

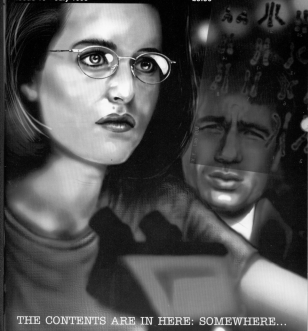
ATARI

ISSN 1461-0030

COMPUTING

Issue 10 • July 1998

£3.50



THE CONTENTS ARE IN HERE: SOMEWHERE...

Veloce+

STe system
upgrade from
T.U.S. Developments

NEW

Bring your STe
up-to-date with
Veloce+ from T.U.S.
Developments,
processor upgrade to
68020 32 Bit at 16Mhz,

additional 2 or 4Mb FastRAM and TOS 2.06
all on board. Load NVDI into 32 Bit
FastRAM for lightning screen updates, along
with the program disk to leave 4Mb STe
Ram free for data.

Compatible with most high end STe software
packages such as CUBASE v3 and Score,
Notator Logic, Papyrus, Calamus,
Timeworks and many many more. Please call
or visit our website for further information.
Available for DIY installation (soldering
required) with full manuals or fitted by
THE UPGRADE SHOP.

- ✓ 68020 Processor running at 16Mhz
- ✓ 0, 2 or 4Mb FastRAM
- ✓ TOS 2.06 on board
- ✓ FastRAM and TOS full 32 Bit
zero wait state
- ✓ Switchable between existing 68000 and
68020 for maximum compatibility
- ✓ Compatible with IDEal
Hard Drive Interface
- ✓ Fits inside a standard STe case

Veloce+ (0Mb FastRAM)	£ 99.00
Veloce+2 (2Mb FastRAM)	£149.00
Veloce+4 (4Mb FastRAM)	£189.00

IDEal

The IDEal hard drive system from T.U.S.
Developments uses the latest 2.5" IDE hard
drives found in computers such as the
Falcon and PC Notebooks.

The entire hard drive fits inside the
standard STe case and is extremely quiet in
operation. All kits are complete with fitting
instructions, cables and software.

IDEal Interface only	£ 59.00
IDEal Interface and 170Mb Drive	£109.00
IDEal Interface and 340Mb Drive	£139.00

Other sizes available - please call

T.U.S. Developments
01625 503448

<http://www.tusdev.demon.co.uk>
Email: dave@tusdev.demon.co.uk

- ✓ Fully Atari compatible design
- ✓ "New" 2 drive systems - please call
- ✓ Works alongside SCSI-based systems
- ✓ Complete with formatting/partitioning
software
- ✓ Very quiet in operation

Veloce+ & IDEal Drives

Veloce+2 c/w IDEal 170	£249.00	Veloce+4 c/w IDEal 170	£289.00
Veloce+2 c/w IDEal 340	£279.00	Veloce+4 c/w IDEal 340	£319.00

Other options available

CHEETAH EXTERNAL HARD DRIVES

The Cheetah external hard drive from T.U.S. Developments brings affordability and style to any Atari system.

- ▶ Complete with Host Adaptor and cable
- ▶ Formatting and partitioning software included
- ▶ Small case dimensions
- ▶ Built-in power supply and cooling fan
- ▶ Dual SCSI internal connectors for daisy-chaining extra devices
- ▶ ID selector

A fully featured system that can be used on more than 4000 computers. All systems are supplied pre-formatted and partitioned ready for immediate use.

160Mb	£149.00
200Mb	£179.00
540Mb	£272.00

HI RESOLUTION 14" MONO MONITORS

Improve your clarity with T.U.S.'s 14" mono monitor for the Atari ST series. High resolution screen ideal for Games, Notepad and many other programs. All monitors include appropriate connecting leads and a tilt and swivel stand.

Without stand	£86.00
With stand	£109.00

(prices on Site)

ATARI MEMORY

STx/Huge STx	
1/2 meg	£19.00
3 meg	£25.00
4 meg	£49.00
STFM Memory	
1/2 meg	£16.00
3 meg	£25.00
4 meg	£75.00

All kits are supplied with comprehensive fitting instructions, testing software and a free disk of useful PC/DOSware utilities.

TOS 3.06

- ▶ Enhanced operating system from Atari
- ▶ Improved desktop
- ▶ Full keyboard control of windows
- ▶ Place programs on desktop for easy launching
- ▶ Assign function keys to launch programs
- ▶ Switchers give access to old TOS system for complete compatibility
- ▶ All kits supplied with full fitting instructions and TOS manual

STx Version 3 kit	£47.99
(TOS 1.621.06 supplied) Simple solderless installation.	
STFM/STFM fitted free	£54.99

HIGH DENSITY DRIVES

- ▶ Easy exchange of data with other platforms
 - ▶ Your ST reads and writes high density (1.44Mb) discs
 - ▶ Fully automatic switching controlled by type of disk placed in the drive
 - ▶ Complete with software drivers and high density formatting software
- | | |
|--|--------|
| High Density Module | £29.00 |
| High Density Module and 1Mb disc drive | £49.00 |
- Note TOS 1.4 or above required for high density support

TOS 3.06 & HIGH DENSITY DRIVE PACKAGE

STx TOS 3.06 with HD Drive & Controller	£99.00
STFM TOS 3.06 with HD Drive & Controller	£149.00

MODEMS

Do you want to send email, browse the world-wide web and join in the online revolution with your Atari? Using one of our modems and suitable software you can do just that.

T.U.S. 33,600 Voice, Data, Fax Modem	£59.00
T.U.S. 57,600 Voice, Data, Fax Modem	£74.00

BAST approved with "CD" markings, complete with cables and software for Bulletin Board access.

SERIAL PORT UPGRADE

Use a fast modem with any ST machine by installing a T.U.S. 57,600 baud serial port upgrade kit.

DIY fitting with full instructions	£22.99
If supplied with any of above modems	£15.00

REPAIRS AND FITTING SERVICE

Fully trained engineers for a reliable repair. All jobs quoted for individually (no fixed prices). 48 hour turnaround on most machines. Long 4 months warranty as standard. Courier collection and return available for £14.00.

We can fit any of the advertised products to your machine for a one off fitting charge of £15.00. This means that if you require an upgrade and a high density drive fitted then the charge is only £15.00.

Please telephone for an appointment before bringing your machine or call if courier collection is required. Please ensure all parts collected are adequately packaged.

Replacement internal drive kit

For any ST with internal drive. High quality mechanism, with standard offer for old ST's if required. 1Mb or 2Mb drive supplied. £29.99

Power Supplies

Repaired and supplied (call for availability)

◎ STx real time clock £22.99 ◎ Replacement Mouse £12.99

◎ STx/Falcon Stereo speakers with leads £19.99

The Upgrade Shop

37 Crossall Street, Macclesfield, Cheshire, SK11 6QF

Telephone 01625 503448

Monday - Friday 9:00AM - 6:00PM Saturday 9:00AM - 12:30PM

ACCESS DELTA MASTERCARD VISA SWITCH

Delivery Charges

Small items under £60.00
prices add £3.00 P&P
Large items and orders
over £60.00 please add
£7.00 courier charge.
Courier Pickup for
upgrades and repairs £8.00

All prices include VAT@17.5% but exclude delivery (unless otherwise stated), please see panel above. Orders can be placed by telephone quoting credit card details or by Mail Order, please make cheques and postal orders payable to "The Upgrade Shop".
1 year warranty on all products (unless otherwise stated), 4 months on repairs. Prices subject to change without notice. (B&N)

ATARI

COMPUTING

Editor: Ian Connor
Layout: Ian Connor

Contributors:

Chris Ellis, Mark
Hether, Stuart Lee,
Rob Hall, George
Cromack, Alan
Kendall, Matthew
Bauer, Dan
Erdosits, Al Cook,
Steve Morgan,
Derek Roberts, Paul
Jones, Martin Miller,
Michael High, Ray
Munn, Markot, David
Evatt, Richard Spencer,
Chris Bedford, Alexander Chant, Oliver
Boudreau, Chris Gould



Advertising sales Alan Kendall
Office manager Al Cook
Editor Design Jonathan G. Bob Fain
Subscription manager Brian Barker
Marketing manager Alan Kendall
Webmaster Rob Hall

How to contact us

Please send letters, questions, feedback to contributors, editorial comments, back issue orders and general enquiries to:
Atari Computing, 'The Tower', George Crescent, Bishops, PA1 8BB, SCOTLAND

Some useful contact points:

Editorial editor@atari-computing.com
Office admin@atari-computing.com
Marketing advertising@atari-computing.com
Letters letters@atari-computing.com
Webmaster web@atari-computing.com
Sub Design design@atari-computing.com
Subscriptions info@atari-computing.com
Tel +44 (0)1262 815002 (landline)

We will do our best to help you through the pages of the magazine but cannot enter into personal correspondence.

It would be very helpful if editorial, subscription and general enquiries are sent on separate sheets of paper or separate A4/3 format files on disk.

Subscriptions

Atari Computing subscriptions: 70 Berridge Drive, FRIARON, Scotland, G4 7JG

Publishing and Marketing

Atari Computing is published by Berridge Publishing Limited, 60 Mill Road, G4 7JG, FRIARON, Scotland, a company registered in England number 1497155.

The views of the editor and contributors are not necessarily those of the publishers. Although every care has been taken over the preparation of the magazine, the publishers disclaim any responsibility for errors or omissions.

We have made every effort to incorporate all trademarks and individual copyright holders.

Reprints and permissions

The entire contents of this publication is Copyright © 1998 Berridge Publishing Ltd. All rights reserved, including translation into other languages.

Material in this publication may not be reproduced in any form without the prior written permission of Berridge Publishing Ltd.

On this basis we welcome enquiries for permission to reprint or reuse material.

We're part of



Velocity+

26

MagiCMac

Low Thermal Temperatures, stable
Data and Write Performance

Copyright 1998 by
Application Memory Technology
Software GmbH
Postfach 60266
D-50826 Mönchengladbach

Tel: +49 (0)21 500000
Tel: +49 (0)21 500001

Index Random News

WebRing



14 Pixel Art 4

ABOUT THE COVER

Cyrocrosse

This stunning image was created using the 'Painting' technique which should be covered in depth in Issue 10. It is 100% digital and makes extensive use of the latest multi-layer and art tools provided by Adobe Photoshop.

Pixel Art

stuart@pixelart.co.uk

Atari Arrows

In AOL we hope to create Frank Charlton with the cover image so we're getting that right here. After a spell off-line Frank is now back online at:

Frank Charlton
frank@frank.netcom.co.uk

FEATURES

- 18 Strings in Resource
- 21 Quest for the Pixel
- 29 System Extensions
- 36 CyberFinder Files
- 37 Suggestive Remarks
- 37 STOS Corner
- 42 Speedtest
- 62 Magpie



SHAREWARE

- 44 News 
- 46 Bombman 
- 46 Spiral 
- 47 Gridlock 
- 47 BubbleGUM 07e 
- 49 A to Z ASCII manual 
- 49 Sample players 



REVIEWS

- 12 MagiMac 2
- 14 PixArt 4
- 20 SpeedoDOS v5.7
- 20 ScanX
- 25 ScanX Update
- 24 MIDIman
- 25 ShyB CDs
- 29 Veloc+



REGULARS

- 6 News
- 9 Reader offers
- 10 Subscriptions
- 11 Letters
- 40 User group news
- 45 Reader Disk 10
- 54 Q&A



TUTORIALS

- 38 8th sound programming
- 38 HUGO BASIC
- 38 Papyrus
- 41 Team Tap
- 60 DTP with DA's Layout



Double Trouble?

Hey, we've reached double digits, nearly two years after the UK newsstand magazines gave up on the Atari scene, not bad eh? To celebrate we splashed out on the glossy cover!

It's not all good news. Our subscription and advertising levels have both peaked and we've entered the twilight zone. As long as our contributors sit in front of their computers entering the latest software, coming up with features to entertain and inspire us we're prepared to put in the maniacs what needed to publish the next issue. Their enthusiasm is our motivation to keep going so thanks to each and every contributor for getting us this far. If you'd like to contribute something for publication please send it by email or on disk to the contact points in the masthead opposite and we'll get in touch.

Apple's recent comeback has proven the third stronghold is not invulnerable. The Milan TOS based computer, named after another bird of prey, looks set to offer Atari enthusiasts a competitively priced alternative to a trip to PC World! Quite where the Milan fits into the upgrade pecking order remains to be seen. Is the Milan too little, too late, or just enough, just in time? As soon as we can get our hands on a review machine we'll set about answering these questions by reporting in detail exactly what these machines are capable of.

Finally, just in case you're wondering where the cover story went, we left them off because we didn't want to spoil the stunning cover image - they'll be back, next issue... somewhere!

Joe Connor

News...



Audio File Selector



AFS is a desktop accessory which can be used with Cubase and other applications. It's a file selector with a difference, selecting an AIF/RAW/AIFF file plays it DSD. AFS will be integrated into future SOFTJEE projects.

ALICORN



ALICORN is the first sound to MIDI translator available for the Atari platform - you can load an audio file and translate it to a MIDI sequence. The sequence can be displayed in key edit mode where it can be played or taped. However, don't expect it to convert your favourite tracks into beautiful scores! Here's a few features:

- Convert 8 or 16-bit audio files in any frequency to MIDI file
- Real and play part or the entire audio file
- Play MIDI file (integral MIDI file player)
- Display MIDI file in key edit mode
- Simultaneous display of audio and MIDI file

Pretty



Pretty is a MIDI file player with MIDI OUT! Play lots of modules and module folders can be played. Pretty includes a Record Module to record the MIDI file in real time and a Grid edit Module to display/change the MIDI file.



SOFTJEE software is available from:

- France: La Terre du Milieu
 - Switzerland: proper Rock
 - Germany: Felix Verlag
 - US: Systems For Tomorrow
 - UK: Titan Design
- Contact: SOFTJEE, P-1000
LORRAINE, France
Tel/Fax: +33 069 91 30 80 87

Email: softjee@net.fr
http://www.perso.tel.fr/~softjee/

ExtraPorts 48



Channel MIDI extender for the Atari ST which offers 3 MIDI OUT ports and 48 extra channels. Just plug its 25 way D-sub connector into the modern port of your Atari and for E-Lab and E-Magic users that's all there is to it. Steinberg, Cubase or Cubase Live users must first enable the EXPORTER driver which is in your MIDIOS folder, then reboot. Also works

with Novation, Ch T and Mastertracks PRO. Available for £54.99

from:
Simple Solutions
Professional Ltd, Unit
2/11 Westley Commercial
Center, East Lane, North
Westley, London, UK
Tel: +44(0) 181 984 4141
http://www.simplesolutions.com
simple@uk7

ExtendOS Gold

Analytica Software have recently released the latest version of their popular CD-ROM driver software which provides access to CD-ROMs and audio CDs through most SCSI CD-ROM drives. ExtendOS is compatible with Atari and most TOS compatible machines and, with suitable hardware, supports direct audio CD-to-disk recording. ExtendOS Gold offers the following new features:

- Support for more CD-data formats, including linear-upper case Hierarchic, long filenames, and the "joker" file system extension
- Compatibility with the "CD Extra" mixed audio/data format
- Supports more CD-ROM drives
- SCSI abstraction (if required by drive)
- Enhanced performance through improvements in cache handling
- Further compatibility improvements with Mac OS
- Audio CD "quick play" can play a track, or entire disk, directly from the desktop
- Improved controls for audio CD-to-disk recording
- CD recorder support (CD creation requires CD filter)

ExtendOS costs £244.95, including manual with upgrades including manual priced at £225, both plus £25 for shipping outside Canada. To upgrade send in your ExtendOS Pro master disk as proof of ownership.

CD Writer

This brand new release can create audio CDs that can be played back on a standard audio-CD player or your CD-ROM drive. The CD tracks are created from your best

audio files (one file = one track). CD Writer offers:

- Modern interface
- 4x recording on M800 and faster options
- 1x recording even on 68000 systems
- Reliable writes, time after time
- Easy installation - no dongle or restrictive copy protection
- Simulates before-writing feature
- Supports ATR, AIF, and WAV file formats
- QuickCreate feature to automatically create a compilation from a folder of audio files, and write it to CD
- Drag&Drop feature for re-ordering, removing, cutting and pasting file entries inside the compilation
- Printing of CD contents (track numbers, song names, times) for inclusion in the CD jewel case
- Up to 99 tracks and 74 minutes of audio can be written (the maximum on audio CD can hold)
- Support for AIFF, Philips, Yamaha, and SCSI/HMAC-compatible CD recorders
- Supports TOS 1.04 and above, MegaC, HMT and Genesis

To create audio CDs, you'll also need:

- ExtendedOS Gold
- Atari ST/50x with 1 Mb memory and Link4 or LinkRT bus adapter, Atari Falcon030, TT030 or other TOS compatible machine with SCSI interface
- Compatible CD recorder device
- Blank CD-R (CD-Recordable) discs
- Large hard disk to store your audio files before writing them to a CD-R disc

CD-Writer costs £249.95. Please send payment by cheque or money order in full. Cash, or pounds sterling (check exchange rate with Amstrad) to Amstrad Software, 8 Colindale Court, Offices, Galsia, NW9 8BL, Canada. Ontario residents please add 8% PST.

Tel: (011) 520-1988 Fax: (011) 234-9983
Email: amstrad@cyberus.ca
<http://www.cyberus.ca/~amstrad>

Sounds and Stuff - The Atari Musician's Toolkit

Flappyshop have released their 9th Atari CD-ROM title compiled with the specialist knowledge of Electronic Cow's Danny McAbber. This CD includes:

- Electronic Cow's entire sample library, nearly a thousand high quality 16-bit ATR samples covering a vast range of instruments. There's bass sounds (acoustic and synthesized, including the TB303), synthesizer sounds from analogue and digital synths (instruments such as the Korg ST, Roland SH404, Juno 106, D50P and Yamaha DX7), percussion loops and



single hits (from the Linn drum, TR808, A90 and 709 amongst others), arpeggiated instrumentation and vocal samples.

- Hundreds of music files in MOD, Pro 34-SNG, Quarter and standard MIDI file formats, covering classical, jazz, pop, drum programming and other genres.
- Libraries and sound editors for most modern popular MIDI synthesizers including Rong, Roland, Kawai, Akai, Yamaha, Emu and Casio.
- Over 300% of Falcon-specific stuff including direct to disk recorders and other audio bits and pieces.
- Fully working version of Sound Clip (Synch v3.02).

The Atari Musicians Toolkit costs £35 + P&P (UK £2, Europe £3, ROW £4). Flappyshop, PO Box 333, Aberdeen, Scotland, UK, AB11 9J.
Tel/Fax: +44 (0)1224 103756
Email: flappyshop@cybertrader.org
<http://www.flappyshop.cybertrader.org/>

ACC '98 Show Update



Plans are progressing smoothly towards the Atari Computing Convention which will take place on Saturday November 14th 1998 at Bingley Hall, Staffordshire Showground, Stafford from 10am to 5pm.

The Showground is easily accessible by car from junctions 13 and 14 on the M6 just north of Birmingham with ample free parking and there'll be a shuttle bus service running from Stafford railway and bus stations.

Tickets will cost just £3 on the door with discount for Atari Computing

volunteers with further reductions for children, OAPs, UKHS, students and orange card holders.

Since ACC98 The Portfolio Club UK have confirmed they'll make a stand and there's still time to book space - but time is running out! Stand cost is very reasonable £110 with power including VAT for 18 hour frontage.

Flappyshop have confirmed their attendance and have recently announced:

Dave and Jeff Elkins, are looking forward to meeting up with you all again at the Atari Computing Convention in November. As well as bringing along a selection of their current products (Rescue Image, G2-Art Professionals, Easy Stock, Family Rovers II, Power Up Plus, Tera II and their four CD-ROM titles) a number of new PD packs are being compiled to one-off for the event. Rescue Image 2 is expected (latest reports suggest further progress has been made, but it's not quite finished yet) and there's a couple of new releases in the pipeline which may well make it in time, including a brand new range of CD-ROM products.

We've also had a few enquiries from overseas exhibitors and we're prepared to offer them a special deal to help offset the travelling costs and make ACC '98 into an international event.

Calling all User Groups

ACC '98 is about Atarians having fun doing Atari stuff which means we want you to take stands, bring along your systems, and show off your wares. All to making table sized stands available to you for just £10.75 plus £3 for power inclusive. If you take a stand you get in for free, book the space, and can help make the convention more interesting for everyone - so

get in touch and reserve yourself a stand today!
Atari Computing, "Bois Brainer",
Duxton Crescent, Johnstone, PA5 6LB,
SCOTLAND
Email: showinfo@atari.computing.com
<http://www.atari.computing.com>
Tel: +44 (0)1896 829002 E-mail
message on answerphone

SHARWARD PROMOTIONS

For the details of Computer Shows, Tel: 01454 40000

Sharward Promotions are promoting the show via their web page and we're adding a banner to our web pages which you're welcome to add to your own web pages to link into our pages to help promote the show.

Sighting!

The composer of the score to the latest Bond movie, David Arnold, uses an ST. In a recent CA documentary an ST was sighted creating the score in... what looked like, his attic. ☺

It's not a dream ... it's available - now!



- Motorola MC 68040
- 4 ED0-Ram-Slots (up to 512 MB)
- 4 PCI-Slots, connected with an Intel PCI-Bridge for full PCI-compatibility
- 3 ISA-Slots
- 512 KB Flash-Eprom for the software-updateable TOS-Operating-System 4.5
- MFP-Processor for ST-compatibility
- Super I/O for PC-compatible serial- and parallel-slots
- 2 x 2 on-board IDE-controllers
- 2 high-end logic-chipsets for virtual hardware-updates
- Milan-Multi-OS 1.2 for full multitasking
- PS/2-mouse-connector
- PC-keyboard-connector
- VGA-graphicscard-support (up to 4 MB)
- and many more professional features ...

It's hard to believe - but it's

20 x Atari ST - 8 x Falcon - 5 x Atari TT

Incredible fast!

For further information please contact:

System Solutions, Titan Designs or

Milan Computersystems

Moorbloeden 17

D-24149 Kiel - Germany

Tel. +49 (431) 20 990 34

Fax +49 (431) 20 990 35

Email: info@milan-computer.com

or visit our great web-site at:

<http://www.milan-computer.com>

It's really not a dream:

A full Milan-Computersystem including
a great software package only costs:

£ 559

ATARI COMPUTING Offers...

Essential accessories for you and your machine - subject to availability. Stocks for some offers are UK only, for sale and you could miss out!

READER DISKS

Individual Reader Disks are available separately from the magazine. Each disk includes software exclusive to Atari Computing which is not available anywhere else.

We also have a Specialist (S&S) BASIC Reader Disk compiled by Paul Jones, to accompany the tutorial.

All disks are available and cost £2.90 each including UK delivery.



BACK ISSUES

Atari Computing issues 1, 2, 3 and 6 are now sold out but we do have a small stock of other back issues - so get them while we've still got them! Each magazine costs £3.00 including UK delivery.



EDITH PRO



Following the inclusion of Edith Pro, the semi-commercial and fully featured text editor, on our Reader Disk we can now supply the official 78 page word bound A4 manual and labelled Master disk for just £11.00 including UK delivery.

Read all about this wonderful program in the Giant text editor review in AC#4 where it received a sparkling review.

STRATOS CD-ROM



The Stratos CD-ROMs are only available to Atari Computing subscribers. Each CD-ROM costs £1.00 including UK delivery. Only 1 copy per issue per subscriber may be purchased. Since Stratos 1 each CD-ROM includes Atari Computing articles, Reader Disk contents, 5 of US on-line French magazine in HTML format plus a collection of international software compiled by Stratos.

Order form overleaf!



Trackman

Trackman is a complete, fully featured, commercial application. We've already given you the software on Reader Disk now we're offering you a chance to get your hands on the original printed manual in a luxury binder. For just £13.90, including UK delivery, you get:

- 44 page glossy A5 step by step Tutorial manual
 - 66 page A5 ring bound detailed Reference manual
 - Instant Configuration Can Card
 - Trackman Master Disk
- Add another £8.50 making a total of £22 we'll bundle a copy of Midman in the same binder.



MIDman

MIDman is a flexible Universal MIDI library which runs as a desktop accessory and is designed to integrate with Trackman. For just £15 including UK delivery you get:

- 80 page glossy A5 ring bound detailed Reference manual
 - MIDman Master Disk
- Add another £9 making a total of £22 we'll bundle a copy of Trackman in the same binder.



MOUSE MATS

Atari Power Users and proud of it? Better get one of these top quality mousemats then! These desktop mouse mats are 3mm thick and feature a smooth hard surface and non-slip base. They cost just £4.99 including UK delivery.

Location	UK	Europe	Zone 1	Zone 2
One time evaluation copy				
Magazine only	£3.50	£4.00	£5.00	£5.20
With Reader Disk	£5.50	£6.00	£7.00	£7.20
With CD-ROM	£6.00	£6.50	£7.50	£7.70
Disk & CD-ROM	£7.50	£8.00	£9.00	£9.20
Three issue subscription				
Magazine only	£10.50	£12.00	£15.00	£15.60
With Reader Disk	£16.50	£18.00	£21.00	£21.60
With CD-ROM	£18.00	£19.50	£22.50	£23.10
Disk & CD-ROM	£21.00	£22.50	£25.50	£26.10
Six issue subscription				
Magazine only	£21.00	£24.00	£30.00	£31.20
With Reader Disk	£33.00	£36.00	£42.00	£43.20
With CD-ROM	£36.00	£39.00	£45.00	£46.20
Disk & CD-ROM	£39.00	£42.00	£48.00	£49.20

Subsequent publications

- ☐ Atari Computing subscriptions: £ (See table)
- ☐ With Reader Disk
- ☐ With CD-ROM
- ☐ Starting issue - leave blank to receive current issue.
- ☐ I would like to receive back issues. Please send me up to _____ issues as part of my subscription.

Your details: (These will be stored electronically)

Surname:

Forename:

Street:

Town:

Postcode:

Country:

Email:

Tel:

£ Total payment in Sterling enclosed

Please make all payments to "Itard Consulting" and send to:

Stari Computing
"Bols Shelin"
Overton Crescent
JORDSTONE
PR5 3JH
Rutland

[illegible]

THE SMALL PRINT

Figure 8

All countries outside Europe except
those listed under Item 2

[illegible]

In alphabetical order: Australia, Belarus, China, East Timor, Fiji, French Polynesia, Guam, Japan, Korea, Mongolia, New Zealand, Papua New Guinea, Philippines, Samoa, Taiwan, Tonga.

All prices include packing and delivery.
The CD-ROM is only available to *Steel*
Customers on special offers.

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 103–110

- Reader Disk contents of the previous Atari Computing issue.
- HTML versions of the previous issue of Atari Computing and current *SHOCK* issue (in French).
- Collection of international shareware compiled by *SHOCK* 2.

11. *Journal of the American Medical Association*, 277: 1001-1002, 1997.

Cards, a Program on Postal Orders

© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 105–112

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 103–110

[illegible]

Keywords: social support; coping strategies; self-esteem

Post Office payment (K&O)
International money order (available
from most banks)

READER OFFERS

[illegible]

1. 1.00 ☐ a STRAIGHT 01. 12-000
 1. 2.00 ☐ a STRAIGHT 02. 12-000
 1. 2.00 ☐ a STRAIGHT 04. 12-000
 a fee per subscriber only
 1. 1.00 ☐ App for non-US delivery
 (placed subscription orders)

Lefters



Satisfactory Show

I am writing to congratulate yourself and your team for not only producing an interesting and varied magazine, but also for organising a new Atari Convention - after the news that Mike Goodwin was no longer going to organise future events, I thought that was the end. I attended the live show in Birmingham and was amazed to see so many people who still use TOS machines - and companies selling their wares. However there was a flaw, and I think you have discovered it already, after a couple of hours, there seemed to be nothing else to discover, so I left, bored. I was glad I went, but was disappointed at the end. So, when I read that you have teamed up with a general computer and consumer electronics convention this time around, I now believe you have the best of both worlds. A get-together for Atari enthusiasts and, since the majority of us also use other machines, something to make the trip even more worthwhile - excellent! I'll definitely be there - you can guarantee that! Hopefully, I might even buy that Falcon I've always been after!

I would also like to congratulate you on the AC website - it really is rather good. One final point, are there any persons in Wales who use an Atari machine? Please, please, someone else out there tell me if it's not, especially if you live in the Bridgend area - send me in email if you're online.

Christopher Bague, Bridgend, Wales
Email: chris@bmk.demon.co.uk

Thanks for the encouragement, we're also looking forward to the show and believe it will offer the best possible show event for Atarians, see you there - along with all the other Welsh visitors!

Peripheral vision

I was pleased to see Atari Computing looking at peripherals and their place in Atari-dom. It would also be of interest if someone could explain why PC Parallel peripherals are not for us, I ask this for three reasons:

- The quest for knowledge of all the Atari quibbles.
- Because over the years, in more than one occasion, owners have been advised that, "multitask games machine" cannot, possibly do this or that, only to find that somebody just did - and more importantly, are selling the bits to enable our machines to do the same.
- So often in magazine articles, when some vital piece of information to me, is mentioned in passing as if it is something everyone else already knows!

What is the difference between Parallel and SCSI? Is it simply cabling, or more than that? I recently acquired a SCSI ZIP drive with 15 pin D-sub connectors instead of the 4 way Centronics style connectors on my SCSI HD and CD and I managed to locate its adapter from Maytas. Could the cartridge port be used? As time passes we will have to become more ingenious and self-sufficient to continue using our machines.

Name & address needed!

Sadly, the difference between parallel and SCSI connections, goes much further than cabling. There was a CD-ROM IDE interface under development which plugged into the cartridge port but it was device dependent and fell by the wayside as faster cheaper devices became available.

Making Tracks

Many thanks for tracking down John Hollis and much praise to him for his generosity putting out Trackman as freeware. I have no idea how successful Trackman was commercially but it certainly deserved to be. Trackman easily held its own against software coming twice as much and it easier and quicker to use than a tape

machine or as complex as you would ever need it to be. But what it does best is not get in the way, which is the most laudatory thing you can say about any software. For anyone contemplating a first move into software sequencing, Trackman must be the best and least expensive way ever to get started. As for the free software and the giveaway price for the manuals, it's fully appreciated what's on offer here, you're likely to have your hands busy off at the elbow.

Ian Nicoll

I'm typing this with my toes so obviously the Reader Offer has been popular - and with MILLER on Reader Disk this issue I'll probably be typing ACP11 using my nose. :-)

Doing something right

I'm a German reader of your magazine and I like it more than the magazine distributed in Germany because the articles are better and hope there are at least another 100 editions to come. As the Atari show in Huesen this March I was talking to Jon Gerner about adding the URL and email addresses of programmers and so on and one magazine later I see, he did - thanks! Now something about me, I'm a crazy Atari-er who loves programming for the 8-bit machines and writing for various magazines. Here's my system: Atari 8-bit (30 MB, 800 KB), Atari TT, Atari Jaguar with CD-ROM.

Raimund Althayer
www1-online.de/home/highland/
www.atari-computer.de/highland/

We're glad you're enjoying Atari Computing. I'd like to invite everyone to send us an article or PDF review - without your contributions there's no magazine!

GET IT OFF YOUR CHEST!

Got something to say, or have a mean debate?

Atari Computing welcomes your comments, gossip, news, advice and used lenses!

Send your contributions on paper, or preferably ASCII text on disk, to:

Atari Computing, 63 Mill Road,
COLDLESTER, COX 11, UK.
Or email as at:
letters@atari.computing.com

We reserve the right to edit letters for reasons of space or accuracy without altering the content.



It's a kind of, erm... MagiC!

Mark Wherry buys a MagiCMac, a diet coke but no fries...



If there's one thing all computer enthusiasts have in common, it's the desire for something faster, better and cheaper. I've never satisfied, always looking to add this or that upgrade trying to convince myself this is the last upgrade I'll "need".

With Atari no longer making hardware, we're forced to look elsewhere for that next machine. The Milan looks compelling but comes too late for me and after comparing the price of other TOS clones compared to their performance I was looking for another alternative. MagiCMac offered us Atari's last Atari computing platform with the benefits of Mac computing effectively throwing for free.

The MagiCMac solution

MagiCMac is supplied as a single high density disk which is quite an achievement compared to Windows or MacOS - even taking into account many tasks are delegated to the host computer.

The current English MagiCMac release is bundled with the fine replacement desktop which is totally unnecessary because MagiC includes its own perfectly usable MagiDesktop. (Erm is even looking a bit long in the tooth these days isn't it, in my opinion, you'd be better off using Thing or Jintox).

The manual is a redeeming factor, beautifully presented as a windowsed 45 booklet. This contains a good and there's plenty of detail about the Macintosh side of the program. As with MagiC-Atari, much of the manual is given over to an explanation of MagiDesktop - alas, yes, I wonder how many Atariists, switching to

Getting Started

Installation is quick and easy and there's little potential for trouble as everyone should be able to get MagiCMac up and running without problems within a few minutes.

The first time MagiCMac is launched a series of dialogs appear to configure MagiCMac to your system. In these dialogs you allocate memory, drive/CD-ROM drives and whether long filenames are allowed, printer and modem ports, and screen resolution.

After completing this procedure, the system boots like any real Atari machine, loading Atari folder programs, accessories, and MagiC's auto-start applications. The desktop then appears, and MagiC users will feel instantly at home.

MagiCMac runs in parallel with MacOS which means you can switch between the two - effectively using two different computers at the same time. MagiC also utilizes the MacOS clipboard, which makes it possible to copy and paste text between applications running in either mode - neat.

Two become one

One thing you can't fail to notice immediately is the Mac mouse only has one button compared to the Atari two button mouse. The advantage for Mac users is that you never have to remember which button to press, but for Atari users, the right mouse button can be simulated by left-clicking with a tiny modifier held down. Alternatively MagiCMac does

MagiCMac, really need such a cheap tool of a desktop? There are some good technical details towards the back of the manual but really no programming documentation.

support some other Apple-compatible pointing devices, including two button rodents, but ask yourself how often you use the right mouse button before parting with your money - I certainly won't be purchasing one.

NVDC - The facts

In the same way NVDC enhances TOS/MagiC on an Atari, NVDC-Mac provides the following functions:

- Displaying more than 16M colours at a time, MagiCMac by itself can display any resolution the Mac is capable of, but NVDC-Mac is required if you want to access 16- or 24-bit colour resolutions.
- Printing via GDSOS.
- Screen acceleration.
- Access to TrueType fonts installed on your Mac.

A separate NVDC module is required to access Mac PostScript fonts. NVDC-Atari also works fine as long as you don't require printed GDSOS output or resolutions greater than 256 colours.

Printing in practice

The single factor which prevented me opting for MagiCMac sooner was printer support. Most Atariists own printers designed for use on PCs using the parallel interface, whereas Mac printers use a serial interface. One solution, directly supported by MagiCMac, is PowerPrint.



The PowerPrint package includes a cable to connect any PC printer to the Mac serial port along with custom printer driver software which supports hundreds of printers. Although this isn't a cheap solution, especially compared to the cost of new printers, it's tried and tested and works well.

Big Mac?

Choosing a Mac presents a dilemma because MagicC was designed to run on the Motorola 68040 series of processors - the same processors found in Atari computers. Up until a couple of years ago all Apple machines were fitted with 68040 processors and MagicMac ran natively, earning it excellent performance figures. Today all Apple machines are fitted with Power PC processors which run 68k program code under emulation. Although MagicMac runs fine under emulation they wait, and recently, were no match for Apple machines fitted with real 68040 processors. Recent models and Apple's latest G3 machines easily outperform even the latest 68k Macs which means if you're buying an Apple machine specifically to run MagicMac the best machines to consider are the outdated 68040 equipped Plus or one of the latest Power Macs.

Test	Atari	Mac
1000 Bytes/sec	0.488	1.944
1000 Bytes	0.460	1.747
1000 Bytes (1000)	0.448	1.663
1000 Bytes (1000)	0.425	1.561
1000 Bytes (1000)	0.402	1.459
1000 Bytes (1000)	0.379	1.357
1000 Bytes (1000)	0.356	1.255
1000 Bytes (1000)	0.333	1.153
1000 Bytes (1000)	0.310	1.051
1000 Bytes (1000)	0.287	0.949
1000 Bytes (1000)	0.264	0.847
1000 Bytes (1000)	0.241	0.745
1000 Bytes (1000)	0.218	0.643
1000 Bytes (1000)	0.195	0.541
1000 Bytes (1000)	0.172	0.439
1000 Bytes (1000)	0.149	0.337
1000 Bytes (1000)	0.126	0.235
1000 Bytes (1000)	0.103	0.133
1000 Bytes (1000)	0.080	0.031
1000 Bytes (1000)	0.057	0.029
1000 Bytes (1000)	0.034	0.027
1000 Bytes (1000)	0.011	0.025

With many Apple users upgrading to Power PC machines there are plenty of 68040 equipped machines around at bargain prices but do bear in mind you're effectively changing from one outdated machine to another! The 68040/68040 equipped portable Apple Powerbook and Duo models also make ideal MagicMac platforms and offer truly portable Atari computing on the move.

If you decide to buy a new Mac, look for models fitted with a 200MHz to 60MHz processor or faster. Many of the recently discontinued Mac clones existed then again and are on offer at bargain basement prices but do bear in mind Apple doesn't support these machines directly. If your budget allows, the recently launched Apple models like my G3 266MHz machine are quite, quite lovely!

I want some more

I would like to see better support for most software, so the Mac HCD system could be used. If the MagicMac programs supported Opcode's Open MIDI System (OMS), a MIDI management utility supported by most major Mac music programs, they wouldn't even have to write their own routines. Alternatively, or

via OMS, the internal QuickTime sound system could be supported, basically providing a sound module (with sounds provided by Roland) inside the computer without any additional hardware.

In my opinion, MagicMac should be an integral part of MagicMac - in preference to the possible inclusion of files. The stress is promising because MagicMac 2.1.4 (the current German release) includes an Epson Stylus Colour 800000 driver which doesn't require MagicMac.

Conclusions

As you can see from the GEMbench results MagicMac is fast - many times faster than a Falcon on suitable machines. If the software you use runs under MagicC and doesn't require access to the Falcon's GEM or the cartridge port the MagicMac option is well worth considering.

LONG TERM VIEW

Joe Connor has been using MagicMac since early releases on various portable and desktop 68k Mac models. Here's his comments... MagicMac offers the portable Atari computing which is many times faster than the real thing and makes available memory above the 1MB limit of the Falcon providing an ideal multitasking environment.

However, nothing is perfect and one of the common problems encountered running any Atari emulator is forcing Atari folder programs to run in the desired order. It's fast enough on real Atari machines where you either have to manually move files into and out of the Auto folder to juggle the running order or use utilities such as Direct, AutoSort or AutoSet. None of these methods work reliably under MagicMac so the MagicC programmers came up with an AUTODIRECT.BAT file (not to be confused with the DOS batch file) which should be located in the Auto folder. This AUTODIRECT.BAT file is simply a list of your Auto folder programs, in ASCII format, which MagicC reads to determine the desired execution order - it also works under MagicPC and MagicAcu.

When I switched from my Falcon to MagicMac I was amazed the system didn't seem to noticeably slow down whatever resolution/color depth I ran. On the Falcon the system can be slowed to a crawl because the time-data bus is shared between graphics and normal memory operations. As most graphics data is piped through this bus the bandwidth available for everything else decreases. The Falcon designers also decided not to include any fast Video RAM (VRAM) - probably because it was very expensive at the time, but this means much slower normal memory has to be used instead.

MagicMac floppy disk handling has never been good compared to MagicPC or the real thing. Pretty much anything other than standard 804 compatible 720kb or 1.44MB disks are, at best, not recognized, or in some cases can crash the system. Happily the German release 2.1.4 I'm using (or maybe the Mac OS 8.1 upgrade I installed recently) seems to have cured the problems and although MagicMac still can't access non-standard floppy formats as I haven't experienced a floppy disk related crash since.

Joe Connor

MagicMac is a mature product, still undergoing development with updates to keep pace with the changing face of the Mac OS. Now what do I do with my Falcon? - if only that clear stayed open on to read! ☹

MAGICMAC2.1.5

Publisher: ASM

UK Distributor: System Solutions

Tel: +44 (0)181 681 3355

Fax: +44 (0)181 680 6916

info@system.solutions.co.uk

http://www.system.solutions.co.uk/uk/

Cost: £129.95 (including Euro), 299.95

Upgrade from MagicC, Atari PowerPC:

£149.95, MagicMac 68K-95 (£19.95),

upgrade from MagicMac

Requires: Mac with 68k memory or more

Runs: Fast and compatible

Gets: Bundled with Easy, MagicMac required for GDEM output, non-standard floppy disk formats are not supported.

83%

"You will return to Art one day"

Shiuming Lai enacts the prophecy of his erstwhile Art teacher and lives to tell the colourful tale...

Pixel had never spun on my hard disk, so when version 4 arrived for review sans documentation (that I could understand), therefore a German *Impfentwurf* (by design's count) I faced two options: run away, or grab the bull by the horns. In retrospect I wouldn't have thought twice - the last you're reading this note rather than send loose is testament to its case of use. With this in mind we'll be looking at it from the ground up.

Many of the ST's best colour paint programs have divided the canvas and tools into two separate screens, toggled by a right-click of the mouse. Higher screen resolutions have negated this, favouring fixed or, more recently, floating tool boxes alongside the image that can be opened and closed as necessary. Pixel offers more flexibility by using a hybrid - the tool groups may be opened permanently from the drop-down menu or selected from a customizable popup which is just a right-click away.



If the tool has a little square to the bottom-right (such as the paint bucket highlighted in the screenshot) this means it has some user settings, similar to the level control buttons in Aqua Media. Each tool has its own settings dialog, though in my opinion a more elegant solution would be to have a single one corresponding to the currently active tool.

An impressive array of drawing tools is available combined with the concept of producing composite functions from the logically separated tool, path and menu

operators. You can define a pathogen then use that as a spray brush, for instance. By default (and this applies to most operations as well) you define the shape, mouse then place it. This variation takes some getting used to but is extremely useful and may be turned off if it's not required. To top it all, all tools work in groups made, it's excellent and will make you wonder how you managed in other packages without it.

Tool response time is generally good (in some cases there is a noticeable delay) and cursor tracking is roughly the same. The sample points can be joined or displaced.



Powerful block manipulation

Defining a block initially seems to have no apparent effect, because it's actually copied to a visible scratch pad where all the processing takes place. This "Block window" needs to be opened manually but can be set to automatic.

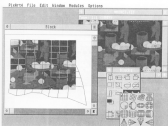
In many ways I like this approach, it doesn't clutter the source image and is subconsciously relaxing. I want to spread out a bit over my workspace. Careful use of its features can produce spectacular pseudo texture mapping.



Adding text to pictures is easy, again, it's prepared separately in a rudimentary text editor - I tried to write this review with it and found the buffer space was too small. Otherwise, save for the odd dropped character because it can't keep up and quirky line wrap, it's more than adequate. For best results and access to thousands of (vector) fonts you should use either SpeedyGDX or NvD3. Text can be rotated too.

Creative scope is further extended with image acquisition via scanner, it works a treat with Texas' Microtek bundle and together they form a top value art workstation. Scanned images are opened in normal picture windows to be manipulated at your mercy and if you want the whole works you can also use a Wacom pressure-sensitive graphics tablet. Most of the tools are programmed to take advantage of this, reflecting the design philosophy of giving maximum technical freedom. At some point you'll want to print your masterpieces, drivers are included for a number of popular printers and the page setup can be saved manually.

In monochrome Pixel is a formidable goal crusher, you'd be hard pushed to find such a wealth of features and intuitive interface elsewhere. The real fun starts in colour and it's here I experienced my first disappointment: using the drawing tools. Specifically, running in the Fabco's 16-bit true colour mode, certain tools caused a crash. I also found the colour selector counter-intuitive which lead to unpredictable results. The crashing has been fixed in the latest German update but the actual tool behaviour remains unchanged.



Many paint packages simulate the action of a spray can very well, randomly dispersing dots of a single colour under the cursor. The problem is the dot patch of colours, even the best of which can't match the minuscule size of droplets from a spray nozzle. Gradients on a video screen have to be made with solid areas of colour because the more technically accurate method produces a visible stippling. While this is a useful effect in itself, 16-bit resolutions should be sufficient to allow a convincing 'real' spray option which is offered in 3A and 3B-bit resolutions. Considering most Asians, even running accelerated Fatima, will be hard pushed to display 640x480x16-bit TrueColor, I think the authors should look into this. MIBO optimisation and DMP support would also be useful to add a much needed speed kick in some areas and tap into the real power lying dormant in the big bird.

☛ Bring up the block wrap grid and detect it to your host's context.

By contrast palette modes are a pleasure - use 256 colours if you have the hardware. A choice between stop or differ reduction takes care of importing pictures with more colours than the palette which brings me to the file import/export routines - it seems compressed TIFFs are not supported and the GIF export doesn't work. To minimise the possibility of an oversight I tried saving and reloading but images were consistently corrupted. Everything considered, whether it's suitable for your machine depends on the screen you've got connected rather than the number of colours it can display. A dialog informs you a minimum resolution of 512x350 is needed; unless Atari made a machine I don't know about this means ST high or above.



...or select one of the presets.

Since writing the first draft of this review I've had a test run with ProArt 3 and made comparisons. I'm happy to report that ProArt 4 has attained new heights of sophistication and power, without sacrificing user friendliness. In fact my first thought was to then it with Pageart, they share a similar feel.

I hope 1.6/32 will improve the English manual, despite being well written it is a solid mass of text with no screenshots and slightly poor quality given the asking price - the German release includes a professionally printed manual, superbly presented with copious illustrations throughout.

Last orders

ProArt 4 is the culmination of thorough design and user feedback, it's highly evolved which shows the moment you touch it through the surface - there's far more to ProArt than we could ever cover in a review. ProArt copies admirably across a range of hardware configurations and, generally speaking, what it does it does very well. I look forward to the next version.

☛ The magnifier can be used as an overview in a zoomed-in main image and vice versa!



☛ All these lovely Fatima colours, also they can't be used properly.



BULLET FROM A GUN OR SNAIL ON THE RUN?

Our cat of interest has tried PixArt 4 on a Macintosh to see how well it would perform. Ben Hills reports.

MINI and Geneva 4

PixArt loaded fine and I could create new pictures. Right-clicking on the open window produced the popup menu containing all the various drawing tools options. Actually using the drawing tools was fine, and reasonably fast with the exception of a few tools, especially freehand, which did not draw immediately. In other words, if I clicked and moved the mouse, it would take a moment to realise that I was drawing and update the window. I don't think though this is a problem related to my OS as PixArt did the same thing on my Falcon running PictG.

Loading pictures was a problem. After clicking on the picture to load, PixArt should have displayed its load options dialog. This problem was that only the outline of this window appeared and then my whole system locked up. I tried altering the settings of Geneva but I could not persuade it to load any pictures in any format.

MINI and AES 4.0

As I was having problems loading pictures with MINI and Geneva I decided to try the original AES 4 that came with my MultiTOS disk. I released with AES 4.0 had forgotten how slow a mouse (as was) and tried PixArt again. This time, loading pictures was not a problem. The only thing I did notice was that loading JPEG images was noticeably slower when compared to other programs I have used such as PhotoLine and Look 'n' See. Other formats such as GIF, IMG and TGA were quite fast at loading.

This time, right-clicking on an open window would produce the popup menu, but selecting an option was slower. Clicking on an option was not enough. To select an option I had to hold down the left mouse key for about a second before it would register. Double clicking on an option to bring up further configuration windows didn't work at all and so I had to go through the menus to get them.



The color splitter "special tool" constantly adjusts its angular lines to match the drawing direction.

BARGAIN BASEMENT

Christmas just came early - for UK readers at least. 1st/10 is offering PixArt 4 free to registered c1 owners, by way of apology for the late arrival of that release. To receive prospective users a free copy of SpeedyGDDOS 1.3 is bundled with every new purchase of PixArt 4 - everyone's a winner!

▲ PixArt 4 running on a MacInt - not forced to wait for a report

▲ Large pixel? No problem - have memory, get pixels!

PIXART 4

Publisher
Crayg Inc.

Contact

UK and Ireland
1st/10 Systems, 173 High Street,
Stroud, Glos, PL6 2TH
Tel: 01454 710788
W: 308premier.co.uk
USA and Canada
100MA SYSTEMS HOUSE
PO. Box 52127, Ottawa, Ontario,
K1H 5S0, Canada
usa10@firstnet.carleton.ca
<http://www.majia.ca/~sims/>

Worldwide

Crayg Inc., Andre Pellerin, Producteur &
D-10449 Berlin, Germany
Tel: +49304374884
Fax: +49304374884
berlin@crayg-inc-berlin.de

Requires

640x480 (ST high) or above, 2Mb or more with GDDOS fonts, hard disk recommended

Price

Invoking, manual includes useful tips, integrated environment

Comments

No Italian enthusiasts, several removing bugs, import/export

84%

Power Column

★ **Married Items**
= Best Price!

Milan 040 from £559.00

16MB memory, 1GB hard disk, 53 Trio V64+ graphic card, Sanyo case with sliding front, Super-Hip 105 based computer giving you compatibility with the main IT. Supplied with PC keyboard and mouse.



DA'S LAYOUT v6.1

Integrated DTP and Vector Design, from £235.00

Various upgrades and Plug-in modules available - please call for details.

SOFTJEE MUSIC SOFTWARE

See back cover!

MONITORS - Belinea

- 14" SVGA monitor from £119.00★
- 15" SVGA monitor from £149.00★
- 17" SVGA monitor from £249.00★

HARD DISKS

- EZ-Piper - 230MB removable £129.00
- 330MB cartridges from £19.95
- EZ135 cartridges from £12.95★
- Syber - 1.2GB removable £279.00
- 1.5GB cartridges £59.95
- 1.5GB Hitachi 5-1/4" IDE £149.00★
- 2.16GB Ultra-SCSI 9.5mm £149.00
- 3.1GB Ultra-SCSI 9.5mm £199.00
- 4.3GB Ultra-SCSI 9.5mm £329.00
- 6.5GB Ultra-SCSI 9.5mm £329.00

PRINTERS

- HP Desktops/Epson Stylus from £99.00★
- HP Laserjets from £309.00

CD-ROM & CD-RECORDING

- PonyTech/MC 24x SCSI £89.95★
- Yamaha 3x24x CD-RW £349.00
- Internal Case for CD-ROM £89.95★
- Extended Pro £39.95

SCANNING SOLUTION

Microtek 330 Scanner. 24-bit flatbed, single pass 300x400dpi optical resolution, complete with Scan software! Suitable for SVGA/Falcons.

New supplied with PC SCSI card/software & Mac software!

£199



TITAN Deals!



Power Hardware

- HADES 040, from £1249.00
- C-Lab Falcons HRLX £279.00
- 14MB RAM, no HDD
- MS-DOS case £199.00
- Complete with Mega III keyboard!

Other Hardware

- Link 97 only £49.95
- ACSI to SCSI adapter for the 97
- Internal SCSI Bus kit £49.95
- Falcons only
- 33.6K ext. modem £39.95
- SCSI adapters: SCSI & C
- 34.6K ext. modem £79.95
- 11 or 16MB, SCSI & C
- Manhattan Mouse £9.95
- Falcons VGA adaptor £12.95
- Falcons RGB adaptor £12.95
- Falcons 14MB sig £79.95

Software

- HD DRIVER v7.52 £49.95
- How do we do it?
- ExtendedDOS Pro £99.95
- Thought only £49.95
- Powerful design & development software for ADO projects!

MUSIC - Software

- Audio Tracker £149.00
- CD Recorder Pro £149.00
- CD Writer £149.00
- Cubase Audio £149.00



See back page for details!

- Digital Home Studio £89.95
- Digital Tracker £14.95
- Midiplay £14.95
- Inguard £44.95
- Live Machine £44.95
- CD-ROM (containing DMS & DT data files) £59.95

MUSIC - Hardware

- ADAT £299.00
- Analog 844 £299.00
- SPDIF (external) £179.00
- SPDIF (internal) £159.00

Recently voted as "Best Hardware" (Nemrod) "Best Atari Supporting Company" in Atari Times. Thanks for all your support!

BSS Products:

- Memorise £69.95
- Software for System and software
- £18 rebate for APRS owners
- For information contact:
- Tel: 01454 612345
- £14.95

- £99.95
- APRS Index, Memrise & Vindicator
- BSS Debug v2.0 £39.95
- £299.95



- Apex Media v2.41 £79.95
- Ultimate or Customise v2.41
- Apex Index v2.41 £29.95
- See extensive version of Titania
- Intro-Media upgrade £59.00

All prices inc. VAT, carriage extra. For more details contact:

Titan Designs Ltd

6 Millbrook Way, Sells Oak, Birmingham B39 4AX, UK.
Tel: +44 (0)121 693 6669
Fax: +44 (0)121 614 1630
e-mail: titandesigns@compuserve.com
<http://www.titan-designs.com>
Postcode: B39 4AX

Strings in Resource

George Crissman invites you through the pain barrier...

Recently, I was asked what is so "recreational" about computer programming anyway? The answer, mean, is *none*! Well:

- A feeling of accomplishment and mastery when a program finally compiles, and does what it's supposed to do.
- That you can make the computer do things no one else will make it do, like pulling text from intentionally unused dialog boxes.

your program into another language without editing the code itself. Anyone who's ever made a "minor change" in a program, only to discover afterwards that it crashes horribly, won't start or won't even compile knows the value of the resource file!

The Slingways Case

Recent Usenix tutorials centered on the ability (or lack thereof) of a program to detect a click of the RIGHT mouse button.

The method was originally undocumented by Atari, then revealed to registered developers, then improperly documented in public, finally resulting in a

free-for-all in the camp-squatters programmer newsgroup where I had to admit I was wrong - thanks, guys!



▲ [Right House Pressed] is copied from an unused dialog box for window display

One of the most important functions of any computer program is to present information to the operator in easy-readable text. In "computational" lines of text are referred to as "strings", since the computer takes a bunch of individual characters and "strings" and puts them together into one long line. It's common for C programmers to simply put user messages into the actual code, since the language has good string-handling ability. While this

string-in-code technique is easy, simple, and quick to implement, it manages to violate a key tenet of GEM: all of the operator display is supposed to live in the resource file. Keeping the messages separate makes updates easy and simplifies the process of translating



▲ Display clutter caused by the free-string technique

During the on-line matter, a test program was developed which demonstrates how to detect a right mouse button click. Since it also demonstrates the "strings

from an unused dialog" concept, we will take a closer look at it. If you want to know more about right button detection, run the program and read the listing on the Reader Disk.

The designers of GEM allowed for general-purpose text by using a "free string" in the resource construction set. Implementation is fairly simple, too, just give the string a name, input the actual string to be used, then link to the string from your program using `mem_gptr()`. The big drawback is having to create a link for every individual string - and the resultant disorganization in the resource window. The temptation to use the same string in two places can lead to trouble later on if the meaning in one of the two locations must be changed - time for a little recreational programming!

Benny, Doctor, No

Headings Used For Window Menu Bar

No Method Selected
`event_button()`
`event_multi()`

Neither Button Pressed
Left Mouse Pressed
Right Mouse Pressed
Left and Right Mouse Pressed

Read Atari Computing

▲ This form will never be displayed, but an `event_button()` is needed to keep the error-checker in the resource program happy

Just because a form is included in a resource file doesn't mean it has to ever be displayed. In fact, the form is an excellent organizing tool if properly named (names such as "heading" and "code") can clearly be used to hold window headings and C source code) because it helps develop a self-documenting program. At its best, only one `mem_gptr()` link to the form is necessary, because it contains an easily-addressed "array" of strings.

The drawback is that each string must be separately accessed in your program code when traversing it in the window display routine or the printer routine. Even simple loops used for string copying from the form to the array may break if the form is rearranged and located in the resource program. The loop will still work properly, but it will grab the strings in the wrong order and might even try to grab objects, which aren't strings. If you do use this loop technique (I never used the resource file [there are many working methods]) and you'll be OK, but it's definitely not the recommended way to handle strings.

Escape From Bondage

When starting a programming project, one of the first tasks is to design the objects for the resource file. Paving all the-minded messages in one form eases the development process, allows for quick examination, and makes future editing easier.

```
/* Accessing a FREE String in
printf("Hello", helloWorld[0].data );
```

```
/* Accessing a FREE String via LSTRING
printf("Hello", localized[0].LSTRING );
```

```
/* Accessing a THREADED String via LTEXT -- Not tested!
string = (LTEXT *) localized[0].LSTRING;
strcpy( string, printf );
printf("Hello", string );
```

▲ **LSTRING** format: selecting a TEXT object instead of STRING can create a coding nightmare. Use LSTRING, not TEXT when building the resource file.

The only downside is marginally more code programming but this actually provides a well-documented quality to your work. Why not give it a try and experience the improvement in your coding projects. ☐

ABOUT THE AUTHOR



George Christman lives in the US and has been a recreational Atari programmer since 1987.

His latest former project is the just-for-fun "Ignoring Standard Interface Techniques" program, an improvement on a personal protection program that gives the user "hints" during login. He also apologizes to C&E fans for the "Springy Case".

ResourceMaster File Global Help



▲ Strings organized by function



▲ A rich variety of sorting methods will defeat copy-paste techniques requiring adjusted objects



USENET NEWSGROUP

Help is always available online in the Usenet Atari Programming forum; point your news reader at:

comp.sys.atari.programmer



If your web browser supports Usenet news:

news.comp.sys.atari.programmer

However you get your Usenet feed, you'll find the help and freely given advice in the Atari programmer area to be of great use no matter what your specialty. With STAC, STING and NEWSIE available free of charge what more do you want?

* ON READER DISK *



▲ How to detect a right mouse click

R_RESOURCE.HRG demonstrates the right mouse programming technique. Adventure developers can use the included H, RSC, and RSM files necessary to change the window display and printer output as desired using ResourceMaster. The C file contains the function that transfers resource strings from the form into the program, and is supplied for easy reference. If you do use the RSC file remember to work on a backup copy.

SpeedoGDOS 5.7

Mike Kerslake looks at the latest release of this font and printer manager...

Remember GDOS - the part of the operating system tasked as to handle font management and printing? Being tied to GDOS, it did produce acceptable printed output, but it was a complete nightmare to set up, the supported printers were few in number, and it only supported bitmapped fonts in a limited range of point sizes. Developers hated it, users hated it and thankfully it was consigned to the wasteland of history years ago!

Atari tried to salvage GDOS by releasing FastGDOS which was quickly superseded by the buggy and ill-fated FMGDOS. However, it wasn't until SpeedoGDOS was released by Atari Corp, using Speedo technology licensed from Bitstream, that a satisfactory method of font management and printing was finally available.

SpeedoGDOS made it possible to use high-quality Bitstream Speedo format vector fonts in some existing applications, and it was incorporated by some new programs.

Although Speedo fonts looked fast and are of high quality they were both expensive and hard to obtain. Because Bitstream jealously guarded the details of their format no PC software fonts have ever appeared - unlike the widespread TrueType and PostScript fonts.

Things changed for the better when COMPTON Software, who took over development of the program, released SpeedoGDOS 5 in late 1994. There was built-in support for both TrueType and PostScript Type 1 fonts, some bugs were ironed out and a wide range of popular printers were supported. Before SpeedoGDOS 5 was released many Atarians had switched to NVDI, which from NVDI 3 supported both TrueType and PostScript fonts (via an external module) and one could be forgiven for thinking SpeedoGDOS development had ceased. However COMPTON-GenH have continued to improve and enhance the program culminating in this fully anglicised version of SpeedoGDOS 5.7 with detailed printed manual.

Installation

SpeedoGDOS 5.7 is supplied on five disks, with a 24 page A5 sized manual which guides you through the installation process - it's really just a case of running the

INSTALL.PRG and following the prompts. All the available printer drivers are installed, but you can delete any you don't need. The manual points out all printer and system drivers from older SpeedoGDOS versions are incompatible, so make sure you delete any existing SpeedoGDOS installation if you decide to upgrade. An ancillary program, called SPIDEX, which is not automatically installed, can act as a font viewer and installer if required.

Customising your set-up



Fonts are added by running OUTLINE.PRG. Any TrueType, Speedo or PostScript Type 1 font can be added easily and even GEM bitmapped fonts can be added if you are prepared to hand edit your ASCII.GYS file.

One potential area for confusion is cache management. There are three different caches to maintain and, although full details of what each one does can be found in the manual, it remains a matter of trial and error to arrive at optimum settings. Up to a point the bigger the cache the quicker your screen display and printing will be, but you're on your own!



The DRIVERS.PRG allows you to install extra printers and configure the page size, print quality and so on. Drivers are supplied for most of the popular printers - including the elusive 600dpi HP LaserJet

and HP Designer 158C colour inkjet drivers and there's a promise of more drivers in the pipeline.

In use

SpeedoGDOS drivers programs should take advantage of the improved facilities automatically and I am pleased to report programs such as Papyrus and Kandybox produce excellent printed output.

You may want to handle various options in the OUTLINE.PRG so programs such as EasyText Pro Writer pick up on previous font sizes, but install this upgrade dotted seamlessly into my system.

Conclusions

For anyone using NVDI there's no compelling reason to switch to SpeedoGDOS. NVDI is similarly priced and offers built in screen acceleration and tight integration with the Magic operating system. However NVDI 4 only supports PostScript fonts via an external module (which costs extra) and separate modules are required to output via GDOS from MagicMax/PC.

SpeedoGDOS 5.7 delivers what it offers and it's great news for existing users that it's still being supported. If you already use SpeedoGDOS (especially v1.2 or earlier) this upgrade is definitely recommended. ☐

SPEEDOGDOS 5.7

Publisher

COMPTON Software - GenH
UK Distributor

1110 Systems, 119 High Street, Strood,
Kent, ME4 4TW Tel: 01634 710788
Email: 1110@compuserv.co.uk
(Email) 019 for CD upgrade from
previous versions)

Requires

Any Atari, 1 megabyte or more of
memory recommended, hard disk

Price

Excellent output, compatible with most
programs which require GDOS, Post-
Script Type 1 fonts supported as
standard

Cons

No integral screen acceleration and no
docs for SPIDEX.PRG

80%

Quest for the Fuji

Our favourite platform is alive and kicking out there on the Internet - you just have to learn where to look. George Crisman offers a few strategies worth following up...

Atari Computing

Just in case you hadn't noticed Atari Computing magazine articles usually include web addresses for more information about products and software. These Uniform Resource Locators (URLs) make good starting points because most web pages include a link page to other related web pages. With a lot of luck, you'll soon have more links than you can visit.

Usenet

Usenet is a collection of "newsgroups" dedicated to specific hobbies or interests. There are newsgroups for almost any subject you care to think of - cars, bridges, trains, computers, whatever. There are public forums and anyone can join in and tell their own "news". It's common practice for surfers to advertise their home pages or special interest groups in a "signature block" at the end of each posting and, in the Atari related news groups, these provide another source of Atari related web pages.

Some web browsers provide access to the Usenet. Instead of typing in the standard "http://" address, enter "news.camp.su.start.it" (Don't add any forward slash "/" characters). Check out NEWSIE which is an excellent Atari application specially designed to read Usenet news groups.

Web Search Engines

When asked if they've heard of "Internet engines" most people can cite Yahoo or AltaVista and that's about it. There are HUNDREDS of such sites available. Instead of visiting individual search sites you can let a meta-searcher off the leash to check them for you automatically. The advantage offered by Meta-searchers is you only have to enter your search string once to get replies from up to 11 different search engines!

Wouldn't it be lovely to have information now?

Ask Jeeves and Deteroling are just two of many meta-searchers available. Once you've used them, you'll probably never use an individual search engine again!

Atari WebRing

One of the most targeted methods of searching for a particular topic is the WebRing concept.



webring.org lists over 70,000 topics.

Anyone can start a WebRing on any topic and they become the Ring administrator. After ensuring availability of the ring other web page authors can be invited, or may talk, to "join the ring". This typically involves agreeing to any rules laid down by the Ring administrator then adding the necessary HTML code along with suitable navigation graphics to their own web page. Amazingly webring.org do not charge to set up or use WebRings even though each site has to communicate with the others WebRing members through webring.org. Surfers can select sites in the WebRing at random or move from one site to the next until all sites in the ring have been visited.



The Atari WebRing includes around 130 different sites but the exact number is constantly changing as new sites are accepted and others leave. ☺

INTERNET RESOURCES FOR ATARI COMPUTERS

Meta Searchers

Ask Jeeves <http://www.askjeeves.com>
Deteroling <http://www.deteroling.com>

Usenet Atari Sites

Primary meeting area

comp.os.atari

Software development area

comp.os.atari.programmer

Hardware discussions

comp.os.atari.tech

WebRing

Atari Index

<http://www.webring.org/cgi-bin/webring/ingameatari01atpage1>

WebRing Master Index

<http://www.webring.org/ingameatari/>

Author's detailed web sites for WebRings, Meta Searchers, thorough Usenet News Group listing, and web software (including NEWSIE and CASI 1.0).

<http://www.totinet.com/~atari/faq/>

atari.totinet.atariRing

<http://www.totinet.com/~atari/faq/search/>

atari.totinet.atariRing

<http://www.totinet.com/~atari/faq/>

<http://www.totinet.com/~atari/faq/>

<http://www.totinet.com/~atari/faq/>

<http://www.totinet.com/~atari/faq/>

WEB RING TOPICS

Here's just a random sample of topics for which web rings exist:

- Pioneer Truck Madness
- B Nuts
- The Orion Ring
- Aviation Ring
- Cat Lover's Ring
- The Sailor Moon Alliance
- Amateur Webbing
- Amateur Webbing
- Ring of Cool Anime Fansites
- The S.P.A.S.T. (Save People Against Sailor Moon) Web Ring
- Art Bell Web Ring



Scantastic?

Matthew Bacon thinks so...

For years I've been happily using a RAW hand-held scanner to get photos and drawings onto my 37c for further editing.

However, hand scanners do have to be manually reloaded across the page - a craft skill I never quite mastered! They're also limited to scanning "single" (ie width of the scanning head) typically 30mm, at resolutions up to 400dpi.

Recently the cost of flatbed scanners has fallen through the floor making hand scanners almost redundant. Flatbed scanners remove the skill factor and offer higher resolution for the same money so recently I purchased a Microtek ES colour flatbed scanner.

Flatbed scanners are not the most distinctive style objects - they all look very similar, the lid rises up roughly the same desk space as a standard ST/Falcon, just like a photocopier, the lid hinges up to reveal a clear glass plate large enough to accommodate a full A4 sized page.

In line with current trends on other devices there are no external controls on the lid apart from the power switch. All settings are software controlled which, for the Atari platform, means you need to buy a copy of ScanX published by HOMA SYSTEMS HOUSE.

ScanX provides a comprehensive level of control and offers similar functions to those found in the PC and Mac driver software supplied by Microtek.

The ES can be connected to any Atari system with a custom SCSI card using a suitable SCSI cable. ST owners without a spare SCSI socket will additionally need a SCSI host adapter such as the PCO Link or equivalent.

ScanX can run as an application or desktop accessory. Running as a desktop accessory ScanX can scan directly into applications using a GDPS scanner driver. Programs that currently support GDPS include Paint, PhotoLine and OCR4.

When ScanX is run for the first time you are required to give the ACU/SCU ID and model of scanner after which the main screen is then displayed (Figure 1).



Fig 1 ScanX can scan any page up to A4 in 24-bit colour, 8-bit greyscale, 1-bit halftone and line art

The area to the left of the controls on the main display (Figure 1) is called the preview window. Select PRESCAN to perform a fast scan which displays a rough preview of what's on the scanner in the preview window. The next step is to define the area to be scanned by either dragging and re-sizing the crop frame within the preview window or by typing in values.

Before scanning the defined area, the colour depth (palette of colours, greyscale etc) and the resolution (75 to 800dpi) have to be selected. ScanX also provides control over the scanning velocity, brightness, contrast and exposure. The slower the scanning velocity the more detailed the scan will be.

Select SCAN to begin a defined scan of the defined area. If the results are not satisfactory simply change the settings and perform another scan. When scanning in colour ScanX holds the image in memory. On my 14Mb Falcon a full A4 page colour scan at 318dpi results in a 13.8Mb file in Taga (TGA) format.



Except when scanning in colour ScanX scans to disk in BMP format which means ST owners, with enough disk storage space, can scan a full A4 page in 8-bit greyscale mode.

The Microtek ES scanner used with the ScanX driver produces excellent results. If you're into graphics or DTP this combination is currently the only dedicated scanner software in town. ☐

MICROTEK ES & SCAN X DRIVER

Publisher

HOMA SYSTEMS HOUSE,
PO. Box 52127, Ottawa, Ontario,
K1H 5S8, Canada.
Email: gdl@hometel.comtel.ca
<http://www.magna.ca/~homa/>
UK supplier

Titan Design, 4 Waterford Way,
Belly Oak, Birmingham, B29 4AX
Email: +44 (0)121 693 6644

Email: TTANUK@compuserve.com
<http://compuserve.com/~ttanuk/>

Cost

£199 Microtek ES & ScanX
Specification
30-bit colour plus flatbed, 1400x900
dpi (interpolated), SCSI interface

Requires

SCSI interface, 440x400 (ST-high)
resolution minimum, 8Mb memory
minimum, hard drive recommended

Price

Easy to use, excellent results,
reasonably priced, runs as a desktop
accessory or application

Cons

ScanX documentation could offer
more detailed advice over settings.
Microtek no longer produce the ES
model but its successors, the ES2
& ES3, are compatible with the ScanX
driver.

85%

Scan X updated!



Don Dreibelbis reports...

At the end of April Philips Monoprice from HEMA SYSTEMS HOLLAND released ScanX v1.0000 for use with the Microtek Scanmaker line of SCSI colour scanners (and added a whole slew of new features including:

- Support for more members of the Microtek flatbed scanner "family" including the new E3+ and E3+, E400, E500, and V3000 scanners.
- Support for all Acan and graphics card resolutions from 480x480 upwards which means ScanX now works in TrueColor mode - no more switching to 256-colours just to use ScanX.
- Folioz/Netmos, Hades, TT and Magix/Seagraphics owners will appreciate this.
- Choice of colour or grayscale process.
- Inverse scanning supported offering a quick and easy special effect to add impact to your projects.
- Scans can now be saved in either TIFF format or Targa format.
- New works under the Geneva international system.
- Special support for users of CSH-D-VMD and HD-Driver v7.0 (or later) hardware driver software.

In Use

My V3000 were started out using my 1486's Philips flatbed with Microtek/Vidality running in TrueColor used with a Microtek E3.

Apart from the extra choices in the Options dialog for colour scans and inverse the interface remains unchanged and retains its single handy-on design.

The new colour process option makes it easier to get a handle on the document borders and precise positioning of the cropping tool before performing your final scan.

Canvases users will be delighted to be able to use ScanX at last but less impressed to discover ScanX takes over

the options so you can't launch colour programs while it's running - it's a real pain to have to quit ScanX to run a graphics program or viewer to display scan results. To avoid these limitations run ScanX as a desktop accessory. Overall the new options and improvements make ScanX even more indispensable than before - two thumbs up!

Existing ScanX users can upgrade their copies to this version by downloading the demo version from the web pages. ☺



➤ Negative image

➤ Original image



FUTURE FEATURES

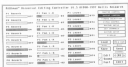


There's an even more powerful version in the pipeline called

ScanX Pro. This release will support other file formats, the ability to zoom into a process view for a closer look, along with precision cropping, wrapping and masking functions. Five times the work in progress version is action and it's reassuring to know ScanX is still being actively developed and looks set to get even better.

MIDIman

Mark Wherry mixes, patches and maps the way for us...



MIDIman is a universal patch editor and MIDI mapper which runs as a desktop accessory and makes it possible to communicate with external MIDI hardware in your system. Because MIDIman is totally configurable it can be used to carry out a variety of tasks including:

- Sound editing
- Remote MIDI mixing
- Recalling complete pages of MIDI set-ups

MIDIman was originally commercial software released by Hollis Research and has recently been released as freeware.

MIDIMAN FEATURES

- MIDIman is a universal patch editor and MIDI mapper
- MIDIman is a desktop accessory so it can work alongside your sequencer and other GEM programs.
- All your editing requirements can be achieved using one simple set of controls.
- Can be used to remote MIDI mixer/controllers or local MIDI setup pages.
- Can be used to create your own patch editor.

Used in conjunction with Trackman MIDIman can also:

- Perform patch editing while Trackman plays or records with no hanging notes or other glitches.
- Record and playback patch edits.
- Control any patch parameter with MIDI - effectively extending the capability of your synthesiser, turning every MIDI parameter into a performance control.

which prompted this review and the Reader Offer on page 9. The 30 page manual is clearly written and neatly presented in an A3 ring binder along with a labelled master disk.

MIDIman is a mature product which runs on any Atari machine from a 520STEPII up-to a 14ME Falcon. Sadly there are a few display problems when running under PlayG but since most musicians don't run PlayG for music sessions this shouldn't be a serious limitation.

The Editor

You can never have enough sounds - I'm always on the lookout for new sound sources and quickly tire of the sounds provided by my MIDI equipment. You can add individual sounds to suit specific situations using a program capable of writing "system exclusive" data to MIDI devices. MIDIman lets you do modify this, and includes lots of example profiles on the disk to get you started.

Although most of the profiles included are for older MIDI equipment this isn't a major problem because it's easy to create your own using the internal profile language described in the manual.



Simply create a control on the screen and enter the program of MIDI commands from your manual for the required operation. Each profile can consist of many pages of controls, which can be used for different aspects of your MIDI device. Fortunately a control is provided to change channels, which means you don't have to create duplicate controls to cater for different parts.

Tip: If you do create some interesting profiles please do send us a copy to the

editorial address so we can include them on a future Reader Disk for everyone to enjoy...

We are family

MIDIman was designed to be used with Trackman and the two programs integrate perfectly. MIDIman can be used before Trackman enabling MIDI data generated by MIDIman to be recorded by Trackman. Similarly MIDIman can be used after MIDI data has been sent from Trackman to make instant alterations, without altering your song file settings.

Conclusions

MIDIman deserves serious consideration by anyone requiring a graphical MIDI editor. Although there's not much support for the current crop of MIDI devices there are plenty of examples provided, which makes it easy enough to create your own. For anyone using Trackman it's a near-essential companion purchase and at the price you can't go far wrong. **B**

MIDIMAN

Publisher: Hollis Research
<http://www.hollis.co.uk/index/>

Supplier: Atari Computing
Cost: £13 (MIDman including UK delivery) (£14 Europe, £14 ROW) £22 (Trackman and MIDman including UK delivery) (£23 £8 Europe, £27 ROW)

Requires: All Atari using external MIDI equipment

Pros: Wide range of applications, value for money, integrates with Trackman

Cons: Supplied control files are for older synths

Supplied Profiles: The following equipment profiles are supplied with MIDIman:

Emu Proteus Emuport, HESQH Proton 280, 88 (Europe), 85 (Row), DAWBER, C64, P11 (Lewison), LSP1 Roland D110, C60, Jeno, JX10, M8320, U118, U130, V80 Yamaha, DX111, DX13, BMT18, F801, 8011, T603, T601 Z. Some generic MIDI mixing and performance tools are also provided.

85%

Suzy B's Software Treasury #1 and #2

Al Gould reviews another pair of Atari CD-ROMs...



There was a time, not so long ago, when it was said that it wasn't worth getting a CD-ROM player for your Atari because there was no specific Atari CD-ROMs available for it. This is no longer true. There are hundreds of compilations available across Europe, however, the *Suzy B Software Treasury* is a little unusual because it originates from Florida America.

In 1989 Susan and Michael Barkley ordered twenty single-sided disks from a major PD disk supplier in the United States, but after sorting them and discarding the files that they couldn't use they were left with very little of interest. This prompted them to collate PD software themselves, and nearly two years later *Suzy B's Software* was born. Their collection was then released as a double CD-ROM now named *Suzy B's Software Treasury*. Originally this was distributed as uncompressed files. As the time it was claimed to be the most complete PD collection available.

This double set has now been compressed into zip-files and has been re-released as a single CD and renamed as the *Suzy B's Software Treasury #1*. It contains games, Palcoot000 specific software, sound files in various formats (and players for the files), dozens of utilities, financial software, demos, educational programs, databases, icons, printer drivers and many more files. In fact there are so many, that even compressed they wouldn't fit on a single CD-ROM! It's coupled with the fact that over the years *Suzy B's* had collected many more files prompted the release of *Suzy B's Software Treasury #2*.

Suzy B's Software Treasury #2 contains a similar collection of files and also includes more Atari software sample files and templates, clips, the entire Interactive shareware collection, table software, picture manipulation tools and more.

Both CDs share a similar and sensible structure. Files are placed in folders, and every folder has a CATALOG.ASC file explaining exactly the contents of the file. There is also a master catalogue folder on each CD. This adds up to megabytes of ASCII text which take ages to read but it makes it clear exactly what each CD contains and where to find it.

Packs of the software and files are now stored, with the inevitable problem files which wouldn't run on my Falcon or under MacG or most worked perfectly on my ST/XT systems running TOS.

Some of the contents will be familiar to you (for example, the *InterActive* collection), but there are plenty of obscure gems in there. For example *Band Names* by Don Wills of Global Software. This allows your Atari computer to generate random phrases of text. It is supposed to help friends to come up with a name - strange but true!

For those of you looking for more "serious" applications there are such programs as *Play MPEG v3.70* by Martin Griffiths (1995 release). This colour MPEG player uses the Falcon's DSP and MPEG chips in software to get far from iteration of MPEG videos, and *FINACALC* which is the Financial Calculator - or "Variations on the Theme of The Present Value Formula" v1.0 by

Ernest C. Quill (October 1996). This program enables you to calculate loan payments, savings which can be made by paying off loans early, and so on.

There is something for everyone on these CD-ROM collections, but you'll need time and patience to try everything out. The decision to archive everything makes casual browsing impossible and leaves you with the feeling you're missing something. I've certainly spent hours checking out files and feel I have barely scratched the surface. Fortunately browsing the Catalogues does narrow down the files worth extracting and I'll write you speed ups browsing through them - I do!

Value for money?

If you were to purchase the entire collection on floppy disk, it would occupy thousands of disks and cost a fortune. At £20 per CD these are certainly more expensive than some of the other collections currently available. But they do represent good value for money, whether you are setting up a file base for a bulletin board, or trying to build a collection of shareware (remember to register shareware if you use it regularly). ☺

SOFTWARE TREASURY

Publisher
Suzy B's Software
UK Distributor
PoppyPop, PO Box 171,
Malmesbury, AM1 5 8QJ
Tel/Fax: +44 (0)1214 312316
Email: PoppyPop@btinternet.org
www: www.poppythis.com/distrib.htm
Cost
£15.00 each plus P&H (£1 UK,
£3 Europe, £4 ROW)

Pros:

The sheer number of files to explore, variety and unusual nature of some of the contents

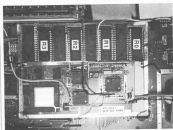
Cons:

No printed catalogue of clips or images. Files archived

83%

Veloce+

Joe Connor looks under the bonnet at perhaps the last, best hope, for STe owners looking to upgrade...



There have been a succession of hardware accelerator upgrades down the years. Most were designed for ST machines, others required re-casing the machine in a tower case or springing the shielding but eight years after the release of the STe the Veloce+ is the first accelerator specifically designed

to fit inside standard STe machines and it's a cracker!

One of the reasons ST machines remain popular, especially with musicians, is their all-in-one case design. With the release of the Falcon and faster TOS compatible machines the minimum system requirements have steadily increased

leaving owners of standard ST/STe machines short of memory, raw processor speed, disk space and higher resolution colour displays.

The Veloce+ alleviates three of these shortcomings at a stroke! For raw processor speed a Veloce+ equipped STe leaves a Falcon in the dust lane and approaches TT speed in standard ST resolutions.

The Veloce+ is also available with 3Fb or 4Fb on-board FastRAM which can be used alongside standard ST memory to increase the total system memory to 5Mb (Veloce+R) enabling through the built-in 4Mb memory bank. With more memory you'll be able to run a multitasking operating system and still have enough memory left to run several major applications and a host of utilities or one application to process larger music or graphics data files.

Finally, with the optional IDEal IDE interface (available separately) piggy backed onto the Veloce+, 1.5" IDE hard drive installations can be fitted internally. For the musician on the move or anyone who likes the all-in-one case design of the ST range this is the solution - it will be sleep's clothing!

Impressive figures report the Veloc+ board boosts CPU performance 50% faster than a standard STe! They don't get the extra video modes, 8Fb option or DSP but this is still one helluva upgrade.

SMBench			
File Test Misc.			
Test	Time	Ratio	Statistics
MEM Blasting Rate:	3.360	100%	BlastingRate: 100%
MEM Text:	3.820	100%	CPU: 100%
MEM Text Effects:	6.745	100%	Average: 100%
MEM Small Text:	3.890	147%	
MEM Graphics:	9.225	99%	
MEM Windows:	1.838	148%	
Integer Division:	1.158	93%	
Float Math:	0.810	57%	
MEM Access:	1.170	100%	
MEM Access:	1.170	147%	
8 (bits):	1.385	84%	
MEM Sprites:	3.085	181%	
Justified Text:	3.785	124%	
MEM Copy:	1.710	147%	
MEM Blasting:	6.720	122%	

TOS upgrade

The Veloce+ also includes a "free" TOS 2.06 upgrade which can be accessed at high speed further enhancing overall system performance. TOS 2.06 features the fast logo on start up along with an automatic memory test, hard drive start up delay and a much improved desktop with better icon support, access to special characters, user definable keyboard shortcuts and various other tweaks.

Compatibility

For maximum compatibility the 68000 processor can be turned off in which case the STe's original 68010 processor takes over in 68010 mode TOS 2.06 and FastRAM, where fitted, remain available - in fact you can't switch back to the original TOS 1.6 as 68010 because they are removed during the installation process.

Most applications which run on a Falcon/TT in standard ST resolutions will

ish with the 68000 processor active. Obviously applications which require the Falcon's DSP chip or which hit machine-specific hardware are likely to fail but generally speaking most programs work and if they don't they're probably due to retirement anyway. Popular applications including *Hotshot*, *Clue*, *Cubase II*, *Cubase Score*, *Calamus*, *Papyrus* and so on all work - just much faster! *Hotshot* logic running in FastRAM has to be seen to be believed.

One potential minefield, TT owners will be familiar with, is memory management. The Veloci+ 2 (20Mb FastRAM) and Veloci+ 4 (40Mb FastRAM) options both include extra memory which is made available for use by the operating system as FastRAM, commonly referred to as TTRAM or Alternative memory.

Programs run faster when loaded into FastRAM because they can be processed faster by the processor but there are some programs which only work in ST-RAM and others which can be run in FastRAM so long as they can allocate memory in ST-RAM. To manage which programs run in what memory "flags" in the header of every program can be configured. On launching a program the operating system checks the flags and allocates memory accordingly. There are various stand-alone utility programs designed to edit program header flags - TUS includes a suitable utility and recommend you check and set each of your applications in turn to your requirements. Replacement settings such as *Flag* and *Jump* can also set program flags. Determining the optimum settings is down to experimentation - unsurprisingly there's no definitive list.

⚡ **Q:** Flag is just one of many custom utilities designed to set the program flags.



Installation

Anyone with soldering experience should be able to install the Veloci+ board and no special equipment is required. The

Veloci+ board is mounted over the top of the standard 68000 processor by wedging pins between the pins of the PLCC sockets and its using just between the pins and the CPU's - the same technique is commonly used to install memory upgrades. Once installed the board sits around 18mm above the motherboard.

The optional IDE interface board is around 30mm square and plugs-backs onto the Veloci board raising the entire stack a further 5mm - but it still fits under the ST's sliding window requiring only shimming to be cut away.

A 14 page A4 manual which includes colour illustrations details every step of the installation process. In total there are eight flying leads to be soldered to the motherboard and two track cuts.

If you don't fancy a DIY upgrade TUS offer a courier pick-up and return service which, including boxing, comes to just £29 extra, which is excellent value for peace of mind.

Software

A supplied utility disk includes various benchmarking and utility software along with the software required to use the Veloci+. All that's required is a single Auto folder program which configures the processor and installs the FastRAM if fitted.

Performance

Playing video clips with sound seemed a suitable processor intensive task to test the Veloci+ with so I loaded up *AmigaPop*, programmed by *Digital Message*, and despite the documentation stating ST/STe machines are unsuitable and likely to 'crash', all the clips I tried ran fine. +

0:15 FURBER, MAT/FURBER, MAT
0' 1", 77%, 20 fr



⚡ Top left: *AmigaPop* on standard STe cannot play the video - even with the sound off. Bottom right: *WAB* the Veloci+ installed this vintage Matt WAB/88 video clip with sound playing to full

TECHNICAL DETAILS

The Veloci+ board is essentially a 68000 processor running at 14MHz with zero wait states but this isn't the whole story. The Veloci+ board is a replacement kernel - effectively a small computer system in its own right.

In addition to the 68010 processor the board includes X1 for TOS 1.04 along with 32 bit 24MHz FastRAM options running zero wait states (instant access), and the decoding logic which makes up the kernel of any computer system. By making optimum use of the 68000 processor via a 32-bit data bus the Veloci+ board can process data with a maximum throughput of 31Mbs per second compared to 4Mbs per second for a standard STe.

The Veloci+ board takes control of the ST's bus systems and sees the ST's motherboard as a peripheral for IO operations.

The 32-bit data bus of the Veloci+ is attached to the ST's 16-bit bus by a pipe system, which not only enables the Veloci+ board to send and receive data to the ST's motherboard, but also enables devices on the 16-bit ST's motherboard to utilise the RAM and ROM devices on the Veloci+ board. This means the ST's Blaster has access to the FastRAM which is very useful for programs such as *NOVA*. Even when running the STe in 68000 mode the TOS 2.04 and FastRAM remains available for maximum software compatibility. To ensure reliable memory and peripheral access a multiple state machine design has been used which is synchronised to the ST's original 14MHz clock.

SECOND SIGHT

Simon Morgan would also like to share his experiences of this (and our sponsor's) "wonderful device" with you...

As you're read already the Veloci+ can include FastRAM, either 128k (Veloci+ 2) or 496k (Veloci+ 4). The FastRAM is added to the system as TT-BAM by a tiny (less than 100k) driver program which should be located at the start of the Auto folder. The entire assembly is then loaded exactly as it would in a TT. The only external indication the machine has been upgraded is a toggle switch on the right-hand side to select between the 4800k and 4800k modes but you should turn off your machine to clear the memory when switching between processors.

In use the extra speed is remarkable, especially with MVEI. Web browsing, printing, etc anything and so on are a lot smoother. At last I don't have to wait ages for tables to format in CAB or TrueType fonts to render in Pages.

By using a 4800k instead of a highly clocked 4800k the Veloci+ gives full 32-bit functionality which has the rather marvellous advantage of being able to run many TTPalcom/4800k programs provided they don't require high resolution colour display, the DGP or 3D-3D.

Compatibility is excellent, I haven't really experienced many crashes apart from programs which don't support TT-BAM but these can easily be written run and allocate memory in TT-BAM using a suitable utility. Some games get messy but switching back to 4800k mode cures this.

Very few of the popular reporting utilities correctly diagnose how the Veloci+ affects the system but the main thing is software works and the extra memory works fine.

All I need now is a high resolution colour graphics card to take on and TT be able to turn the side in colour!



▲ Here is an interactive 3D graphics demo which won't run on a 4800k equipped machine but it works fine on an ST-BAM fitted with a Veloci+.

FAQ'S

- Q Why has a Motorola 4800k been used in preference to a 68030 or 68060?
- A When used in an ST environment the 4800k processor is basically the same as a 68030 without the Memory Management Unit (MMU) so there was no advantage using the more expensive 4800k. To achieve a similar performance level a 4800k processor would need to be clocked at around 40MHz.
- Q Is there any cache RAM?
- A The 4800k includes an on-chip instruction cache which is capable of pre-fetching instructions. There's no cache RAM on the Veloci+ board itself because the FastRAM options offer memory which is slower as fast as cache RAM (30 nanoseconds compared with 40 nanoseconds) so there's no gain.
- Q What are the components on the board?
- A The Veloci+ board contains the following main components:
 - Motorola 4800k CPU: Large square IC to lower left
 - 10-bit TOS 2.06: Labeled 80, 81, 82 and 83
 - 128k FastRAM: Four larger ICs between the TOS ICs
 - Data bus pipe: Two rectangular ICs above the CPU
 - Custom GLEB logic: Two square ICs to the right of the CPU
 - IDEal interface board: Mounted above 4800k at lower right.

VELOCI+

Manufacturer

T.U.S. Developments.

Distributor

The Upgrade Shop, 37 Crossall Street, Macdonald, Chesham, Bucks HP8 4GP.
Tel: +44 (0) 494 525 3834-88

Cost:

- £ 99 Veloci+
- £ 49 Veloci+ 2
- £ 89 Veloci+ 4
- £ 45 IDEal IDE interface as optional extra
- £ 15 fitting charge
- £ 14 UK Courier collection and return of your TT

Requires: Atari TT

Pros: Fast, fits inside machine and cloning, relatively straightforward installation, compatible, breaks the 496k barrier, optional IDEal interface.

Cons: No information provided about the changes between TOS 2.06 and TOS 1.6x

99%

GEMTrade 2

Don't struggle with German documentation GEMTrade 2!



Attractive GEM interface
CAB module to translate web pages on the fly
Instant BubbleGEM help
On-line ST-Guide help
Clipboard Cut and Paste
Look-up dictionary

GEMTrade has been under extensive development culminating in GEMTrade 2 which is available now and offers the following new features:

- Better case handling
- HTML improvements
- GEMScript compatible
- Redesigned interface
- Extended help system
- English < > German
- User dictionary added
- Viewable Dictionary
- Bugfixes (Mono works!)



Email registration only.....£7.99
 Disk or CD-ROM version.....£9.99
 Unregistered version.....£1.99
 Send Cheque/PO made payable to Mark Wherry at
 a Hampden Close, Topham Road,
 Exeter, Devon, EX3 6AW, England
 http://www.stx.co.uk/~mark_wherry/
 Email: mark_wherry@stx.co.uk

System Extras

Mark Wherry reports on recent developments...

We last looked at **BubbleGEM** and **OLGA** back in ACPS, since then, coupled with InterActive's English releases, support for both has exploded!

Bigger Bubbles

BubbleGEM has established itself as one of the most popular system extras ever with most active programmers adding **BubbleGEM** support. There was a six month gap between the original English 02 release and release 03 but since then there have been five revisions - **BubbleGEM** has come a long way, and the so-called "dream team" have been busy!



A CPU module has now been added to configure **BubbleGEM**, although strangely, there's no bubble help! There's now an option to use box-like help bubbles instead of the so-called speech bubbles which placed a load of mine who killed the original bubbles. Personally I still prefer the original bubbles but it's always nice to have a choice.

Loads the source file into your chosen editor.



Loads the source file into your chosen printer.



The most significant change is inclusion of the help daemon (or server). This started out as a separate program which could be run alongside **BubbleGEM**, but has now been integrated into **BubbleGEM** itself. With the help daemon active bubbles

appear automatically as the mouse hovers over options - just like the Mac/PC platform equivalent. The help daemon can be turned on/off and the delay and display times can all be configured using the CPU module. Other minor additions include support for the font protocol. Previously **BubbleGEM** had only proprietary routines for changing fonts, but now any other program that supports the font protocol can be used to select the current font. Also, **BubbleGEM** can now optionally send out **RV_SENDKEY** messages. This means if a bubble is displayed and you carry on typing, the first character won't be swallowed by

BubbleGEM when the bubble is cancelled. There's always the danger simple and effective utilities like **BubbleGEM** will become burdened with unnecessary features, taking up a disproportionate share of system resources but happily Thomas hasn't taken into the trap - **BubbleGEM** still occupies less than 25Kb memory.

OLGA

Since we last looked at **OLGA** there have been two new releases - the current release is v1.5. Strangely, **OLGA** development has been both major and minor at the same time.

Thomas has completely rewritten the **OLGA** manager in **PureC**, which was previously developed using **PureBasic**. This dramatically decreases the amount of memory needed. I certainly judged the 700k memory required by **OLGA** 1.3 as an excellent investment, but even with extra features, v1.5 occupies a mere 180k - less than **BubbleGEM**! The **OLGA** manager can now also detect if an **OLGA** application has crashed, and re-register it accordingly. There's an extra **OLGA** task program provided which makes altering the current installation quick and easy, currently its main function is to check the **OLGA.INP** file. Programmers are provided with some extra calls to help find the paths

of servers and recognition of multitasking systems including **MultiTool**, **MAE** and **MagC** has been improved. The splash drawing routines (refer to ACPS for more details) have been rewritten, although the previous routines are still there to maintain compatibility. Provision has also been made for clients and servers using different colour tables simultaneously. Although there's only a few "new" features in this release **OLGA** is a terrific near-complete for the job it was designed to do.

The last remaining hurdle is implementing splash activation. This will be based on what is to be called **GEM Component Object Model (GCOM)**, based upon the **OLG/COM** structure of Planmatt's **ActiveX** and will effectively enable programs to run within programs. Another element being worked on for future **OLGA** releases is **GOSC** (**GEM Database Connectivity**) which will work with **GEMScript** to allow databases to be integrated within **GEM** applications. **OLGA**'s future is exciting - so stay tuned.

The last remaining hurdle is implementing splash activation. This will be based on what is to be called **GEM Component Object Model (GCOM)**, based upon the **OLG/COM** structure of Planmatt's **ActiveX** and will effectively enable programs to run within programs. Another element being worked on for future **OLGA** releases is **GOSC** (**GEM Database Connectivity**) which will work with **GEMScript** to allow databases to be integrated within **GEM** applications. **OLGA**'s future is exciting - so stay tuned.

Keytab

Keytab is not a new program - it's already in release 96, but it's one we haven't covered until now. With the popularity of emulators and cross-platforms computing you may encounter problems handling different character sets. Each character in a set is usually assigned a number and the problems arise when a character is assigned different values in different character sets. **Keytab** sets out to eliminate these problems. Although it can be launched from anywhere, the best place to install **Keytab** is in the **Auto** folder after which you can forget it. A cookie is placed into the operating system which provides functions programmers can access when handling input and output operations. As you'd expect, Thomas' own **Text** makes use of these routines.

Conclusions

Thomas' excellent **Natural Born Programmers** web page is worth checking regularly to pick up the latest additions and revisions to his utilities which are as important as fully-blown applications in the continued well being of the **MagC** operating system.

<http://tthatch.home.pages.de/>

SUMMER

To celebrate the glorious Summer of 1990, we're offering a cartload of great games and productivity software for your Atari at fantastic prices!

Do whether you're stuck inside waiting for the rain to stop, or just want to stock up for the cold winter evenings ahead, you can't do much better than grab some of these bargains!

Do you like mind games like Backgammon? Or do you prefer a shoot-'em-up? Perhaps you enjoy the challenges of a game with massive levels and hundreds of rooms to explore? No matter what your favourite genre is, we've probably got something to suit!

Hang on, not everyone uses their Atari for games, we know this, so we've bought in stocks of some serious stuff to tickle with. How about Hyperpoint, the excellent point package from Atari themselves, still good years after it was first released! Are you a bit disorganised? No fear, how about ST Organiser with its combined functions to put order into your chaos!

There's much more, so read on and place your order as quick as Badland Pete draws his gun, or you'll be disappointed!

All the software comes in the original official substantial boxed packaging along with a full manual or instruction leaflet.

Due to the maturity of this software, you'll need an STFM and a low, medium or high resolution screen to run most of it. STe owners will find most software runs OK. Falcon owners are probably out of luck though ☹

Our extra special prices even include UK postage and packing. We welcome orders from outside the UK, but please contact us before placing your order and we can advise you of the extra postage charges that apply.

SPECIAL OFFER

Take any four items individually priced at £3.00 for just £10.00 inclusive!



BADLANDS PETE

Badlands Pete Coyote is the meanest loneliest six gun machine.

Take on the role of this man who is feared by desperadoes everywhere and fight mountain men, renegade Indians, Mexican bandits and all sorts of crazy characters in the bid to rescue the governor's daughter!

- * Countless characters
- * 3D sprite graphics

£3.00 inclusive

B•A•C•K•G•A•M•M•O•N

THE CLASSIC BOARD GAME

Backgammon is the precursor of practically every modern board-and-pieces game. It is probably the oldest of all games combining skill and chance.

- * Stretch your mind muscles!
- * Runs in ST low or high resolution

BACKGAMMON

£3.00 inclusive

CHRONICLES OF OMEGA

A magical quest where good clashes with Evil!

Is the far off land of Omega, the peaceful existence of its people is

thrown into panic as the jealous forces of evil abduct the children one-by-one. Aided by the kindness of the good witch and your own magical powers battle your way to the demon castle for the final encounter. ST Low res.

CHRONICLES OF OMEGA

£3.00 inclusive



Bob Cat has a girl in every town, but there is one who's special to his heart; Claudette cat. Bob aims to make her his queen!

Four massive levels with hundreds of rooms. ST Low res.

- * Stunning Animation
- * Original Game Soundtrack
- * Amazing End-Game Scene

9 LIVES

£3.00 inclusive

HEAT!



The year is 2189. The Galactic Exploration Federation has been sending mining camps to newly discovered planets on the periphery for 13 years. One of these planets has been taken over by Space Clean farmers and GAP have offered a substantial bounty to anyone clearing the planet of its unwanted

visitors. You and your ship SS Star Breaker

change course and head for New Chicago.

* STa compatible * ST Low res

STAR BREAKER

£3.00 inclusive



Bumper box set of various and set so serious software! Includes 1st Word word processor, Ani ST animation program, Macchrome art package, Sim City game, Escape from Planet of the Robot

Barstons, 9 Lives, and more! * STa compatible

DISCOVERY XTRA PACK

£4.00 inclusive



Keep track of bank accounts, credit card transactions and mortgages with this comprehensive personal finance database and organizer. The package also includes Datasfax, a complete personal organizer that also prints out pages suitable for your carry around PdaFax™

* STa compatible * Colour or mono resolutions

INTRO TO PERSONAL FINANCE £3.00 inclusive

MasterPlan

Financial Spreadsheet

Superb financial spreadsheet package. Giant 8192 x 256 spreadsheet grid. Date, Financial, Logical, Mathematical, Special and Statistical Functions. Loads of other features, including comprehensive graph displays. Hard drives, dot matrix printers and colour or monochrome monitor supported.

* 150 page manual included

* Reads/Writes .WK4 data files.

MASTERPLAN

£8.00 inclusive

HyperPaint 2



Atari's classic graphics package offering a versatile, all-purpose tool for creating, editing and printing all kinds of pictures and diagrams. Work with A4 size high resolution monochrome images or with colourful, eye catching pictures in ST Low res.

* STa compatible/enhanced

* 600K included

HYPERPAINT 2

£3.00 inclusive

ATARI

PERSONAL SOFTWARE ORGANISER



Get organized with Atari's own answer to chaos! This program is designed to help you manage your business and personal information in a more time effective and organized manner. Powerful, but easy to understand integrated program.

* Address Book * Diary * Spreadsheet

* Word processor * Colour or mono resolutions

ST ORGANISER

£3.00 inclusive

Atari First Basic - SPECIAL OFFER!

BASIC is easy-to-learn, yet is still a powerful programming tool. Although slightly dated, this package is great for anyone new to programming to cut their teeth on. With this in mind Atari Computing are making it available at a low price!

FIRST BASIC

£2.00 inclusive

Price shown are inclusive of postage to UK addresses, please write for quote if outside UK

Please send me the following items:

Title _____ £ _____

Title _____ £ _____

Title _____ £ _____

Title _____ £ _____

Total £ _____

(Don't forget our special 4 or £3 for £10 offer!) (Article on plain paper or (photocopy acceptable))

Name _____

Address _____

Make your cheque/PO payable to 'Atari Computing, and send to Summer Heat, Atari Computing, 'Rais Rheine', Overton Gracourt, Jahnstone, PA5 8PB, SCOTLAND

Good Vibrations

Shiurng Lai discusses some advanced STe sound programming techniques...

Feedback explanations of the STeTT's enhanced sound system have been doing the rounds for years; you have a set of control registers for playback and simple global attributes - tone, volume and balance. Correspondingly, numerous STe-enhanced programs exist (mainly games, on the PD and shareware circuits) where only sonic improvements are some samples played using no more than these standard controls, perhaps in stereo.

However, there is a lot of scope (beyond) using hardware features, so the easy route is often taken to do what the rules say it can. Safe, but hardly exciting!

To appreciate the newer hardware let's take a look at how things might look better. The Yamaha YM11F1F PSG (Programmable Sound Generator) fitted in the original ST, and all derivatives for compatibility, can be made to play sampled sound.

Playing samples isn't a performance art, increasing with the higher frequencies necessary for good quality. This is because playing a sample through the Programmable Sound Generator (PSG) requires the main processor to splice feed it with large amounts of data - far more than could ever be used by internally synthesized sound (see below).

Additionally the PSG also has to use a Digital to Analogue Converter (DAC) because the PSG doesn't contain a dedicated circuit for this job.

After caught on to this and with the revamped STe, added a new stereo sound system driven by DMA (Direct Memory Access). DMA relies on a special processor to handle the elaborate and time-consuming task of moving large memory blocks between sub-systems within the computer, relieving the main processor to get on with something more useful, like processing.

So there it was - a new sound system capable of playing straight samples without burdening the main processor, apart from the same time transfer phenomenon was all the rage - soundtracks.

Let's take another step into history this time, looking at the ST's old rival, the

Amiga. Commodore's machine had a custom sound chip with four independent voices, which could be either synthesized or, more interestingly for our purposes here, sampled.

The architecture of this chip featured four DACs, each with variable sample period. It wasn't long before some bright sparks realised the sample period increments were small enough to make a fair approximation of a musical scale, simply by playing a sample faster or slower.

Thus, the idea was born to make realistic four-track music, using samples of real instruments. Although not the best method, the fidelity offered by 8-bit resolution and the available processor power of the day didn't warrant anything more advanced.

The STeTT module have two audio DACs, also with step-variable sample period, but only enough gain is rather less flexible (3.3580Hz, 13.8430Hz, 25.0000Hz and 50.0000Hz playback frequencies). We need to use software to generate more voices and overcome the

usual playback frequency set, both of which are required to play a soundtracker tune, more commonly known as tracker "modules" or "mods".

Pitch shifting

Professional electronic musical instruments commonly use samples for sounds. In contrast, they don't achieve this by modifying the DMA conversion rate. Instead, the DAC runs at a constant and the sample is stretched or repeated with respect to time before reaching it.

Stretched samples produce slower notes while expanded ones produce higher notes. This offers the advantage that the basic quality of the sound can then be enhanced.

In the first case, interpolation can be used to smooth out any coarse quantisation steps relative to the installed sampling interval caused by stretching - the equivalent of "jaggies" resulting from enlargement of bitmap images.

A simplified illustration of linear interpolation is shown in figure 1, where the mean average of the preceding and succeeding amplitude levels is used to "fill the gap".

Further improvement can be obtained with high-order polynomial interpolation, which accounts for a range of preceding and succeeding notes. This technique of artificially increasing the information density is called "oversampling" and is standard on most digital audio sources.

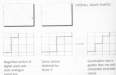


Figure 1: Post processing of a stretched digital sound

This is how it has to be done on an STe and the only chip able to perform this pitch shifting is the main processor. Unfortunately a big chunk of its power can be drained while engaged in this activity. Consequently, real time interpolation is practically impossible on a stock STe except at the lowest frequencies, and is usually implemented. The Falcon's DMA circuitry also has a limited number of conversion rates, although they are of much higher, 16-bit resolution, complemented by a fast Digital Signal Processor which is typically used for both of these jobs.

Track mixing

The second step in playing a tracker module on an STe is getting more than one

noise out of each hardware channel. An obvious way to do this is to turn the amplitude data from n sources then combine to avoid clipping distortion when the resultant value is out of the DAC's input range and the output literally gets clipped off at the amplitude extremes, making a very noisy noise by scaling to the same 1/s. As far as the DAC is concerned the input is still a single stream of data, and for all of our present frequencies, this works just fine. At higher frequencies though, a lot of processor muscle is needed. For instance, at 50KHz stereo, it has to generate around 1 000k of data per second more or less for out.

Alternatively, the mixing can be initiated by time-domain multiplexing two-voice into one signal, and writing the DAC to twice the speed to compensate for the resultant increase in data. Look at figure 1 (ignore the DMA buffer in the middle for the moment) to see how this works.



Figure 1: Functional block diagram of tracker replay operation with multiplexed track mixing

Multiplexing halves the processor load in generating data for the DACs but results in a high-frequency noise component, proportional to the speed of multiplexing. It's only of any use with the DACs at 50KHz, where the noise frequency is pushed up to transparent levels. In reality both methods are compromises - the first compromises dynamic range whereas multiplexing loses frequency definition.

After mixing all that's left is to transfer the data into the DACs. Naturally samples are data physically present in memory. Tracker mode, on the other hand, is effectively a long sample that is dynamically synthesised. It must therefore first be placed into memory. Simply dumping to memory isn't a good idea because you'll soon run out of it - a three minute module at 50KHz stereo would require about 18Mk!

The solution is to apply a technique more commonly known as displaying smooth animated graphics, called 'dead frame buffering'. A series of seamless frame-transitions is achieved by

writing data to one 'invisible' buffer of a pair while the other is output, then switching the physical frame address pointer when the invisible buffer is ready. A good example of this method used to overcome physical memory limits is the MIDI Player, reviewed last issue.

Since sample data are stored in memory at alternate left/right channel bytes, so if multiplexed mixing is used, the two multiplexed signals have to be multiplexed together themselves to fit in a single linear memory space suitable for the playback hardware. With the standard track ordering shown in figure 2, the resultant sample bytes would be stored in memory as shown in figure 3.



Figure 3: Byte ordering of multiplexed tracker data output in memory

Buffering the sound data also has the advantageous side effect of ensuring it flows constantly, which is useful because the pitch shifting and number of tracks in use at any particular time varies (and can sometimes even kill the processor if a high playback frequency and lots of effect commands are used). Figure 4 shows the 'insides' of the DMA buffer.

If the tracker programming has broken many widely held beliefs to reach great heights. As always, we are indebted to demo makers for their skill in constantly pushing beyond technical boundaries.

Figure 4: Data flow from processor into memory and out to DACs



I hope you have found this article useful. The techniques can be adapted for other uses; for example, the multiplexing method of mixing could provide multi-voice effects for a game, with much less processor overhead. Sounds translated because another effect started playing before the current one finished would be reduced, giving a more convincing and polished effect. □

ANALOGUE SYNTHESISED SOUND

Getting a noise out of a programmable sound chip only takes a few bits of data - set some registers to activate one of the proper waveforms, generated by on-board oscillators, then there might be some other registers offering more control over the sound like envelope shaping or filters.

A digital representation of the same sound explicitly defines the overall waveform shape, rather than containing information about how to generate it. To use another graphics analogy, synthesised sounds are like vector images whereas samples are "bitmap sounds".

Figure 5 is a comparison of the data storage requirements between a hypothetical PSG and digital sample, for a complete cycle of a note with period T .



Only single bit required to be set to position select register



Order of data required with 8 bit resolution at 50KHz sampling frequency

Figure 5: Analogue synthesised wave and digital representation

System Solutions

Resale Promoters (Europe) Ltd
Companies registered in England & Wales

Summer Specials

4TMB Atari Harddisk system
complete with LWBPP and HD Driver
for only **£129.00**

12X Toshiba CD-ROM Drive
complete with ExtraDOS **£179.00**

330MB 6200yer SCSI drives
for 11, Mac or PC **£129.00**

1.5GB Syntex SCSI Drives
Fast For Audio and Video **£294.00**



MAIL ORDER

Tel: 01753 - 832 212

Fax: 01753 - 832 266

119 Arthur Road, Windsor
Berkshire, SL4 1BB

SHOWROOM

Tel: 0181 - 683 3355

Fax: 0181 - 683 4956

15-17 Blackwater Square,

East Dulwich, London, SE20 8BB

Opening Times

Monday to Friday 10am to 6pm

For small items please add £3.95 P&H

Multiples or large items - please add £10.00

for courier delivery. 08.05

CAB 3.5 Surf the Internet with Your Atari!

The master of CAB comes with a PPP-connect and SLIP driver designed for use with Magic, Mac and Magi PC. Easy to install and set up, you will be surfing within minutes (No download or internet access, of course).

CAB comes with the following useful plug-ins:

- AccessMail** - Downloads whole pages including graphics for off-line reading.
- Calibre** - Catalogues images using thumbnails.
- Callings** - Hides a text message in an image (secret information).
- AdBlock** - Displays hidden pages for images. Finds what is new quickly.
- CallIndex** - Allows you to reject advertising.

CAB also works on TOS with STB or ST2nd but needs Magic to use plug-ins.

CAB 3.5 Internet HTTP, Browser Software including PPP **£29.95**
Special price for Internet registered (therefore CAB users) **£19.95**
CAB v2 to 3.5 upgrade **£19.95**

HDVX Modern Fast Accelerator

With high speed modem, the slow Atari serial port is slowing you down. HDVX is a small hardware & software kit allowing connection speeds of 28,800 right up to 115,200bps (no accelerated 5.75. Requires serial firing of 4 wires).

HDVX hardware kit and software **£29.95**
Special Bundle Offer (if bought with CAB or Modern) **£19.95**

High Speed Fax Modems Handle & Save Money!

At CAB and B&T approved, 1 year warranty (Atari fax software is optional).
£60000 External Fax Modem complete with cables **£29.95**
£60000 External Fax Modem complete with cables (Coffered) **£39.00**
Add CAB 3.5 for £29.00. Add HDVX for £29.00

HADES 640/640 HDVX Outbase & SoundPort compatible

Do you enjoy working with Outbase HDVX on the Atari? But would like a bigger monitor to see more cards and open more stuff windows; or need a still and page changer (appears much quicker to print data); or want to follow the screen and other stuff on time.

Do I have to buy a Mac or PC to do this too much to ask for? HADES 640 and more is now available with the sophisticated HADES Atari compatible 330MB standard HDVX ports, while are known for speed and precision timing. Using your Atari Outbase Software, HADES allows you to load large arrangements in an instant, moving the cursor from beginning to end in seconds and displays the scene from top to bottom, you will say "I don't believe it".

No pay, credit or hire - just high quality audio. The StarTrack VHS Audio card for HADES and TT now comes with a **CD Module** as standard, supporting 160 channels unlike the Falcon, which supports only 4 SoundPort audio files and software are HADES compatible. **StarTrack**, another HADES add-on, is an ISA card for the connection of up to 4 cartridges (optional).

HADES is a joy to use, a time saver and a real alternative to PC and Mac for HADES Studios and professional HDVX users wanting to replace their aging ST. Interested? Give us a call for an individual quote and to discuss your project.

Teasel The New Look, Easy to Use Atari Spreadsheet

Teasel is a new, easy to use spreadsheet program for Magic and TOS. Because it is a true 6801 application it will run on just about any hardware. Teasel allows a maximum of 65536 * 256 cells per worksheet. You can choose from over 90 functions. ExpertProof of most common formulas, powerful sorting routines, printer in windows. Teasel comes on a single floppy disk, runs on systems with 256k free memory and a display of at least 640 * 480.

Teasel v1.01 The Atari Spreadsheet Software **£19.95**

Zans-X v2 A Major Update!

Direct to disk now supported on playbacks, recording, editing and image viewing operations. New files supporting a 50P if present, 2-4 times faster afterwards. Also SCSI serial and master directly to and from your hard drive. 4 (Multi-touch) mice. Upgrade pack **£49.95** Zans-X v2 **£149.00**

MagicMac v2.1.5 for Mac OS 8.1

The ideal solution for anyone moving from the Atari to the Apple Macintosh platform. Reliable, stable and very fast, Magic allows you to run your favourite Atari programs on a Mac. (Please ask for upgrade price).

MagiMac - Atari OS for Macintosh. New price (without Atari) **£79.95**

Magic PC Operating System for Windows 95/NT

Run your favourite Atari software on a PC and faster than on an ST! Magic PC is highly recommended for extra speed (not colour and printer support (available separately). **Magic PC** - Atari OS for PCs **£79.95**

HDVX PC **£49.95** **Magic PC and HDVX PC bundle pack** **£149.00**

What's new

There are some serious upgrades under pressure. HDVX 3 and the Magic 3 will be published to be followed by a major upgrade of Magic Mac & PC. CAB without version 2.7 will also be a major upgrade of Teasel to version 1.0 (expected soon). The new look for HADES (in 2000), the ultimate Drawing application.

But don't wait for the new versions, get your new software now and a free upgrade for the new releases. There's a promise for all orders placed in July and August for these months/years.

New HDVX Driver 7.80!

Old & new drives, SCSI/IDE, SCSI/TB, JAZZ, EasyPlex, Syde, Playmate Optical, Phase Change and 100MB Super Drive.

No problem! Unlike HDVX and other drive software, HDVX Driver is self supported and keeps up-to-date to reflect the latest in storage technology.

- Supports SCSI new line (SCSI-2)
- Supports 100 physical bytes per sector
- Formatting of SCSI drives
- 100% complete protection
- Partitions up to 4 Gbytes capacity
- Reduces (or removes) partition table
- Write protection partitions, boot & read
- Password protect DP & PC drive
- SCSI initiator identification and bus arbitration (TT and Falcon only)
- New from one partition
- New from one partition to 1000 users
- Special support for SCSI compatible systems showing 100 * 10000
- New Magic v2 to 2.0 partitions
- Automatic start drive (as for Teasel)
- New looking and new version with Magic applications (as other drive supported).

HDVX Driver 7.80 **£29.95**

Maxpat 2300 RAM for ST/PM

Maxpat is back in stock. We are now the sole manufacturers of the excellent Maxpat memory expansion boards for the ST and ST/PM.

Maxpat for 5 Mb **£29.95**
Maxpat upgrade to 1 Mb **£29.95**
Maxpat 1 Mb Special **£39.95**
Maxpat 4 Mb Special **£99.95**

Please upgrade the thing for you

Repairs, Spares, Upgrades

The Atari Workshop is the only Atari UK Accredited Service Centre. Our Workshop branch is now the European Atari Spares Parts Centre.

We use genuine parts, Atari factory test kits and highly skilled technical staff. For urgent repairs & upgrades ask for the special Fast Day guaranteed Service. Call for more information.

E-mail & World Wide Web

You now can contact us via email. Our domain is: **system-solutions.co.uk** (info@system-solutions.co.uk)

To subscribe to our News Service - the latest products and updates, visit www.system-solutions.co.uk

sales	Atari sales agents
start-ups	Atari system agents
mac-updates	Mac system agents
pc-updates	PC system agents
info-hardware	Information only
info-software	Information only

Check out our <http://www.stm.co.uk>
www.system-solutions.co.uk/stm

Monitors include VAT when stated otherwise

FILES

Denesh Bhabuta goes shopping...

Woke up this morning and decided to internet window shop. Got into a GMail and headed straight for the AGH designer software site at: <http://members.aol.com/AGHMP0/>

It was as though someone had been looking. The month of June, and no less than eight upgrades to those already in progress pieces of software we have come to love.

Of importance to most of the Atari Computing readership are the releases of CM 1.1, Reader v1.1, Travel v1.1, Jones v1.1, Magic v1.0 and HD-Driver v1.10. Although these are currently only available in German (English versions should follow in System Solutions, however), if you understand German and can get by without English manuals, you can order direct from AGH. German versions are available for download from the AGH web site.

Taking of German software, I scrolled over to Titan Design at: <http://houseof.computer.com/homepage/TTMMWIS/> where they're currently selling HD-Driver v1.10 for half the price of the English version.

Taking a random turn at the AtariWebRing I ended up at Cadence Software: <http://www.cadence.cyberstrider.org> where Phoenix Bauer has been producing paid utilities for some time now. All his software is programmed in H-Soft BASIC and is of a high standard. Previous Phoenix releases have featured in Atari Computing Reader (Data) and include Personal Organizer, Address Book and Password Protection.

Mathew has now poured his talent into a major project, called Web Wizard, which is scheduled for release this October.

Web Wizard is intended to become a fully fledged Web authoring suite boasting a GEM interface, keyboard shortcuts, BubbleGEM and ST-Guide help and a WYSIWYG display.



The Cadence web site was designed using the current unreleased version so you can get an idea of its capabilities! Web Wizard will be released as a commercial program costing somewhere between £10 to £20 and looks set to compete head on with HomePage Penguin Pro.

I asked Erik, the Web Wizard's cat, what to do next and he told me to read MyMail at: <http://www2.tripnet.se/~erikhall/> where Erik Hall has been very busy upgrading his usual MyMail client which now to web ST/XT/NTG and supports BubbleGEM, OLGA, Air Server, DragADrop, and MIME/Basic 88.



Recently there have been around four upgrades per month so they'll probably be a more recent release available by the time you're reading this. Currently at v0.6.0 here's the latest version features:

- History window reduced
- Ward using now works correctly
- Improved mail handling
- MIME encoded attachments



MyMail can create mailing lists and the built-in editor neatly bundles up the package. If you'd like to be automatically informed of updates there's a MyMail info mailing list which you can subscribe to at: <http://www2.tripnet.se/~erikhall/stymailupdates.html>

Then I woke up and found myself sitting in Heathrow airport, just as the last call for my flight to India was announced, so I'm off on holiday - see y'all later.

Denesh Bhabuta

Basic BASIC!

This month Paul Jones unveils his latest project - Virtual BASIC!

Virtual Insanity

In the last few issues we've been creating FDS, a GEM application in HESQUIT BASIC. If you're still struggling, or haven't got the confidence to create your own fully working program, then Virtual BASIC might be the solution.

Imagine if all you had to do was create your dialog boxes/menus in a Resource Editor and, instead of going through all the hoops we've covered recently, you could simply double click on the button you wish to assign code to and type - that's what Virtual BASIC will offer!

Virtual BASIC (VirtB from now on) is a partial 4th Generation Language (4GL), which removes instead of adding the computer whilst to do and how to do it (a 3rd Generation Language), with the 4GL you simply tell it what to do. VirtB is still only a partial 4GL because you still have to tell it what to do, but there's now a set of commands to deal with complex issues such as OSLA-compiling, ST-Code help and system messages.

Virtual Reality

Here's a programming example:



Our RSC file is loaded up with a copy of its INFO file - which contains such items as every dialog box/menus/object etc. These items are displayed in the edit dialog box, with the object type in brackets (in this case our menu is highlighted). We click on 'Show' and the menu is displayed in the menu bar area.



The menu can be created like any other, click on the one we wish to assign code to, 'Menu NetChat', and VirtB automatically assigns a name for the object and runs the editor program to input the code.

```
SUB menuClick_ABOUT
infodi.show
END SUB
```

As you can see there's nothing complex about the code. The biggest job VirtB does is to declare our subroutine (the SUB and END SUB parts are not changed). Code goes in between these two sections. The infodi.show

command will simply show the dialog/menus called infodi. In this case infodi is the dialog box which displays information about NetChat.

After saving the code and



editing, the program returns back to its original position. Finding the edit dialog box and clicking on 'infodi (dialog)' then clicking 'Show' displays the information dialog

box. Assigning code to a button couldn't be simpler: simply double click on it, and the editor runs ready to enter your code. Currently VirtB only displays the object name in an alert box. It's also possible to assign code to the 'Show, Load' etc. when the item is displayed (this could contain code to remove all text from text boxes and so on).

After you've saved the source, VirtB offers a compile option. This takes a snapshot of the HESQUIT GEM structure

code, adds your code and anything extra needed such as libraries. Our big program is generated and the final check of code can easily be compiled into machine code using your HESQUIT BASIC editor.

New templates can be offered and updated regularly. Templates can be written by 3rd party members in HESQUIT so can even be upgraded by yourselves to customise the dialog appearances.

If you have any ideas or suggestions for developing Virtual BASIC, do get in touch - your ideas may well be incorporated into a future release. ☺

ENCHANTING

ENCHANT (Enhanced HESQUIT Application Toolset) is a set of replacement HESQUIT Graphical Toolboxes (HGTs) written by Paul Jones and Matthew Bacon (California Software). The HESQUIT Graphical Toolbox is a series of routines which can be included into your own programs to speed up development in programming. For example, the HGT offers subprograms to deal with the GEM event, menu command, ENCHANT is designed to do what the HGTs do, but later with even more features. Hopefully the final release version will include routines to ease OSLA linking, ST-Code online help, encoding routines, and many more besides. Templates will be updated regularly and the intention is for a special version of ENCHANT to be used as a template offering features such as HESQUIT decoding, A/V/A/V/A/V file playing and so on. Templates could also be written by third parties to add other features to your library.

ALL CHANGE

Paul Jones has left the Zenon RP and consequently the HESQUIT mailing list is closed.

Paul can now be contacted at: paul.jones@compuserve.net

Suggestive Remarks

Mike Karstake with a progress report on recent suggestions and some ideas for programmers...

As I've said before it's really good to hear suggestions made in this column are taken up by programmers and new programs get developed as a result, following on from the last column, programmer Mark Mewry is currently gathering information on "Windows Only" printers with an eye to programming an utility that will enable Atari users to access many of the functions of some of these printers.

However, the biggest nut to crack is the fact that many of these printers use the Windows operating system and computer memory and hardware to handle everything other than the actual printing. Mark Mewry mentions we're talking up the wrong tree.

As I understand it, Windows printers learn the computer to do all the work then send a compressed image to the printer. This suits the Atari platform perfectly since GDCOS has always worked this way! So rather than developing a new program to support these printers we need SpeedoGDCOS and WinDI drivers.

Talking with printing masters, mention was recently made in the Atari conference on CDX about the ready-made library of templates for Avery laser and inkjet labels, and it was agreed that it would be good if such a library existed in Papyrus format.

ON READER DISK

The subsequent discussion and supply of some vital data by Roger Derry (of Mamezet fame) enabled Gary Banderidge to come up with a program that converts Avery Windows Label configuration files into the required Papyrus paper format. AUTOLAB is the name of the program, it's simple to use and appears to do the job very well, you'll find a copy on the Reader Disk.



AUTOLAB was a direct result of minor moan and groan from Martin Dryden and follow-up postings from myself and others on CDX and it just goes to prove programmers are more than willing to have a go at a project if they get some help and feedback. So, if you've got an idea for a program that could do something useful

for you and other Atari users, please do let us know.

One good aspect of the present Atari scene is that many programmers are either working together or at least working to similar guidelines and protocols. One other excellent way of co-operating is to allow the main program to use modules programmed by someone else, as is the case with the C&B web browser. One of the latest programs to interface with C&B in such a way is GEMTide which can translate a German language web page into English 'on the fly'. This prompted Joe Curran to suggest it might be a good idea if someone programmed a C&B module to turn HTML documents/pages into raw ASCII.

So if anyone is up to this task we'd be more than delighted to see the results! Finally, I've had a lot of response to my plan mentioned in the last issue for a directory of people willing to assist other Atari users with help and advice. However, we really need some more offers of help, so if you think you can help, please get in touch with me via the usual editorial address or email me at: mike@starcomputing.com

Mike Karstake

STOS Corner

Anthony Hoskins^{*}
(Falcon) Extensions

The restructuring of Anthony Hoskins (Falcon) extensions has now been completed and importantly most of them are now ST compatible. For example the 3D effect menus and 3D effect file selector are now available on all ST users.

As promised, Anthony has sent out the untested shareware (interpreter only) versions of the ST compatible extensions and you'll find them on the Reader Disk:

ON READER DISK

- X_EXTNLS.TOC: Icons, System Control, 3D menu & Alerts, Games, Graphics extensions
- X_EXPLN.TOC: Example programs showing how to use the new commands
- X_DOCX.TOC: Documentation
- INSTALL.TXT: Installation instructions

Because of the major restructuring some of the commands have had to be relocated or renamed to minimise any backward compatibility problems with the older versions.

Read the documentation carefully to ensure you're aware of the potential problems then proceed as follows:

- Save any older programs in ASCII (untested) form along with any data banks.

- Install the new extensions and use a text editor to replace any changed commands with their new equivalents.
- Run within the STOS editor, reload each edited program and its associated data banks (if any).
- Save it out as a normal program.

Sprite Engine

I recently mentioned Anthony was working on a new sprite engine, unfortunately, due to a hard disk mishap, he's lost the source code! Hopefully he'll be able to get it back together.

Recently STOS development seems to have stalled with most of the active developers moving onto other projects. For this reason we've decided to close this column - unless we get fresh input from a hitherto silent band of STOS enthusiasts, with suggestions for future coverage - it's up to you.

Martin Miles

Getting Clever!

papyrus

An object lesson in Papyrus from Michael High...

Michael High introduces the tale of "Text and the Three Objects" to explain the difference between Word Processing and DTP.

Having mastered the use of styles and tables, we have the basic tools needed to produce professional looking letters and reports. We can take this one stage further and produce multiple column documents with headers and footers by the creative use of the "Page Layout" and "Master Pages" options. These are well covered from pages 101 and 148 of the original manual. Since their functionality and dialog have hardly changed between Papyrus v3 and v5, I have assumed that you have read up on the subject so we can press on.

The manuals tend to use the term "objects" in a variety of contexts, which can be confusing. By my definition, all Papyrus documents contain "text". They may also use some of the three "objects".

Word Processing uses
"Text", "Text" and characters entered by the keyboard whose position on the page is determined by the way all previous text fits up the Master Page layout. You can control the horizontal margins and the paragraph offsets from the previous and subsequent paragraphs, but the position within the document will usually change as you modify previous text.

▼ Relative text placement

Text	Document	Object
Paragraph offsets...		
Page break	A%	
Column break	A%	
Hyphenation...	QAT	
Function keys...		
Copy ruler	A3	
Paste ruler	A4	
Group lines	A(	
Ungroup lines	A)	

There are only two mechanisms which allow you to lock text into a particular vertical position within the document. The first is the use of page and column breaks to place text at the top of a new page or column. The second is the use of the group lines command to make sure text elements are not separated across an automatic page / column break whenever preceding text is modified. For example, a heading could be grouped with the first few lines of the next paragraph.



DTP also uses "Objects". "Objects" may be placed anywhere within the printer margins. They can be anchored to a particular piece of text. They can also be anchored to a specific place on a page and so need not move when previous text is modified. They can force surrounding text to flow round them. They can also be superimposed on each other in layers. There are three basic types of objects: "pictures", "drawings" and "text objects".



▲ Plenty of object options

Pictures

Since the release Papyrus v4 it has been very good at handling pictures such as

scanned images and the output from "point" programs. These can be enlarged or reduced, stretched, and rotated round the four points of the compass. All loaded pictures are held in the picture window. Since Papyrus v5, these may be held by file reference, in this way if the original picture file is altered, the Papyrus document is automatically updated next time it is opened.



▲ The best place to see pictures

Meanwhile, like myself, need not be put off by the reference to "Colour printing" on the Picture page of the Object attributes dialog. It is just as handy for making fine adjustments to images being printed on black and white printers. A tip for NVDI users here is to leave the Raster type as "Output device native" (Papyrus v4) or "output device's default" (Papyrus v5). This leaves the NVDI printer drivers to perform their own dithering (the process of converting the colour and grey scales into a pattern of dots). By using the NVDI MetaPrint plug, fine control can be exercised over not only the intensity, but also the colour separation and contrast curve. Colour users in particular, can still use to fine tune several printer driver files to cover different paper types such as normal, glossy and transparency. Even black and white laser printers can benefit from this technique, particularly when producing transparencies for overhead projectors.

Because that Papyrus is more too clever at handling vector pictures. This is a shame, since they are resolution independent, take up little disk space and print so well. It certainly comes as a disappointment to Randomly users. The

problem is that Papyrus can not handle GEM files with colour, fill or angled text. In other words, it only handles black lined Helvetica, all is not lost if you can follow these steps:-

1. Open your vector drawing in Handwriter or whatever you created it.
2. Save it as the exact size you require in your Papyrus document.
3. Print it to file using the PLOT (or SpeedoGEM) image driver at the resolution you intend to print the rest of your document (300 dpi, 600dpi or other dpi setting). This creates a crisp (and colourful) EPS format file which can then be imported into Papyrus and will output at the desired resolution without loss of quality.

Drawings.



"Drawing Objects" in Papyrus are not drawings in the

sense of GEM files. As such, they do not appear in the Picture window. They are lines, lines and (yell or laser) circles that can be used to frame, and sub-divide your text. They can be assigned with various attributes, including colours, patterns, line style and arrowheads. The position and size attributes can be set precisely. By holding down the [Shift] key lines may be drawn that are precisely horizontal or vertical. They can be placed in front of or behind text or other objects. Experimentation is the name of the game here!

Text Objects



This is where the fun begins. Suppose you have created a three column newsletter, but the opening sentence needs to span more than the first column. Here is a step by step guide:

1. Select the Text Object icon in the toolbar and draw a box at the required width - the height is not important at this stage.



Placing the frame for the text object

1. Right click to display the attribute dialog (or select the dialog via the F100 down arrow in earlier versions). In Word Wrap on. On the "Position &

- Size" page, check "Object height grows with text" and clear the other boxes.
2. Select the Text Object and click within the new text object to enter your text.
3. Use the Object Tool to select the entire text object. You may then format the whole text by choosing a text style or a particular font (individual words or letters can be locally formatted by selecting them with the text tool). In Papyrus v1, the new object may also be given a fill and line border, with individually set colours. It may even be rotated to any angle, although you should be warned that wrap does not always work correctly, except at the four points of the compass.



Perfect positioning for the text object

These objects can be set up very quickly yet they have the power to transform a document into a visually interesting presentation people will want to read.

For example, take a look back to the first article in this series, on page 18 in AC#10. The layout designer pointed out a key sentence from the article and repeated it as a new object in the second column. The title and the text object are the first things you read and the combination set the scene for the article in a simple but effective way. The article flows round it, and may well be read easily.

I've now covered the topics I originally had in mind when I began writing this

mini-series so I'm now relying on you for feedback and/or suggestions if you want this series to continue - I hope you've found them useful so far. If you'd like this mini-series please send your feedback and/or suggestions

on disk in ASCII or Papyrus format, to the address in the masthead on page 4.

Michael High

Email: michael_high@nt.com

FONT FRENZY!

The arrival of SpeedoGEM and MWD's upgrading to handle outline fonts means that Atari users have access to literally thousands upon thousands of fonts in both Postscript and TrueType formats.

Some fonts are produced commercially, others are shareware/registrars, and others are simply free. Atari users will find that most of the remaining PC & Macintosh libraries can supply an extensive range of fonts in the latter two categories. Commercial fonts are available, usually on CD from various vendors that advertise in the general computer press, or by going direct to the type foundry themselves.

Owners of Papyrus, who purchased the upgrade from v1 to v4 from MWD, may have been lucky enough to receive the Bestware MOO Power CD as part of the package, and this forms an ideal base for a font collection. The CD contains both Postscript and TrueType versions of some excellent fonts.

However, having a good collection of fonts is not the end of the story. For two other we can tell that someone has a new DTP or WP package because the first thing we require from them is a letter or document using dreams of different fonts!

It's good advice to restrict the number of fonts you use in a document to just two or three. You can make it appear more by careful use of **Bold**, **italic**, **underline** and other font styles.

There is an accepted wisdom that you should use a sans (without) serif font (serif - squiggle bits on characters) for headings and a serif font for the body text. In many cases this is a good rule to work with, although you should always take into account what sort of image you want the document to present. Atari Computing uses a Sans font for our headings, and Helvetica 12 for the body text. Although Helvetica is classed as a sans serif font, along with the similar Gil Sans and Optima, it doesn't have the austere look of a typical sans font and is easier on the eye for large amounts of text.

Display fonts like Micromanchard are something very different and should only be used sparingly, and never used as body text unless as a special effect.

Mike Kerslake

User Group News

I sometimes wonder why it seems to be so hard to get people interested in actually attending a user group meeting. As can be seen in this month's report from a recent WRAUG meeting people are there to help each other, and it is a place where there is always something to learn, no matter what your level of experience is. Be *only* not make the effort to get out to a meeting and see for yourself.

Drop a line to Harry Siders, chairman of The UK Association of Atari User Groups and he'll put you in touch with a group in your area, or give you advice on how to start one if there is no local group.

As Harry says "Wherever Atarians gather, the sharing of accumulated knowledge and demonstration of those skills remove the passion we all have for our machines. The flexibility to achieve impressive quality results in the fields of art and typography, music and MIDI, communications and web page creation, database creation and spreadsheet manipulation, desktop publishing and document processing, with a little bit of image retouching thrown in for good measure, pay themselves attention to that fact. It is in the user group domain that these skills can be shown in their best light - by people you know taking their time to share you exactly how they manage it".

Please remember to enclose an SAE and disk (if necessary) when writing to Harry expecting a reply because the UKAUG is a non-profit organisation.

The UK Association of Atari User Groups comprises an index covering all currently existing UK Atari User Groups, to enable people to make contact with others to share their knowledge and skills and to demonstrate solutions to real-life questions. These groups fall into two categories:

PROMOTIONS 'R' US

If you would like to promote your user group on these pages kindly free of charge then all you have to do is send us some copy. And this page is for user groups all around the world - not just UK user groups. If you're involved with a user group and would like a mention then please do get in touch: Atari Computing (User Groups), "Box Brother", Quarter Crescent, Johnstone, PA1 4BB, Scotland, or Email: usergroups@atari.computing.com (telex: 33-330-733 041nvt) Pn

- Local groups who can offer experience and general knowledge across a range of topics.
- National groups with specialist knowledge of one subject area, such as Columns User.



WRAUG (White Rose Atari Group) meeting report

Stephen Barwood reports... The meeting started quietly with a few late arrivals, but once everyone arrived we couldn't believe how true this was. The biggest surprise to everyone was the announcement from Alan Jackson that he had a new toy to play with - and soon he was the envy of us all.

While on holiday up in Scotland (Why didn't he come to one of our STAG meetings? - A) Alan picked up the bargain of the decade, a P1000 with 40% memory, a 127MB hard drive and SVGA monitor for the princely sum of £1800! He all joked with him and tried to offer him a few pence more for it so that he would show a profit, but surprise, surprise, he rejected our offers.

In another corner Sander's came in action. Antony had just brought a new scanner and was demonstrating its capabilities and how to use the software.

Sally I didn't have the time to try the scanner out at the meeting because Adrian Haigh spent the most of the meeting trying to figure out what was wrong with MIDI on my system. After many a crash it took a full re-installation to get it working, and now there's just some fine tuning to do.

Everyone seemed to have a good time - we just wish we had a bit more time because before we realised it was time to go.

Future meetings of the White Rose Atari Group will be held at 4 Langdale Drive, Ilford, New Habbas. Please get in touch for directions and dates.

Telephone: Tony: 0141 575673 or Stephen Barwood: 01274 436111 before 8pm
Email: Net: 90188-402.8
Postbox: 2390/2833
Internet: stagg@spite-tide.demon.co.uk

SWAG (SouthEast & Warwickshire Atari Group)

A quick mention for a fledgling user group starting in the SouthEast open Area, Warwickshire area. The group was started by Carl Turner and Peter Farnock who first met each other through the "Atari Wireless" dossier which contained a name and address listing of everyone in the club on disk. Both Carl and Peter were online to after a couple of weeks back and forth, they started the user group. They're actively looking for new members to try and establish the group where all aspects of Atari computing will be discussed. Carl and Peter can offer experience connecting to the "Web", setting up email and handling file attachments and generally troubleshooting any problems people may have. Initially, meetings will be held at "The Bird in Hand" pub in Henley on Snow. Meeting dates are still to be confirmed, so if you live in the area and fancy a friendly chat with like minded people then do get in touch: Carl Turner, 39 Saxebride, Billesdon Ave, Warwickshire, CV35 9BS
Tel: 01926-650852
Email: clturner@netnet.co.uk
Peter Farnock, "The Bird in Hand", Henley on Snow, Warwickshire, CV35 9TB
Tel: 01926-650555
Email: pfarnock@ixx.co.uk

UKAUG

Get
Connected!



The UK Association of
Atari User Groups

For up to date information on all UK Atari user groups, send a blank disk and SAE to:
Harry Siders, UK Association of Atari User Groups, 17 Garswood Road, Sandley, Birmingham, B26 3AB.
Email: idsiders@ixx.co.uk

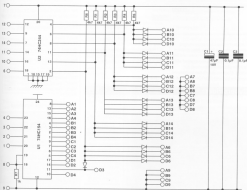
Images on tap

Xav finally presents that Team Tap circuit diagram...



worth buying them in bulk (Purples often sell bundles of 100 for a few pounds). The capacitors C1 and C2 are both ceramic disk types which act as local reservoirs of energy for the ICs, so should be mounted as close to U1 and U2 as possible.

Before the next issue I intend to construct my own Team Tap so I should be able to report more on these add-ons in my experiments progress. Naturally errors may have crept into my initial examination of the Team Tap - or the subsequent



A Idealised circuit diagram of Xav's Team Tap. This image has also been included on the Reader Disk in Q38 installable format.

The circuit diagram isn't exactly as daunting as it first appears - although that's mostly because I spent ages trying to make sure! The actual circuit board looks far more complex.

Technical notes

All the diodes are small signal diodes, 1N4148 or similar and come in three packages - they're the same as the ones used in the poppad, and several forthcoming CUP projects, so it might be

ON READER DISK

If you're wondering about that, apparently out of place, diode connected to pin 5 on port D (and hence to pin 11 of U1) [see the disk] I'm not certain of its purpose either. Nevertheless, I have checked and double checked an original Team Tap, and it's definitely present on the circuit board.

A similar anomaly is the connection between pins 7 and 8 of each of the four poppad sockets. All logic devices there should connect to the positive supply, but detailed examination of the original Team Tap shows this is not the case.

construction of loads-of-envelope designs to the circuit diagram presented here.

Neither myself nor Atari Computing accept any responsibility for anything based on this design.

Next time we'll begin breaking this diagram down into manageable sections. In the meantime it's worthwhile re-reading the previous columns which should help you figure out at least some of the technical details and you might also notice some similarity with the poppad diagram itself. ☺

Email: car@compac.mon.ac.uk

SITE SEEING

Julian F. Reschke

75%

<http://www.museum.de/~reschke/>

Julian Reschke has been programming freeware software for the Atari platform for many years. His Playfield command line interface (CLI) remains unsurpassed and this is the place to visit to check for updates. More recently Julian has become known for his Super CD-ROM driver which

along with a handful of Atari related links but nothing on-line for others which makes the site primarily a place to visit to check for updates rather than browse on-line for information.

Jon Connor

Cyberstrider

82%

<http://www.cyberstrider.org/>

After a visit to the CyberTrider site you wonder what Daniels will get up to next. His software support scheme covers the Atari, PC, Mac, Plan, MacXT, BeOS, UNIX and is probably a few others I've forgotten. He's also into venture capital - practically wanting Atari Computing on his own if you believe everything you read! The site covers his family and other interests in music, cartoons, writing, and links and his server also acts as a mirror for other sites.

Home page links are provided. Faced with such an impressive list of software encourages people to register several items, at the same time which works to the benefit of everyone involved in Atari since we keep up the good work!

Jon Connor

has attracted lots of attention. Apart from the various staff Julian has also programmed a Tera clone called Kates, a CPM sound oscilloscope, a Double emulator CPM and put together lots of (German) documentation. The web pages are in English (German/English) and the design of the pages makes for fast loading and display. There are some screenshots and explanatory pages for some of the software.

Like Daniels the web pages are a real cultural mix, with no consistent theme running through the pages. It's obviously under construction but nonetheless a worthwhile site for Atarians to visit. The main area of interest to Atarians is the Atari supported software area where 40 different items along with download and



SITE NEWS

Atari Computing Message Board



We've recently added a message board to our web pages which can be used to chat with other Atarians. Why not drop by and say hello!
<http://www.ataricomputing.com>

Fido Club

The URL for these web pages has recently changed. Please update your bookmarks and favorite to:
<http://www.stc.co.uk/~fclub/>

Magic Mailing list

This mailing list covers all aspects of the Magic operating system. To join visit:
http://www.stalist.com/subscribe.cgi/magic_jr

The Atari hyperlink launchpad



Hallvard Tangen has recently reconstructed these pages, adding new categories and making it easier to find things. If you're looking for files on the site this is the place to visit. There are hundreds of Atari related categorized links. The pages now have their own permanent site at:
<http://www.geocities.com/tilloer/hallv/>

Hallvard has also been running a mailing list for Bragg's (formerly C.Late) Newsletter and Creator SL. With sequencers since August 1997. There are currently around 30 members, but there's always room for more. To subscribe visit:
<http://members.hartee.at/~atolator/>



Around half our subscribers take the Reader Disk. The combination of tutorial files, listings, PD/Shareware and exclusive software is unbeatable and not available anywhere else. Individual back-issue copies of the Reader Disk are still available. Please refer to page 9 for ordering details.

HiDex™, EXCLUSIVE Freeman, Hollis Research



The de-commercial software has never been released to freeware. HiDex™ is a usable Universal MISC library which runs as a desktop accessory and integrates with Trackman. With the permission of Hollis Research we've put together a Reader Offer which includes the original printed manuals. Please refer to page 9 for ordering details.

BuilderGEM Release 87c PRIMER RELEASE, Freeman Thomas Much



BuilderGEM with speech builder style help to supporting applications and has evolved itself as one of those essential system add-ons most Atarians have installed permanently. This is the first English release since BuilderGEM 82-84 and includes a configuration CFX, choice of font and style of bubble.

The Atari A to Z book, Shareware Mark's Baines, © Linnhe Computing. Originally published in 1985 as a 340 page manual Mark has decided to release the A to Z book in ASCII format. With 2,200 entries, 101 tables and 118,000 words - an invaluable reference for all Atarians!

Autolabel 3, Beta release Gary Bainbridge



Autolabel is a utility which sets Paypa to print self-adhesive labels or similar items. A database of Avery Laser and bigger labels is included. Avery labels are widely available from most stationery suppliers.

STOS extensions, Shareware Anthony Hoskins

Unrestricted shareware (interpreter only) version of Anthony's ST compatible extensions.

Enhanced Joystick ports tutorial, EXCLUSIVE

© Xan/Marti Computing 1988
Team Tap circuit diagram in GEM format.

R_MOUSE.PRG © George Crissman 1988



R_MOUSE.PRG demonstrates right-mouse button programming techniques. Developers can use the included H, MC, and RSM files necessary to change the window display and printer output as desired using ResourceFoster.

HP Ingot printing GEMUS article only on Reader Disk © Paul Jennings/Marti Computing



How to print the last inch on the page using HP Desktop printers.



Unfortunately STaTOS Issue 5 is still not available so there's no point listing the STaTOS 5 contents in this issue. The latest news from the STaTOS team is that STaTOS 5 will not be available until September at the earliest. Like you, we're disappointed but, as we point out each issue, the production of the STaTOS CD-ROM is beyond our control. What we can do is offer CD-ROM subscribers who want to get their hands on the Reader Disk software now the opportunity to do so - just complete the form below and we'll adjust your subscription accordingly.

- ☐ Please send me the AC10 Reader Disk now, reduce my CD-ROM subscription by one, and continue my CD-ROM subscription.
- ☐ Please send me the AC10 Reader Disk now, cancel my CD-ROM subscription, and send me Reader Disks from now on instead.
- ☐ Please send me the AC10 Reader Disk now, I've previously converted my Reader Disk subscription to CDs and would also like to receive the following Reader Disks which I have missed. I understand my CD subscription will be reduced by one for each Reader Disk ordered:
- ☐ Reader Disk 7
☐ Reader Disk 8
☐ Reader Disk 9
- ☐ Please cancel my CD-ROM subscription and send me a refund.

YOUR NAME

YOUR ADDRESS

Send the completed form (photocopy or retyped details on a plain piece of paper are also acceptable) to: AC Subscriptions, 73 Barnack Drive, THORON, Ardara, KA10 6HZ, SCOTLAND.

Shareware and PD

NEWS



FRENCH VDI

French/Fast VDI, programmed by John Klockner, is a software screen accelerator similar to NVDI in concept. This release offers similar performance levels to NVDI on STs and Falcone (in monochrome mode). Text effects, arcs,

release but the current French demo version is available for download from <http://joomla.club-internet.fr/boyle/>. Email: jboyle@club-internet.fr or boyle@jepta.fr

ZIP 3.0

This release features long filename support, compatibility with PKZIP 3.04, but no GUI. It's described as a beta version for PMPT, but seems to work fine on a Falcon running Magic - for as know if it works on your machine. Download from: ftp.lyb.fr/pub/alan/Archives

Family Tree



Family Tree v2.18 is the first update since 1996 and features non-modal 3D dialog boxes, localisation, improved memory management, clipboard support and additional printing options including output across several sheets (not output) and output to GDI+ Metafile. Thanks to Transhuman's Color Plus a complete French release is also now available. A mass of over 3000 people can be handled in a

508K7 with up to a million on a system with 640Kb memory. So long as GDO6 (or replacement) is installed Family Tree offers the ability to lay out family trees as desired. Members of the family can be viewed around an screen and the links between family members remain intact. Family Tree includes extensive support for the standard GEDCOM

file format, defined by the Church of Jesus Christ and Latter Day Saints, which enables data to be swapped with other genealogy software on other platforms. Ian & Mark Baker, 298 Spence Road, Great Bookham, Surrey, KT22 8DA. Tel/Fax: (+44) 1872 494875. Email: ian.baker@btopenworld.com <http://www.genealogy.com/uk/1/typping/wq/download/freetree.zip>

Mountain

Mountain is a video editing application, reminiscent of Adobe's Premiere, developed in France by the TNT crew and coded by Boris Vassal.

Mountain can load FLI, FLC, FLH, QuickTime MOV, G4 (180), AVI (and) animations, TGI bits and TGA images with other modules planned.

Video is handled internally in 18.8k mode with 150 animation tracks which can load video direct from disk available. Transitions, intensity motion (zoom, move), transparency and effects can be applied as desired.

Mountain requires a 68030 or faster machine with at least 4Mb memory and fast high resolution TrueColor display (800x600 minimum) - the Nova, Chapeau, etc. ET 4000/6000 and ATI models 44 cards are all supported. Currently there's no sound support but Boris is considering adding this.

An English version is planned eventually. In the meantime you can check out the current French demo beta-release at: <http://www.mountain.org/11/mtmng/>. Email: vassal@club-internet.fr

Zeng

Ludovic Rousseau has recently released Ze OIRGarcia, his disk and file manager as freeware under the terms of the GNU Public License (GPL).

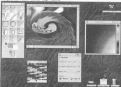
Zeng (the disagreement and optimize hard disk partitions) and includes options to edit binary files and sectors directly. The archive is available for download via ftp.lyb.fr/pub/alan/Disk/2095_7101.ZIP

Anyone interested in getting involved with future development should get in touch with Ludovic at: Ludovic.Rousseau@willata.complus.fr

CGOAs, ellipses, vector lines and printer drivers are not currently supported. VDI is easy to port - device drivers for PC cards on the Atari clones can be written with ease. Native code drivers are planned for the freeware IT emulators ProCAST and TOSBOX which should offer fast high resolution TrueColor modes. John is looking for feedback, bug reports and people to help code drivers and for things like the FreeType font rendering engine. The current release can be downloaded from John's web page at: <http://www.john.klockner.de/>

Digital Lab

Developed by John Klockner, Digital Lab



If you're looking for some graphics software to push your Falcon to the limit take a look at Digital Lab, developed by Frédéric Boile and Eric Du Canto in France. Digital Lab uses the HME module system to handle images and runs on a Falcon and other TOS-compatible machines with 2Mb memory minimum. Digital Lab is shareware and costs FF 800 (around £10). Currently there's no English

Bombaman

v1.0



Jonathon Adams keeps his head down long enough to gather his thoughts...



Bombaman is a multi-player battle game for the STe which has been under development for two years by Kevin Callahan. Bombaman is programmed entirely in assembler and 48000 assembly code and it takes advantage of the extra STe only features which makes for lots of high speed action on-screen simultaneously.

The plot is simple. Your little guy runs around trying to kill the other little guys by lighting bombs to destroy bombs until you feel yourself facing your enemy who's doing the same thing. The last player left standing wins the round.

Bombs explode North to South and East to West and as blocks are destroyed bombs and powerups appear which can be picked up and used to assist you.

Between two and four players can play one using the normal ST joystick

connections and another two using Floppydisk or joystick modified to work with the extra STe joystick ports - details to do this are included in the accompanying user file. Bombaman runs from floppy or hard disk and the available Options include control of player selection, play area selection, sound calibration, instructions, credits and resetting the screen.

The original sound-track consists of three channel chip music which can be turned off if desired - it's not MOD music, but since the processor is already working overtime that's probably a good thing. Dropped bombs pulsate slowly then pulsate rapidly one second before exploding when they may start a chain

reaction triggering other bombs.

Isometric movement is silky smooth and the control method is easy to get to grips with. This version is faster than other ST versions and doesn't suffer from the annoying "getting caught on wall corners" problem which spoils other versions.

The graphics are both colourful and cheerful and are due to be revamped because Kevin thinks some of the graphics which look weird on some of the battle grids. The characters run amusingly, bombs pulse smoothly and the explosions look good.

To keep the action moving there's plenty of power-ups including extra bombs, extra range, speedups, slowdowns, reversals, immunity, invisibility, global effects, ghost bombs, autozap, short and long fuses, ticking bombs, throwing bombs, molotov cocktails, mega and mini explosives,

random effects, plunger, bonus extensions, bonus terminations and more!

When you pick any of these up, your guy is identified as having the item by graphics around his head. Some bonuses only last a while whereas others persist for the duration of the battle.

The ability to lock and freeze bombs or missiles controls an opponent also sets this version apart from its peers - it's very satisfying tossing a well-timed bomb to trap your opponents. The control method for throwing and locking is easy - lay a bomb, look in the direction you want a clone or lock it then hit fire again. Thrown bombs bounce off the arena walls so be careful not to trap yourself!

Finally, if you're taking to long to kill off your opponent/s a winning bombside the appearance of windows which bonus everyone triggering bombs in their wake and bringing the battle to a climatic conclusion.

The unregistered version has a limited number of bombs and fewer game arenas so do register your copy or as Kevin says "If so-one registers, I'll soon get the message!" ☺

BOMBAMAN V1.0

Author: Kevin Callahan
17 Epsom Road, Poole, Dorset,
BH14 5RN, England
Kevin.Callahan@tin.prg.pt.pt or at
<http://www.binet2.demon.co.uk/bombaman>

Status: Shareware. Send CD burning plan in SAE (or an international reply coupon) or your email address in return for which you'll receive a full version.

Requires: Atari STe, 1MB+ minimum

Pros: Fast multi-player fun, makes use of the wasted border area

Cons: No option to play against computer or via the keyboard

Graphics	88%
Sound	75%
Gameplay	87%

81%

Spin! v0.34

Mario Becroft takes Spin! for a spin...

These days practically every computer user has a CD-ROM drive, and CD-ROM is more relevant to the Atari than ever. Not only are there more Atari specific CD-ROMs becoming available, but the Atari can also take advantage of many "PC" CDs.

A SCSI CD-ROM drive can be connected to any newer Atari machine with built-in SCSI by simply plugging it in. Older machines will require a SCSI to SCSI adapter such as the Link 87. But the other important requirement is driver software, without which the drive is useless. And this is where Spin! comes in.

MetaDOS, the software previously used to access CD-ROM drives, adds functionality to the operating system to enable alternative storage media other than hard and floppy disk drives to be used with TOS. It does this through the use of BIOS and DOS drivers. The BIOS drivers provide the lower level access to the actual hardware, while the DOS drivers provide the high-level interface between the filesystem on the storage media and the application software. Various filesystems can easily be used the same physical storage hardware, such as a hard disk drive, and that is why the two different drivers are necessary.

The release of MINT and its introduction of loadable filesystems rendered the MetaDOS DOS drivers irrelevant. Under MINT (and now PlayC) any filesystem can be supported using a loadable filesystem driver so MetaDOS is no longer required!

Spin! is supplied as a MINT or PlayC loadable filesystem, but it still uses MetaDOS for the lower level access via a BIOS driver. This means all existing CD-ROM hardware supported by

MetaDOS remains accessible with Spin! using the original BIOS drivers but the DOS drivers are no longer necessary - these are what Spin! replaces.

Like all the current CD-ROM drivers, Spin! lets a CD-ROM be assigned to a new drive letter and the CD can then be accessed like another media. Unlike other drivers, Spin! supports multiple CD-ROM filesystems, including:

- ISO9660 Level 1
- ISO9660 with longer names
- ISO9660 with Rockridge extensions
- ISO9660 with Apple extensions
- ISO9660/joliet
- Macintosh-HFS
- Audio-CD

This means so-called long and case-sensitive filenames are processed - which

is particularly handy when accessing CD-ROMs created on Windows 95. Many Spin! users will also benefit from the Macintosh HFS CD-ROM support, which allows Macintosh CDs to be accessed on the Atari. Many other CD-ROM drivers fail to read multi-session CD-ROMs in my experience, but Spin! handles them without problems.

Audio CD support has also been improved. If an audio CD is inserted and the user tries to access it like a CD-ROM, rather than receiving an error message, he will find on the CD a series of programs, one per track. Double clicking on a program plays the chosen audio track - no other software or player is necessary!

With CD-ROM drives that support the features, audio tracks also show up as wave (WAV) files, which can be copied to

the hard-drive by a single Drag&Drop operation on the desktop. Of course CD player programs will also still work as normal.

Aside from these outstanding features, Spin! functions like any other CD-ROM driver. Spin! is available in two versions to suit either MINT or PlayC, and installation under MINT is as simple as copying SPIN4.XPS to the MINT folder. If MetaDOS is not already installed it must also be copied to the AUTO folder, and the CDMSYS.SYS file has to be edited to reflect the correct configuration. A compact version of MetaDOS, called MetaX86 is supplied with Spin! and this contains all the features needed to use Spin!, with the other files removed. Although this article is based on the MINT version of Spin!, the PlayC version functions in much the same way. ☺



SPIN!!

Author

Julian R. Reacher
Email: jrr@mac.com.au
<http://www.monster.de/~reacher/>
<http://ftp.atl.uni-mainz.de/pub/staff/jr/attics/spin04.tgz>

Status

Freeware

Requires

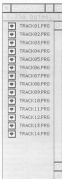
CD-ROM, any Atari, MINT or PlayC

Pros

Supports wide range of CD filesystems including ones with long filenames, easy to access audio CDs, free

Cons

Not as easy to install as commercial alternatives



▲ Here's a thing window displaying the contents of an Audio CD. Simply double-click on a "program" to play the desired audio track - so other software is required

Utility Program, all Atari

Author: Thomas Much

Author: thomas.much@atari-uk.com

http://www.atari-uk.com/de/

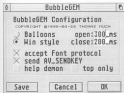
-Thomas.Much@atari-uk.com

http://helfert.honne.pages.de/



Here's an original BubbleGEM style bubble

And here's a Windows style speech bubble



BubbleGEM adds more speech bubbles to supporting applications designed to make their user interface as easy as possible for newcomers to find their way around. BubbleGEM offers Atariware functionality under to utilize built into Windows 95 and the Mac OS.

run it as a desktop accessory.

We included BubbleGEM Release 07e on the AGPS Reader Disk, but since then there have been four German releases. This is the first updated English release and BubbleGEM has come a long way here's a rundown of the major changes:

- Release 08: Support for other fonts added and the ability to copy the bubble contents to the Clipboard.
- Release 09: Proportional font support.
- Release 05: CPU fan introduced. Auto scroll delayed bubble display using an external Help Daemon utility added. Windows style rectangular bubble option introduced.
- Release 06: Support for non-AtariC systems added. External Help Daemon integrated into BubbleGEM.

The CD-ROM format targeted includes full programming documentation which makes it relatively straightforward for programmers to add BubbleGEM support. Now BubbleGEM supports all Atari systems and only occupies 200k of memory it's bound to attract wider support. If you use any application which includes BubbleGEM help you might as well make BubbleGEM part of your default set-up - you can take that as a recommendation if you like!

Joe Casner

GrafTool v07.09.97

80%

Graphics, RegisterWare, all Atari

Author: Jorgens van Bergen

Email: jbergen_van_Bergen@kix.mijn.nl

http://www.kix.computer.nl/

kixpages/200

range of options to play with.

This program loads graphics in a huge range of formats, and it can load and play animation files in these formats. Loading of the latest format (PGC) is not supported yet,

but you get an appropriate message in the useful log window to this effect and no ill effects were observed. In addition GEM fonts can be loaded and viewed. Export from GrafTool is limited with only PNG, GIF, PNM, GIF and PGM supported. However,

Export from GrafTool is limited with only PNG, GIF, PNM, GIF and PGM supported. However,

unless you are into web publishing and need PNG output, the available formats should satisfy nearly all users. You can either save a picture by ECHERN AGS (Save as) in the desktop menu, or by clicking an area of a picture and then saving this via the SAVE VIEW option in the pop-up menu available via a right mouse click - either option allows you to specify the final format.

There's some nice filters included, many of which can be used to sharpen or soften images. A useful tip is to select a small part of the image and experiment on

that - the results are displayed in a new window and your original image remains unchanged. When you are happy with the result simply select the whole image for treatment.

The COLOR option from the desktop menu displays a palette of the currently available colours. Clicking on any colour box results in that colour flashing whenever it is in a picture for as long as you hold the left button down.

The useful KIMWART option available from the pop-up menu can be used to convert graphics from one resolution to another, but it also allows you, via the METHODS subsection box to specify the dither pattern and colour palette.

Printing out from GrafTool is easy. If you have GEM, SpeedGEM or NVDI installed the program will pick this up. The printing options available are extensive, providing full control over the size of the image to be printed, position of the page, margin setting and so on.

This is an excellent graphics utility which, although presently only available in the German language, is very easy to use, gives an amazing range of options, and considering the free registration, has to be viewed as a download or a trip to a PC/Shareware library!

Mike Kestlake



See how we mentioned GrafTool, an excellent German image viewer, editor and manager, which is totally free to register and gives users an extremely wide



● Scribble Synth Software-based additive synthesiser

- 320k to 100kHz sine wave oscillators, each with independent envelope shaping
- Up to twenty user-definable frequency bands per sine wave
- Up to five variable-length sine waves for amplitude envelope shaping
- Variable sampling rates for sound generation (30.9k to 100kHz)
- Seven sounds in AM, AP, and SP (pulse duty) formats, in 8 or 16-bit
- MIDI sample dump (for MIDI-compatible and Akai 1200/1600 samplers)
- Real-time and Custom/Frequency Mapping mode

£16



● Sound Chip Synth FM sound chip synthesiser

- Square wave oscillator (30k to 100kHz) with two sub-oscillators
- Noise generator (30k to 100kHz) mappable to any oscillator
- Oscillator volume, detuning, pulse offset, and octave shift controls
- Amplitude and low frequency oscillation with depth, rate, and phase control
- Four-point envelope generator, mappable to amplitude and pitch
- Seven sounds in AM, AP, and SP (pulse duty) formats, in 8 or 16-bit
- Real-time MIDI control, with portamento and auto-sweep mode support

£16



● Snippet Synth Software-based granular synthesiser

- 30k to 100 kHz oscillator frequency bandwidth, with polarity settings
- Five different grain types (square, sine, triangle, sawtooth, and constant)
- Five different amplitude envelope shapes, with real-time gain control
- Variable sampling rates for sound generation (30.9k to 100kHz)
- Seven sounds in AM, AP, and SP (pulse duty) formats, in 8 or 16-bit
- MIDI sample dump (for MIDI-compatible and Akai 1200/1600 samplers)
- Sample rate, operation, duration, tempo, and auto-sweep mode

£16



● MIDI Arpeggiator Analogue-style sequencer

- Two real-time step modes, divided into four arpeggiator patterns
- Balance three channel MIDI notes with one computer-compatible synthesiser
- Program change, volume, pan, and MIDI channel settings for each track
- Arpeggios, scale mixing, and left and right markers for looping sections
- Logic of play modes: forward, backward, ping-pong, random, and chord
- Auto-harmony pairs with four algorithms
- Export single patterns or entire performances as type 1 or 2 MIDI files

£15



● EC-909 Analogue drum machine for the STETT and Falcon

- Sixteen original Roland TR-909 drum sounds, with synthesis controls
- Extensive pattern editing, including on-note features
- Drum pad and pattern triggering via an external MIDI device
- Seven drum loops in AM, AP, and SP (pulse duty) formats, in mono/stereo
- Export patterns as type 1 standard MIDI files
- Replace existing drum kit with your own sounds using Kontakt (supplied)

£25

All Electronic Cow software is packaged in a CD jewel case with an eight-page booklet, and STGuide help. Prices include P&P in £1 (UK).

Upgrades are free to registered users. If you like to upgrade your existing version, please send your master disk with an LTR to Electronic Cow. All software is tested against 16M memory and a 640x480 display for more information on these, and forthcoming releases, please visit our web page, or contact:

Electronic Cow, 160-16 Southover, Gillingham, Dorset, DT8 3LH, UK. Telephone: (01424) 544100

WWW: <http://www.electronic-cow.com/uk/index.html> Email: electronic_cow@uk.pipex.com

Distributors:

UK
Pipex Ltd
PO Box 170
Aldershot
Hants RG31 3BQ
for orders only

USA/Canada
Systems for Tomorrow
PO Box 3694
Burlington
MA 01803
for other UK orders

Germany
Pipex Trading
Postfach 107
32691 Bad
for UK orders



Shoreware, any machine
 Author: Mark Baines, Linde
 Computing
 Email: mabaines@linde.co.uk
 http://www.thal.demon.co.uk/linde.html



Over the years there have been a few must-buy Atari books. Your Second Manual written by Andreas Krenn, published by the Fast Club was the first, followed by The Colours Guide to Booking Publishing, published by Desk. In

1991 I raised my piggy bank and bought one of the first copies of Mark's A to Z and it's still in regular use today. A to Z was written with all Atari users in mind with simple definitions, beginners can

understand alongside available technical data of interest to experienced enthusiasts. With the original 340-page A-Z (card board) book out of print Mark has decided to release it in ASCII format as Shoreware which is flexible because there are only two illustrations to worry about. The ASCII version comprises the commented Protext files used for the 4th and 5th printing with a same minor changes, updates and revisions. There's a separate file for each letter of the alphabet, two illustrations in PNG format and files covering the title, preface, intro, and appendix pages. Although the pages are

not completely up to date in a few areas the 2,137 entries, 181 tables and 128,000 words still represents the most comprehensive English language reference work available for the Atari platform. In case you're wondering Mark did consider releasing A to Z in ST-Guide hypertext format but this would have involved many extra hours of work. Following a discussion on CD-ROM Mark offered as a choice between an immediate ASCII release or just the possibility of hypertext version sometime in the future - we've opted for the ASCII release now. When asked if owners of the printed book are allowed to use the ASCII version without paying the Shoreware fee, Mark replied:

"I've thought about this situation and as the text files are so much more versatile as I'm only asking for a few and as the book wasn't too expensive to start with, I decided no. Sorry. After all you wouldn't expect a free video after having read the book of the day."

At just five pounds A to Z represents excellent value for money and comes recommended.

Joe Connor

Probe House Player v4.5 - 80%

Sample players

It must be the season for sample players, we've direct paths for choice. The development path for these utilities is highly predictable, an OS tweak here or some bouncing for VU meters there. Bouncing La reports on how which have come up with a new spin...

Probe House Player v4.5 - 80%
Music/Utility, Firmware
StyTT/Palcom or DMA sound support
 Author: William Wong
 Email: wongp@netnet.com
 http://www.pcoo.fas.com/1500net/haley/680/phys.html



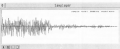
▲ PH Player's versatility is dogged by its original front-end

Since we landed on PH Player v4.3 in 2007 this release now plays MIDI music files (that's right) using the StyTT or Palcom DMA sound, and an instrument

sample patch library. The output quality is fairly happy, which perfectly complements the sample tone - a cheerful piano ditty and the overall effect wouldn't be out of place in an early black and white comedy film, pure eccentricity! It certainly can't match MIDIJOY in this area but it doesn't purport to, the deal is a flexible sample player for all DMA sound machines in a small package.

Showing La

Samplayer v0.61 75%
Music/Utility, Firmware
 Author: Electronic Cow
 Email: electronic_cow@dal.pipes.com
 http://pipes.pipes.com/electronic_cow/cownet.shtml



Showing La!

☛ Definitely no MIDI!

Samplayer v0.61 -



☛ This looks familiar...

The second offering is from Electronic Cow, Samplayer v0.61. Looking much like and sharing more or less the same functionality as the sample window in Snapper Sandwich, you're more likely to use this one for the MIDI sample dump than its sample playing sibling. There's a single play button and that's it for the playback! Stereo or mono *.WAV files are supported here, with 16-bit for Palcom. I experienced a few serious random problems (as with PH) but nothing fatal.

each line of text fractionally to fit the desired space. DA's Layout includes a Vertical justification feature which eliminates all the head work of aligning the bottom line of text in adjacent columns.

An associated feature to line spacing is leading, pronounced 'ledding'. The name derives from traditional typography where strips of lead were inserted to pad-out lines of text. Normally measured in point sizes the general rule is if the lines of text in a column are more than 15 words, increase the leading by between 2 to 4pt.

Can you justify this?

The justification of documents is purely a matter of personal taste. Personally I avoid using full justification (where lines of text are forced to the column edges as this can lead to unacceptable gaps between individual words on narrow columns, although having an even 'rag' is just as desirable. Using hyphenation to break words can overcome this, so it is well worth experimenting with the various modes of justification to see what the overall effect can achieve on different column widths.

The ability to micro-space characters by manually adjusting the 'kerning' (space) between characters is another feature of DA's Layout which can help to eliminate such occurrences. To use micro-spacing, hold down the [Ctrl] key and use the right and left arrow cursor keys.

Unlike fonts, mixed justification styles can work—sometimes. While mixed justification may not work with body text on adjacent columns, an elegant method which can be used successfully in opposing columns, having opposite justification. Confused? Basically this means having two columns side-by-side

with an even 'gutter' space between columns so the justification is tugged on the outside.

One consequence of narrow columns is the possible introduction of 'widows' and 'orphans'. A widow is where a word is left on a line by itself at the end of a



Allow Line Height—an equivalent term for leading.

where text stretches across the entire page. An orphan is where the last line from a paragraph is situated at the top of a page or column. Avoid these at all costs!

Adding Images

Including images into a document serves many purposes. They can break up a long passages of text, add a more dynamic feel to the page, and the old saying 'a picture paints a thousand words' is very apt—you wouldn't describe a dialogue less would you?

When incorporating images into a page which uses columns of text, don't always size the image to fit the width of the column. Sometimes the overall feel of the document can be enhanced by images that overlap columns, causing the text to be wrapped around them. With regard to the placement of images, try to space them evenly so they are not crowded together and there is adequate room for the text to flow around them.

Screenshots should be used to any text within them is roughly the same size, although this is sometimes not possible when a complete Desktop is being displayed, but overlapping a text column proves useful in this instance.

OH, DASH IT ALL!

You may have seen the use of different types of hyphens. These 'dashers' can be used depending on the purpose.

Hyphen: Uses the minus (-) sign to break up single words.

In dash: A slightly longer hyphen which normally replaces the word 'to', as in 'pages 17-23'.

Em dash: The longest dash—used to set off a parenthetical phrase. On a typewriter this is represented by two hyphens. DA's Layout uses the same principle, but automatically joins them.

Pulling a Quote from the bag

Cross Headings, or 'Pull Quotes', are a useful way to break up a long lines of text and add more flair to a document. As in the example used on this page, the previous sentence was used with slight editing. In some cases you may prefer to encapsulate the quote with quotation marks—this is entirely optional. Pull Quotes are particularly useful when images are sparse and to a certain extent can be classified as replacement images.

Pull Quotes are useful to break up long lines of text and add more flair to the document

Pull Quotes normally use a heavier font than body text and a certain amount of 'white space' does add impact. Alternatively using heavy lines above and/or below the Pull Quote (as in this magazine) can be used for emphasis, although an outline border does not normally work well.

In the same way that images don't necessarily have to be sized to a column width Pull Quotes can be treated in exactly the same manner, so experiment with various widths.

Next month a sample advert will be demonstrated. This will use various techniques already discussed in this, and the previous, article.

Coming back to the explanation of Vertical justification of columns, the dotted line down here points to this feature in action.

DA'S LAYOUT V6.1

If you have any queries feel free to contact me — David Frell.

TITANWEB@compuserve.com
A complete demo including the Plug-in module is freely downloadable from our web site — see back cover for URL.

SERIF VERSUS SANS SERIF

Serif

Generally for use with large concentrations of text by being more readable and identifiable due to the design. The serif of any font is where the 'tail' of a character is tapered.

Sans serif

Ideal for banner headlines, or sub-headers. The word 'sans' derives from the French 'without', therefore a sans serif font is, literally, 'without serif'.

Night
Night

The Alternative Party

Richard Spewart reports from this unusual Atari event...

Held from the 11th to the 12th of April, 1998 (Easter weekend) in the city of Turku, on the east coast of Finland, the Alternative Party was probably one of the best coding parties for the Atari scene as far

Why the name Alternative Party? For some time now, most coding parties have been dominated by people owning high-end PC's or Amiga, which left minority platforms like ours without a look in. With this in mind the organisers decided to ban, from the competitors at least, any PC above a 286 and any Amiga above the standard A500 machine that, as readers will know, was the main competitor for the ST back in the late eighties and early nineties.



As we printed last issue, the Maggie pages include coverage of the enjoyable experience, over in Finland, known as the Alternative Party.

Many fine programming acts by the ubiquitous Reservoir Goids resulted in a new game which was written during the party itself. Can yourself a copy and trial yourself in some good old fashioned retro gaming action!

Normal services, or what passes for normal on these pages, will resume next issue.

Richard Spewart and Chris Holland, *The Maggie Team*, <http://www.users.netnet.co.uk/maggie/index.htm>

With the high end machines banned from entering the competition this cleared the way for people with an interest in older machines to make some headway.

Apart from people from the Atari scene, who were the best represented platform, other people brought a variety of machines, some I haven't seen in the UK for many years. A couple of these veteran machines were connected up to relatively new peripherals such as zip drives including an F51X machine. It just goes to show there's more to life than PC and Plan hardware!

The party was hosted by members from the Aggression demo crew who produced one of the classic ST demos called Brain Damage. There was a large Swedish contingent at the party consisting mainly of members of Dead Hackers Society, one of the best Atari demo crews. They are still supporting the Falcon to some degree and made some good entries in the demo competition. Dead from Nine (from Development) was also there and he showed us the latest developments in *Millie's Adventures*. It was great to see the game looks almost ready with just a few minor improvements remaining to be completed before a release.

The English contingent consisted of myself, Chris Holland (Giff), Leon O'Reilly (Pis Pea/Reservoir Goids), Ray Dempsey (Giff/Reservoir Goids) and Neil Jones-Podjary (Hynd).

We also met up with Martin (or Baco), better known as Q-Park, an IRC #Atari, who had flown over from Canada for the party. Chris and I met him on the flight from England. Q-Park unfortunately had a slight problem with his luggage on arrival at Helsinki - thanks to look at Heathrow car being on the ball, his luggage had to be delivered later on to Finland.

People outside the demo scene may not recognise the name of Anders Eriksson but may well recognise him from his IRC name as Bot of the Dead Hackers Society. Chris and I were both looking forward to meeting him for the first time



because he has done a lot for Maggie over the last year or so.

Another coder from the same group, known as Ljake on IRC, was also there and he was very pleased to see us. There might well be an appearance from some of the Swedish contingent at the next Atari show, wherever that is organised, in the UK. One thing we soon realised was Swedish coders are generally a lot taller than ourselves!

One guy was there with a Phobos machine - which I personally didn't get to see much on it. From what I heard the owner did have some impressive stuff to show off.

As is usual with coding parties of this nature, there were some competitions. The first of these was for ASCII art, which ranged from the impressive to the downright lazzie. After a long wait there were also some music competitions. Later on during the party, the main part of the competition were demos, which included several new demos and demos for the Falcon. The latter Deth had some in some entries but it was a shame none of the crew could make it, but, as they said, maybe next time...

There was also a prize given for the most obsolete machine at the party which was won by a machine built in the late



1960s, early 1970s. This consisted of two circuit boards and an LED output, and won the prize comfortably - let's hope Atari machines never win this accolade! Some stations brought in a big pile of classic hardware, which was placed on a table and used in the demo competitions. Hardware such as the Aquarius, J2581, Spectravideo, Atari 2600 console and one or two other unknown machines was viewed with a lot of interest by people at the party. The only thing that was reasonably up-to-date on this particular table was a PlayStation 2.

One user who was heavily into the PEA scene had connected his machine in a number of ways. He had fitted an internal hard disk and connected an external SCSI Zip drive!

It just goes to show that, with a little ingenuity, it's possible to connect up the latest hardware to obsolete machines. I started on the machine's console, who told me that he had made up the lead to connect the Zip himself and he'd had to

truss difficulty finding the parts, which was nice to hear.

Although the Atari scene was the largest, competing the general level of interaction between the users present, no matter what machines people own, impressive programming can still be produced.

Amazingly the winner of the demo competition wrote an intro as an unexplained Commodore 16/28. This was very impressive viewed on the big screen and all the more impressive considering just how old the 16/28 is compared to the other platforms!

In general, the party was very well organised by the members from Aggrovision and IRC #Atari - Sarah (Krisztofer Luvvett), Portyale, Wulfen and



Lance. It was also great to meet the Swedish people as well and a big hi! goes out from the Reservoir Gods and the Maggie Team to Anders Eriksson (Bo), Bagger, Luke, and everyone else who attended - not forgetting the person who travelled probably the furthest distance to get to the party, Q-Punk!

Richard Spewart



70%

Entertainment
Freeware
Falcon only

Author: Reservoir Gods

<http://www.atc.barton.dk.uk/~mag/bug/>
screen film

In keeping with our Alternative Party debutant theme for this issue, we bring you a review of a game that was actually written in six at the party itself!

Bugger! is actually a thoroughly updated reversion of the classic Frogger game. It was the guest appearance of the Atari VCS remake version of this crazy but still addictive game on the big screen at the party that led directly to the Reservoir Gods deciding to do their own version.

Everything was sacrificed in the road rush to produce this game, ships, food, (apart from the odd Hamburger) and even

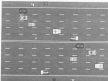
the meagre promise of a name was shunned by the dedicated team who barely looked up from their monitors while the deed was done.

With Bugger! the basic game of Frogger is an offer: that is, to get the frog across the road, and to avoid being squished by the oncoming traffic, all one needs is it. As with many other

Reservoir Gods games, there is more to it than just a simple game, as a whole range of configurable options lurk nearby.

There can be up to six players, any combination of human or computer control, the game can be won with the number of frogs safely across the road out of as many, or with the guilotine of a timer to intervene. Gameplay is simple, but very 'intense' for just that final turn.

The sound and graphics have been suitably updated, with the TriColor treatment, headed out to the intermediate basic frog and car sprites, but the Falcon really shines in distinctiveness with the



'intensity' samples and DMP powered soundtrack. As with all Reservoir Gods productions, the very high standard of polish is apparent, even more incredible, considering the fact that the main part of the game was produced over two very hectic and noise-filled days at the party. We're not quite sure how Bugger! got its name from the Reservoir Gods. It can however confirm that the choice of name was necessary to do with certain words that were thrown around by them when something failed to work as planned, the first time around!

Richard Spewart



Now why not check out the
Maggie home pages at...

[http://www.users.zetnet.co.uk/
maggie/index.htm](http://www.users.zetnet.co.uk/maggie/index.htm)

Q&A

"We always have more answers than questions"

SUMOS

Q I have a MegaSTe and a SUPAS laser printer with SUPASRA laser controller which I use to run Calamus 1.01a. If the laser printer is switched off but connected to the Atari my machine acts very strangely when the Atari hard disk driver is booted off my 40TiB internal hard disk. It seems to think it has additional drives attached and normally ends up booting out or presenting a desktop with no drive icons. When I am not using my laser I have to pull the DMA cable out of the back of the MegaSTe which is a pain and is not doing the connections any good. Both the MegaSTe and laser work perfectly otherwise. Do ACII devices have to be terminated like ordinary SCSI devices? I don't want to keep my laser switched on all the time. Is this problem related to the SUPAS laser? There seems to be very few of them about. I have only seen one other guy that got one and he has exactly the same problems as me.

I would also like to see a general article about current hard disk models. I am going to get a 1Gb unit to replace my 40TiB Quantum drive. I bought a used IBM 1Gb drive but could not get to work despite three other members of the Phoenix Atari User Group having a play around with the original Atari HD software and SCSI software (thanks anyway guys). I have also been told the Quantum Finishek SCSI drives don't like Atari, although I have heard of one guy with an STe with a 9Gb drive. It would be interesting to know if Atari can use some of latest drives being released this year which are supposed to run up to 40Gb with IDE and SCSI on SCSI sounds great if you want to run a BBS, burn some writable CDs, and do some direct to disk recording all at once! Joe Hayward, Rotherham

A If the SUPA Laser printer and controller are connected to the ACII connector they must be powered up otherwise you will experience the symptoms you report. There used to be a hardware switch which got around this problem but I haven't seen one for a few years. The simplest solution, which minimises wasted power consumption and

keeps the laser printer quiet, is to open the rear flap just enough to trip the sensor - if necessary use something to wedge it open in that position. To use the printer simply shut the flap and the printer resets itself ready for use - crude but effective!



Almost any SCSI hard drive mechanism can be persuaded to work with Atari hardware given the right combination of termination and software, which usually means using HD Driver software - refer to the SCSI Hardware Q&A item in ACII for more details. IDE mechanisms can also be connected by fitting one of the TULIO IDE interface boards.

Joe Coomer

WWW & CAB 2.5

Q I'm running this combination on my TT fitted with Platinum Core Card and MMDA. I have recently experienced occasional problems trying to access links or back/forward page resulting in system locks with the error message Runtime error and what looks like a list of program code. Also when on Selected Website error messages "Too many frames" and on another website error message "Too many frames". Is there any way of saving HTML pages as ASCII text pages, or do I print them out then run the program through a scanner and OCR them?

Nick Jolley via Email

A The numbers following the Runtime error message relates to a Pure Pascal error code. For example, the most common error is "Runtime error #163" which means "too error" - a crash to you and me. The problem could lie with CAB, CABOWL, or STING as they're not much help to the end user. It's probably worth trying a different CAB-OWL file because there are so many different releases.

You certainly don't have to print out HTML documents then OCR them to get at the ASCII in the Options/General CAB dialog you can set up a mouse-button combination to call up a pop-up menu, which includes the option to save the source code of the HTML file. You can now load this file into Everest, or other text editor, and do a Search/Replace with leaving the Replace field blank which

removes all the HTML tags leaving mostly ASCII. There are also various stand alone utilities to convert HTML documents to ASCII which work with varying degrees of success including:

- Egle, the latest version includes an HTML to ASCII converter.
- HTML-2-ASCII, programmed by Martin Jupp, which offers lots of options.
- HTML2ASCII, a no-frills DOS based utility.

A CAB module to convert HTML source to pure ASCII would be useful.

Joe Coomer/Alexander Clouet
Oliver Broadway/Chris Good

SCSI dump

Q In the Digital audio article in ACII I'm assuming ILL support using ExtendedOS Pro on a Falcon to SCSI dump data from a CD-ROM to bypass the degeneration which occurs in converting the analogue/digital boundary and would like confirmation this is also possible on ST/STE machines?

Paul Keating, via the message service

A Yes, you can use SCSI dump-on-ST/STE machines, it's a simple data transfer operation which is nothing unusual in a computer system. ExtendedOS has included this feature for a number of years now, the Pro version should meet your requirements, otherwise check out the press release of the latest update, ExtendedOS Gold.

If you're using the ST as a sound source (running a sample sequencer, perhaps) then you're restricted to 8-bit resolution. The benefits of dumping from CD would be offset by having to downsize the resolution as well as convert the sampling rate (if you're bothered about maintaining the speed), although it'll still outstrip sampling in 8-bit, so you might want to

ACII'S BUG REPORT

Digital audio errors

The SN figures for the STe and Falcon given last issue were only based on theoretical calculations, which (as explained in the article) don't correspond exactly to real life. Lab tests have shown factory-fitted Falcon CDROMs are of widely varying quality, averaging an output S/N of about 90dB. Please accept my personal apologies for these errors.

Shriming Lai

Secure

On page 35 in ACII I mentioned CAB doesn't support secure transactions yet I've been using this feature for a while now so that must be wrong!

Markie Beccoff

consider the Replay 16 computer. This gives 16-bit microprocessors (CD capability for applications with a Replay 16 option).

If however you are using the ST simply as an editor or processor and intend to upload the data to a MIDI sampler or other professional device (see the sample player reviews in the PC/Macware pages), you can opt for the full digital version, a CD-ROM drive. This will also give you convenient access to lots of software including Rhapsody's music utilities compilation. You may need to use one of the current SCSI host adapters because many of the older models don't transmit the control signals required for SCSI dumps.

Mingus Lai

SiMMs explained

Q First of all I must congratulate you on your continued support of the Atari platform and long may it continue. I also read with great interest the Atari Computing Convention this coming November which I plan to attend. I am writing to ask a couple of questions concerning SiMMs:

1) Apart from price, is there any difference between 2 and 9-strip SiMMs (performance etc)? My STs currently contain two of each and seems happy. 2) It has recently come to my attention that it is possible to buy 4Mb 30 pin SiMMs. Would it be possible to install four of these in my machine to give me 16Mb? If not, why not?

Peter Bray, Ashley De-Lin, David

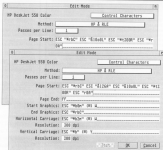
A Thanks for the encouragement - see you in November!

1) I'm not aware of a price or performance differential between SiMMs equipped with three or nine chips, most will work fine in your STs. The only issue to be aware of concerning SiMMs are:

- a) Parity or non-parity SiMMs are available and both work fine in ST machines (it's an issue on other platforms).
- b) SiMMs have different speed ratings, most 4Mb 30 pin SiMMs will have a speed somewhere between 100ns (nanoseconds) and 15ns and those should work in any combination in ST machines (again it's only an issue on other platforms).
- c) It's not possible to use 4Mb SiMMs in place of 1Mb SiMMs because the memory management unit used in the STs, although redesigned from the one in the STE, still only had 10 address lines. The number of address lines dictates how many memory locations can be accessed, so because there are only 10 lines, only a maximum of 4Mb can be addressed.

Jon Connor/Mark Wherry

TOP TIPS



HP Deskjets - the missing last inch solution!

Real junkies reports...

In Atari Computing **Phil Lee** Charles mentioned the "age old problem with HP Deskjets not being able to print the last couple of lines at the bottom of a page". Courtesy of Wilfried Behne of Behne & Behne Systemsoftware in Germany, there is a solution - for HWD users at least.

HPD is supplied with a utility called MAKEPRM. This program allows the user to set the margins of the paper, so it is

254 and A4 paper - other page sizes require different values.

appears, but Wilfried explained MAKEPRM does not change the margins - it describes the physical margins of your printer.

What you have to do is to insert the control code which sets the printer for the page size you are using after ESC *v*ESC *v* and the problem is fixed!

To do this, run MAKEPRM, select the HP 500C driver, then in the Control Characters page edit the Page start line as shown in the screenshot above.

ON READER DISK

Using this information it should be possible to adjust other suitable printer drivers. For more details along with a table of codes for other page sizes plus details and tips for colour printing check out the illustrated HTML format article on the Reader Disk.

GOT A PROBLEM?

Tearing your hair out?

We have access to experts who can solve almost any Atari related question you care to throw at them. Unfortunately we cannot enter into personal correspondence but we will do our best to help you through the magazine.

"Atari Computing Q&A"

45 Mill Road, Colchester, Essex, CO4 5LJ, England

Email: editor@atari.computing.com

Surplus Items Offered for Sale in First Class Condition

Copied master disks, master/slave disks, tests and settings are included as appropriate in each order.

HARDWARE

AT 486 2 to 486 100 1.50 Retail purchase 1994 (R2M 1995) complete with 2 mice, Quick file (QFTR), Program Manager disks, 3 months of Family Computer software (4 disks) plus Boot Disk and useful F.D. software

Price £15

Power Drive (Second Supply disk drive)

Price £15

Taking in Plus Monitor Model 1001 1 Year

Price £30

Mini II Hard Disk 270 MB (Quantum Mervick drive) complete with CDS and JYB 5.5 and full software (Properly partitioned and holding 1986 PG software, 68005 Fonts and Assign Sys). First used 1986, no faults.

Price £30

SOFTWARE

Global V21 - 08, Issue Desktop 04 - 015, MCH 10-5 - 08, Easy Test Pro - 08, Your's World 01 - 010, Marking 08 - 08, Teststyle 1.01 - 08, VV0000 01 - 04, Image Copy 1.50 - 08, Stealing Pro 04 08, Based on new, some used - 010.

BOOKS/BOOKS

ST (Soft 'Users Guide to First Word' very bound 120 page manual together with 'First Word Plus' disks - 03, 'Your Second Manual to the Atari ST' (Andrew Parnes) together with boxed set of 12 related PG disks - 08, 'The Best of ST FORMS' 164 page general guide, together with set of 4 related PG disks - 03.

BOOKS/BOOKS

Others listed for the following: Atari Ports all issues (11) 21 disks for set of 8 Time Works, ST Format Issues 04/05/06, 08 Mag. and Subscriber disks, ST Review Issues 07 to 20, 17 disks, 21 purchased disks of unrelated PG software, the file contents of all the above disks are listed, grouped and described in an archive STCAT catalogue disk.

DELIVERY

All items will be sent by letter post or Parcel Force as appropriate, at cost, unless mutually convenient alternative can be established.

PLEASE CONTACT

John Chapp, Banbury (N. E. Scotland).

Tel: 01452 620 220 - Best Times 9 to 5 & 7 to 10 pm

For the man with an Atari who was worried about paying through the nose for what was advertised is a service for Windows or Mac?

Zetnet Services explain why some providers can be a false economy.

No set-up fee

UK local call access

No on-line charges

5MB Web Space - Free

Fast remote access
(Standard service supports 10Mbps)

Dedicated Atari support group

90.00 annual subscription or
8.50 per month (inc VAT)

01203 00001
01203 00004
info@zetnet.net
http://www.zetnet.co.uk

ZETNET
Internet Service

ATARI ST SOFTWARE

all originals, boxed with manuals etc.
over 800 titles in stock, from £1.00 each

Please telephone or email for full list
sewa.cele@virgin.net

ST's AND OTHER HARDWARE AVAILABLE

Tel/Fax 01726 842166 Tel: 01726 842165

SIMPLY THE BEST

<http://www.world.computerware.com/homepage/more.html>

The Wale 0800 01726 844725 24 Hrs

CyberStrider

Shareware Support (Atari, PC, Mac and Linux)

Commercial Products (Positive Image, DTP + Graphics)

Telephone Cards (Cheapest ever calls to other countries)

Internet File Archive (Files for free download via Web)

Shopping Mall (Responsive advertising services on the Net)

PO Box 2623, Wickford SS11 9BX, UK

demok@cyberstrider.org

<http://www.cyberstrider.org>

Hardware and Software for Sale

HARDWARE

Falcon 0X keyboard plus plastic top and normal standing in excellent condition. Box of 886 cards for games including Super clones, CDMA cables, connectors, and even a working Power 2400 module which could form a nice present too! The cables alone are worth a few quid! Forget the Clock II and software. The whole lot for 125.00

SUPER SOFTWARE!

Falcon AudioFreaker (Open-to-Disk recording software which is currently missing at £15). My copy is unused due to severe lack of time, but is a really excellent piece of kit. (I accept offers in the region of £75 plus insured postage. Falcon AFEX 01990 on software 195.00.

GOOD SOFTWARE

All are complete with proper disks and official manuals
00044 - editor for text or binary files £3.00, Inter 2 game for Falcon £5.00, Easy Test Professional - writer version which uses (Spells from £3.00), Name Accounts 1 £3.00, (Excel) Chess £3.00, Mouse Tricks £3.00, PongPlus Plus Roman Set - £3.00, £3.00.

BOOKS

Falcon manual (One spare copy), ST Basic Source book

DELIVERY

All items can be sent by normal post or by ParcelForce at cost, or can be collected in person from (Sheffield).

CONTACT/HAGGLE

Mike Rankine

Email: rankin@uk.ac.uk

Tel: 0114 261 8940 (any reasonable time)

CLASSIFIED ADVERTS

PRICES & CONDITIONS

Each insertion of an advert costs £1.00. For up to 100 words, with each additional 100 words costing a further £1.00. You may not place an advert for as long as you wish, as long as you include correct payment for the required number of issues. All adverts must be pre-paid www.bbc.co.uk/mediacentre/ukadvertising/ by their UK sterling GBP or Euro in value. Classifications available include for Sex, Smoker, Ethnicity, Age, and Country. All adverts must be accompanied by your name and address (leave it out and include it in itself), and will be printed at our discretion subject to the usual acceptance conditions. Any request to be selling printed materials will be required to be accompanied by a separate advertisement. Any errors on our part should be notified to us immediately, and our liability only goes as far as printing a corrected advert in the next issue. Please note that we can't guarantee when your advert will appear. Please post your advert early or send an A500 to us in due (include RM) for return, and send your payment in the form of their UK stamps, to AC CLASS, 42 Larch way, Haverhill, Cambridgeshire, SG4 6JL, UK. Please note this address is for advertising sales ONLY.

WANTED

Wanted: "SynalADD" computer-aided design package published by State of Ontario, and distributed by Sigma Publishing and Exports/Imports. Can anyone provide any help as to where I can get a copy from? Richard Goss 0481 9652 1214 (Eagle Creek, 225-20348 (Hawarden), U.K.)

Send your ad to: **Walter's**, *Corporation*
 1014 1st Ave. East, P.O. Box 1180, Montreal, Quebec H3C 1H6
 (514) 392-1111. Fax: (514) 392-1112. E-mail: info@walters.ca
 Send your ad to: **Walter's**, *Corporation*
 1014 1st Ave. East, P.O. Box 1180, Montreal, Quebec H3C 1H6
 (514) 392-1111. Fax: (514) 392-1112. E-mail: info@walters.ca

16727077, STATE OF TEXAS, HD
 DIST #3, EXAMINER 12, MATTHEW
 POON, SIGNER 11, CALLI-
 GRAPHER PROFESSIONAL, MAS-
 TERTING CALLIGRAPHER #1, MOORE
 TRAIL V2 12, EASE V8, START 17
 Full version, Head 13, Freedom #2,
 Full version, TRAIL, Specialized,
 Thought from processes WORLD,
 MASC #5, GOLDEN IMAGE
 Hand Trimmer design/typo disk,
 HEAVY LABELS TRANSPLANT TO
 BOLD WITH CIP ON WORD

MICROSOFT, GENERAL, & IBM
 NEEDHAM, & Consulting, Boston
 HENRI & Systems, BOSTON, MA
 Consultant, MA, Data, Inc.
 TOLSON, & Systems, DC, MA
 BOSTON, CONSULTING, & Systems, MA
 27 State-Mass (and not into the
 main, disappeared, & Report
 Thompson, Anderson, Proj. Book
 Richard W.D., Boston, Mass.
 & Consulting, Proj. for Mass
 Federal, W.D., Chicago, Illinois
 Assistant, Project, Computer
 Management, Cambridge, Proj.
 System, Technology, Proj.
 Systems, Forms, Proj.
 Professional, Page 2, Page 2
 Proj. Management, Proj. Copy
 Available after Version 1.1, System
 2, (E)Book Manual

CRASH DATE GRAPHICS CARD by
MILASTIL, IT ALSO GRAPHICS
CARD by MILASTIL, EDITHAM
21" MULTISCREEN MONITOR AND
SPECIAL, NEW SOFTWARE TO
RUN MONITOR

RTAR T1 with graphics card, Video Graphics Card, 21" Color Monitor, FLATBED SCANNER, 3750KHz 100MB Removable hard disk, CD-ROM, Link 8, Link 87, Mouse, Packaged Adobe Photoshop (Level 2 SEM), HP Part Number C00006, HP Toner Part Number 80274A, HP Memory SMM8 Part Number C00004.
Write to: Div. 32 Hawthood Road,
Shelby, West Virginia 26168-480,
USA

Universal Joint Bearing, 12-18
Balls, Lubeless, 121 Millingbury
Road, Cranston, R.I., 02906.
SOPH S&B Inc. 04703 JEWELL
1129

Wizards Manuals for 2nd level, *summon*, 37 pages. Lord of the Lampoons. Another World. Storage Master. Hero. Turbo (The Game). Rollabouts. P042. Please write with details to David Apple, 28 Palmy Road, Sheffield, S21 7PA. 1120.

1000

IOA's of 5T and 8 bit software from Hq. All original commercial files in original packaging, including for every item, e.g. Pire Mario/Seaside 50p, Soundboard Shadow Dancer CD, Shogun/Black/Parade CD, Jordan's Lotus Notes/Manager CD, Eliza/Star Trek CD, 1 Meg SIMM CD each, Japan 1980 C15, Evening class 10 for CD 50. Write for full to Dave Clayton, 1st Colchester Avenue, Elm, Kent, SA5 10D. 1100

Newfound bargains. Copies
Pirtek Consumables. Withers to 10
Laser LIBRARY INFORMATION, 2000,
WCHS, MAY/2 92, CW, MARC,
P33. Inkjet cartridges to 10 Laser
P3300, 2000, 2000-40000000
1000. Color to 10. Color RAN

[illegible]

Start STI-6000 (4400) plus 14
VGA frame monitor and monitor
interfacing cable, with 500
transistor CMOS, 640 dpi mouse
and Joyp. Two clock cards;
Serial +16 with expansion
Cinema/Video 8-ch, 5-1

[illegible]

Sale: Hardware **Mail: 922**
37799. Fax Carded with 300, 5555
 100 1.284/2.040. HD disk drive, and
 need a lot for 90 games 21500.
37800. 386/333 HD internal disk
 drive 215. External floppy disk drive
 215. Display monitor arm with
 keyboard support arm 215.
 386/333. Fax, modem, radio and clock
 215.
37801. Removable hard Modems 21
 215. Modems. Printers
Professional Software **2222222**
37802. 386/333 PC Carding 145
Modem 225. Software **Imagines**
 4-3 and 3.84000 225. 386/333
 100 1.284/2.040. External 3 225
 386/333. 386/333 225 1.284/2.040
 Fax, Modem 225. 386/333
 100 1.284/2.040. 386/333
 2 62. Mail 225. 386/333
 386/333. 386/333. 386/333
 386/333. 386/333. 386/333
 The One 225. 386/333
Computer Experts 2252222 - all at
 100 1.284/2.040. all about 100 1.284/2.040
 100 1.284/2.040. 100 1.284/2.040
For Sale: 386/333 2252222 14
 100 1.284/2.040. 100 1.284/2.040
 100 1.284/2.040. 100 1.284/2.040

[illegible]

Star 3040STE 8 Meg with 14 inch High Res monitor, 4.00 Meg Main Memory and second floppy drive. Magic Notebook SL with floppy, Star Works, SpeedyGIGS, Thats What's 3, Image Copy 4, View 2 and a load of other useful programs. A big pile of flops with your disks. Also your PC, and others with a heart. Don't miss it! Call 909 441 7400. Tel. evening, line 01800 41 90239 (Toll Service) 11.00
FOR SALE - STAR SOFTWARE

[illegible]

now you can create



with **5** new
programs from

SOFTICE

DIGITAL HOME STUDIO

Four integrated programs in one interface!

- Powerful Sampler
- Audio-MIDI sequencer
- Direct-to-Disk Recording (D2D)
- Digital Effects Generator

A home studio within your Falcon!



The audio sequencer allows the replay of sample in a range of 4 octaves without any additional hardware.

Record large samples with D2D and mix with D2D's, D2D's, and MIDI sounds on a synthesizer in real time!

D2D's can add digital effects (reverb, D2D's) in real time on the sequencer.

DIGITAL TRACKER

Digital Tracker can mix 12 tracks with 12 polyphonic voices and more than 100 sounds. No additional hardware required—except for a Falcon! Each sound can be played at any frequency, at any volume, and at any position in the sequence. Sounds can be sampled at any frequency from 100 Hz to 5000 Hz in 1-bit precision. Each track has master volume and pan/mono graphic display.



Tracker can also play music in a frequency higher than CD-quality (20000, 16-bit, interval of 44.100 Hz, 16-bit) with linear interpolation for best quality!

MIDPLAY

A MIDI file player (MIDI files for the target Falcon) with no need for additional hardware support.

With this software you can access the MIDI file list—first. Routes to the software—usually any music format is supported.

MIDPLAY even allows playback through synthesizers or CD Expanders—only a Falcon and MIDPLAY is necessary!



LIVE MACHINE

Usually for live use, LIVE MACHINE can compare up to eight D2D tracks in several parts, and controlled in real time using MIDI commands.



Each part can have other effects (reverb, delay, etc.), and can be played once or looped, with full control to play the next part.

EXPAND

Expand simulates a MIDI expander/sampler. Can load audio sounds and create MIDI instruments or commands with full control using a sequencer or keyboard.

Define the sound and playback in D2D directly from your hard drive!



PRICES:

D.H.S.	£89.95
Digital Tracker ...	£34.95
Expand	£44.95
Midplay	£34.95
Live Machine	£44.95
CD-ROM	£19.95
D.H.S. & D.T. class files	

All prices inc. VAT, carriage extra.
For more details contact:

Titan Designs Ltd
4 Wilford Way, Selly Oak
Birmingham B29 4AX, UK
Tel: +44 (0)121-693 6669
Fax: +44 (0)121-494 9638

e-mail: titandesigns@compuserve.com
<http://www.td.computerware.com/>
homepage: <http://titandesigns.com/>