capabilities. However, at the end of the day most of your problems will be solved by saving your files in fixed ASCII format.

I've no idea why spaces have

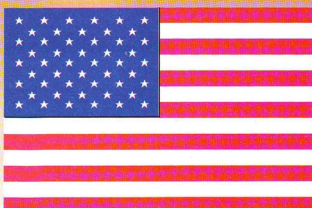
C in English



I just finished reading the June 1995 Atari Pro magazine and noticed that the reviewer of Pure C lamented the fact that all the documentation and help files are in German. Apparently he was not aware of the fact that there is an English translation and a full set of documentation available from a programmer in the US. I just obtained a used copy of Pure C recently, and haven't yet ordered these English help files, so I can't elaborate much on them, but the ordering card says that it includes Pure C help files in English, complete documentation of Pure C menus, double clicks and hot keys, Assembler and C Language references and tutorials, Pure Debugger menus and window descriptions, complete descriptions of all library functions (except BGI, LineA & VT52), Atari memory map and hardware descriptions, ASCII, scan codes, data structures, file formats, examples, and more.

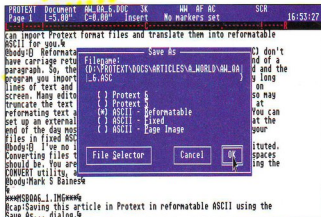
All this is available by sending US\$80 to ELF Software, 9614 Oregon Circle, Houston, Texas, USA 7036.

Frank Zimmerman via Internet



strange characters substituted. Converting files to 1st Word format puts odd characters where spaces should be. You are using the Save As... menu option and not using the CONVERT utility, aren't you?

Mark S Baines



Saving this article in Prototext in reformatable ASCII using the Save As... dialogue.

Mousey, Mousey



Q I've just bought a secondhand Atari ST and I'm very pleased with my purchase. I used to own a BBC B and the change up to a windows based computer is amazing. After thinking long and hard I decided that the move to a PC was just too much money for my limited computer needs.

My system came with a monochrome monitor, which is very sharp and crisp, and has 2 Mbs of memory. My only problem is my mouse — when I move it across

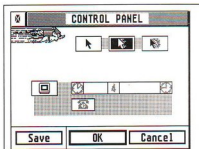
the screen it doesn't move very far at all and occasionally jerks and bumps along. Can you give me any advice? Peter Thomas, Bridlington

A The ST is certainly a very attractive buy for computer owners at the

moment, in the secondhand market you really do get power without the price. You don't mention the make of your mouse but it sounds like it's probably one of the original Atari models. They aren't the best available and you can easily buy a better one from almost any of the hardware vendors advertising in this magazine.

However, you may be able to do a little maintenance to your mouse that will make a further purchase unnecessary, at least for the moment. Disconnect your mouse, turn the little blighter over and remove the cover from the ball. Take out the ball and clean it with a lint free cloth. Now take a look in the hole that normally holds the ball. You'll see two or three rollers. Take a pin or a small-bladed screwdriver and — carefully — remove any dust or gunge that's built up. Replace the ball, close the opening and you'll probably find that you have a much healthier mouse.

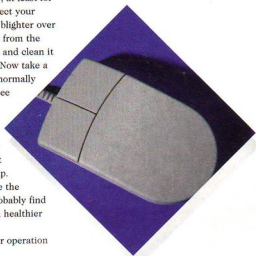
There's one further operation



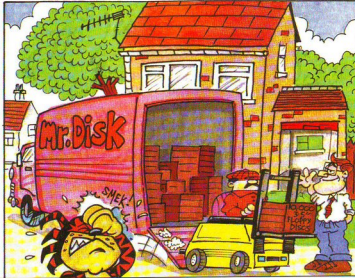
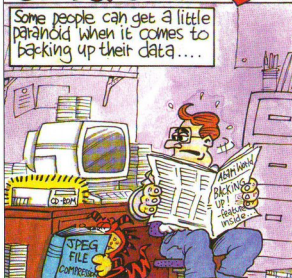
The Maccel Mouse Accelerator — ask your friendly PD librarian for this or other rodent boosters...

you can do to speed up a slow mouse — use a mouse accelerator. These useful little additions to your setup enable you to amplify your mouse movement. For example, where your old, slow mouse would normally move the cursor one pixel the mouse accelerator moves it two.

Graeme "The Vet" Rutt



Sid & Scuzzy by Dave Howell and Paul Van Linden ©95

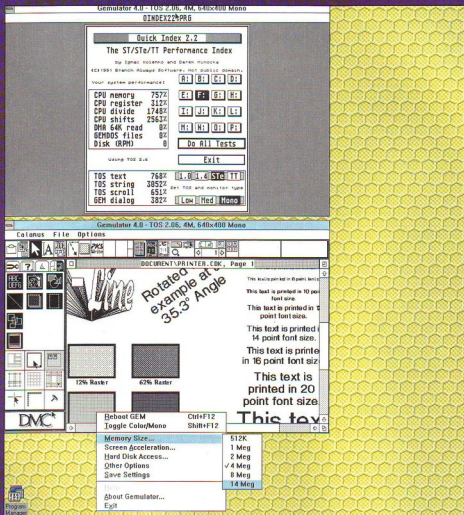


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