

**ST inside**  
ACTION

# ATARI

## ST USER

March 1994  
Issue 98  
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Pagestream V2.2

Calamus 5

Timeworks Publisher 2

Calamus SL

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Truepoint (for Falcon)

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Future Design Disk

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Cad 3D

Neo-Desk 3

That's Surface

Signs and Banners

Calendar & Stationery

Greeting Cards

MUSIC SOFTWARE

Emagic Notator SL

Emagic Creator

Emagic Unitor 2

Cubase

Cubase Version 3

Cubase Light

Notator Alpha

Cubase Audio

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Atari Internal Disk Drive

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TOS 2.06 STE/STFM

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Outercasing STE/STFM

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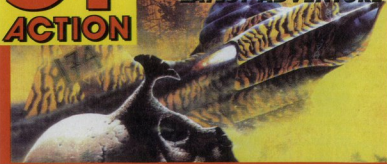
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**ST  
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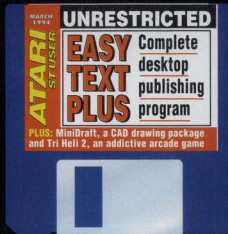
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# The CoverDisk



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- Use high resolution only software on colour monitors with the MonoPack utility
- Teddy-TERM v2 will get your modem talking to bulletin boards around the world in no time at all

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

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<b>Data Pulse +60Mb</b>	<b>£170</b>
<b>Data Pulse +170Mb</b>	<b>£280</b>
<b>Data Pulse +240Mb</b>	<b>£360</b>
<b>D/P +21Mb Floptical</b>	<b>£330</b>
<b>D/P +128Mb Optical</b>	<b>£810</b>
<i>Please note all prices quoted are for main drive unit only. Add IC D LINK for use with ST or SCSI cable for use with FALCON</i>	
<b>ICD LINK (ST)</b>	<b>£89.99</b>
<b>SCSI Cable (Falcon)</b>	<b>£39.99</b>
<b>128Mb Optical Disk</b>	<b>£35.00</b>
<b>21Mb Floptical Disk</b>	<b>£19.99</b>
<b>ICD PRO Utilities</b>	<b>£39.99</b>

## Hand Scanner

- 100,200,300,400 Dpi Resolution
- 1 letter mode, 3 photo modes
- 105mm scanning head
- Includes Cartridge through port with switch box
- Supplied with Scanlite Accessory. Compatible with any graphics package which supports accessories.
- Allows scanning directly into compatible packages, such as Silhouette.

## Hand Scanner+ Scanlite £99.99

Hand scanner supplied with Silhouette V1.4 Autotracing user package (mono monitor only). £119.99

## Repair Services

**The Only ATARI Authorised Repair Centre in the UK**

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

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

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

<b>Minimum repair charge</b>	<b>£35.25</b>
<b>Same day service</b>	<b>£15.00</b>
<b>STFM(E) PSU</b>	<b>£34.99</b>
<b>1Mb internal drive</b>	<b>£39.99</b>
<b>TOS 2.06 + Switch STFM</b>	<b>£65.00</b>
<b>Courier Pickup</b>	<b>£11.00</b>
<b>Courier Return</b>	<b>£7.00</b>

## PC Emulators

- Check configuration before ordering
- PC SF2 STFM or STE (XT) £49.99**
- AT SF2 STFM (8MHz) £139.99**

# Jaguar delay blow for Britain

by John Butters

**IN ORDER** to meet American demand for their revolutionary 64-bit Jaguar games system, Atari have been forced to delay the machine's launch in Britain until later this year.

"Reasonable" supply is promised from April but full availability has been put back until at least July.

Company boss Jack Tramiel told Atari ST User that his firm will be putting all their efforts into building Jaguar sales in the US, severely restricting European supplies.

Machines are being sold there as quickly as they are made, and the Jaguar's profile was boosted further at the recent Consumer Electronics Show held in Las Vegas.

As well as meeting a warm welcome from visitors, the console won the most awards ever presented by the American video games press for a new product at the bi-annual event.

It was named Best New Games System, Best New Hardware System, 1993 Technical Achievement of the Year - and Jaguar game Tempest 2000 was voted Best Game of the

Show. Said Atari boss Sam Tramiel: "We developed Jaguar's 64-bit technology to raise the standard for game system performance, making it the most powerful, affordable system on the market."

"It's an honour to know that the leading trade magazines and their readers recognise our efforts."

Head of Atari Europe Bob Gleadow, meanwhile, enthused: "I've had visits from Woolworths, Dixons, Rumbelows... all wanting to take the machine."

"It's the most talked about product at the show. People from Sega and Nintendo have been constant visitors to the stand, wanting to



CES: Awards and praise for Jaguar

try it for themselves."

A spokesman for Atari said a limited number of Jaguars will be shipped into Britain every few weeks until the end of March.

## Catching up with CD-ROM

ATARI computers have finally caught up with the CD-ROM revolution with the launch of a brand new compact disc from US-based specialist Walnut Creek.

The disc contains 2,872 Atari-specific files totalling a stunning 616Mb of data and at \$39.95 costs less than a full price game.

It is mainly composed of shareware and public domain utility software but the list includes more than 50Mb of games - the equivalent of some 70 standard 720k floppy disks.

There are a number of commercial demos, animations, full colour graphics files, sound samples and even 15Mb of assorted fonts for DTP programs like Calamus, Timeworks and PageStream.

Most of the programs are available in both ready to run and archived forms and a complete index is supplied on the disk as a large text file.

A free CD-ROM driver and PhotoCD viewing utility is supplied on

an accompanying floppy disk.

Hardware requirements are any Atari running MultiTOS with a SCSI-compatible CD-ROM drive.

The disc comes from It's All Relative, 2233, Keaven Lane, Florissant, Mo, USA 63031. Telephone 010 1 314 831 9482.

*Photo Show*<sup>™</sup>  
Camera to Computer  
with Kodak Photo CD  
Technology

Copyright 1995 It's All Relative

CD-ROM: Almost 3,000 Atari files and programs

## Managing from the desktop

DEXTROUS is a file management accessory due soon for Falcon computers that will enable users to choose between the machine's GEM desktop or the program's own.

Every function of the computer's desktop is provided, and the package allows files to be seen even when they are inside directories.

Using the package's Iconic Organiser, files can be arranged in logical directories in a similar way to the Windows Program Manager on PC-compatible computers.

Icons can be produced in any art package to make thumbnails from image files.

A File Viewer - accessed when any file is selected - displays the content in its native format, whether it is graphics or text. Formats not supported are shown as Ascii or Hex.

The £39.95 is due for imminent release by Titan Designs (021-414 1630).



## CompuServe slash connect costs

ONLINE information giant CompuServe have slashed connect charges for hourly-priced services by around 40 per cent.

The US-based firm say the cuts have been made possible because advanced technology has resulted in lower operating costs.

"We are pleased to pass these savings on to our members in the form of substantially lower connect rates," said Barry F Berkov, CompuServe's executive vice president.

"We have the financial strength and stability to allow us to reduce our rates while continuing to offer the most extensive range of services in the industry."

Areas affected by the savings include interactive forums, premium travel services, financial services, reference databases and entertainment.

Someone accessing the services using a 1,200 or 2,400 baud modem now pays about £3.30 an hour compared to the old rate of £5.50. Other baud rates see similar cuts.

## Complaints over computer use

DESPITE the increased sales of computers over recent years, only one in five Britons find them easy to operate and millions more have other complaints about their use.

That's the finding of a Gallup survey, which also shows people think computers have made business unnecessarily complicated.

Only one in 20 of the 1,000 people questioned believed computers helped running a home or family, with a large number of them saying they will never buy a machine.

The survey also showed concerns about the price of computers, that children spend too much time playing games and about the spread of computer pornography.

On a more positive note, half of Britons consider computers a must in today's society and nearly as many people think they have made business more sophisticated.

## On sale

WATCH out for the April issue - on sale at a newsagent near you from March 17.

## Another music Breakthru

AN UPGRADE to Software Technology's Breakthru sequencer adds a range of features, and the Plus version now comes with a device to convert the ST's modem port into a second Midi output socket.

Software extras include a multi-track editable score display with detailed control of layout and advanced humanise options which can simulate human playing characteristics.

There is also improved song arrangement,

graphical controller editing, an on-screen Midi generator and a disk utilities page for format, delete and so on.

Breakthru 2 and Breakthru Plus 2 are supplied with a 2.5-hour video tutorial and upgrades are available from v1 to registered users.

For newcomers Breakthru 2 costs £149.95 and Breakthru Plus 2 sells at £179.95. Software Technology can be telephoned on 061-236 2515.

## Survey to report on security breaches

THE Government are carrying out a national survey to find the extent of computer security breaches experienced by British firms.

It will find the costs of violations to companies, identify major causes, give evidence about the level of computer misuse and give an indication of user-awareness of security issues.

Ten thousand firms are taking part in the survey, and the results are expected early this year.

The last study in 1991 found that more than half of business had suffered from security problems at an estimated total cost of £1.1 billion a year.

Modems: Survey to find user awareness of security issues



## Moving north with Atari

SHOWS for owners of Atari computers living in north-east England and Scotland are to be held in Newcastle-Upon-Tyne and Glasgow on April 16 and 17 respectively.

Both will be sponsored by Atari ST User and the line up of exhibitors from the professional and productivity side of the market includes Titan Designs, CGS ComputerBild and Compo.

Other major players such as System Solutions are also planning to attend. The doors are open between 10am and 5pm, and full details of the venues can be found on page 96.

## DIARY DATES

April 10-12, 1994

European Computer Trade Show  
Venue: Business Design Centre, London  
Organiser: Blenheim On-line  
(081-742 2828)

Europe's largest trade show for the computer and video games industry.

April 16, 1994

Spring All Micro Show  
Venue: Bingley Hall, Staffs  
Organiser: Sharward Services  
(0473 272002)

Last autumn's show contained 70 exhibitors - some with ST software and hardware.

April 16, 1994

Atari Show  
Venue: Eldon Exhibition Centre, Newcastle-Upon-Tyne  
Organiser: Compo Software  
(0480 891819)

See news story and p96 for more information.

April 17, 1994

Atari Show  
Venue: Central Hotel, Glasgow  
Organiser: Compo Software  
(0480 891819)

See news story and p96 for more information.

April 22 to 24, 1994

MEMS '94  
Venue: Wembley, London  
Organiser: Westminster Exhibitions  
(0222 512128)

Britain's premier Midi and Electronic Music show.

September 20-25, 1994

Live '94  
Venue: Earls Court  
Organiser: News International  
(071-782 6893)

Some players in the electronic entertainment industry have pledged their support for this large consumer electronics show.

October 6-9, 1994

BBC Big Bash  
Venue: NEC, Birmingham  
Organiser: Haymarket Exhibitions  
Future World area of this big show will contain the latest computer games and virtual reality.

October 26-30, 1994

Future Entertainment Show  
Venue: Earls Court II  
Organiser: Future Exhibitions  
(0225 442244)

The biggest public show for computer and video games players.



# System Solutions

## World Record

68000 CPU running at 36MHz

Two new Accelerators are now available for the MegaST and ST(FM) computers. Performance and price are sensational. The T28 with a 28MHz clock is 3.5 times faster and the T36 with a 36MHz clock is 4.5 times faster than the original ST's clock. The use of the original 68000 processor guarantees near perfect compatibility. CPU caching is switchable for added compatibility with the cartridge port devices. DTP, Graphics Software and Cubase show a fantastic speed increase. Compared with a standard ST with NVDI and without Blitter, Gembench gives the following results:

	ST(FM)	T28	T36
CPU	100%	299%	373%
Graphics	100%	949%	1097%
Average	100%	763%	890%

The combination of the T28/T36 and NVDI transforms the humble ST into a powerful graphics workstation - a dream come true for all those who want more speed at an affordable price.

T28 Accelerator, 28MHz, 64kb Cache £189

T36 Accelerator, 36MHz, 64kb Cache £279

NVDI bought with either £39.95

## High Density

e!Co doubles Disk space to 1.44Mbl

- ★ Automatic floppy disk detection
- ★ Compatible with your floppy disks
- ★ Software is included. (ACC and CPX)

Kit price still only £79.95 inc VAT

## High Res Monitors

The SM14s is a perfect replacement for the Atari SM124/5 monochrome monitors, exceeding the original specifications. The 14" high resolution paperwhite FST gives a perfectly centred, crisp and sharp image without blurring at the edges.

"Essential Buy, 90%"

ST Review, May '93

without audio

SM14 £129.95

with audio

SM14s £149.95



## FLY LIKE THE WIND...

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

MultiTOS and SpeedoGDOS compatible.

"Scrolling through a long text file in Word Plus took half the time ... Calamus, Calligrapher and Wordfair also showed a marked improvement ... Compatibility is remarkable and we have yet to find a program that is not compatible with NVDI. ... a must for all ST and Falcon owners"

ST Review Issue 16, August 1993.

NVDI Version 2.5 - £49.95

## MiniS

The small award winning SCSI Hard Disk System at an affordable price, for all computers with SCSI connections.

Awarded 92%, "Essential buy" Atari ST Review Christmas '93

ATARI ST REVIEW  
92%  
ST Review  
Gold Award  
93% Feb 1993



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

	TT/Falcon	ST(FM/e)
127MB	£279	£319
170MB	£309	£349
270MB	£359	£399
340MB	£459	£499
525MB	£699	£739
1080MB	£999	£1049
1800MB	£1499	£1549

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

To order and for further information telephone or write to:

### System Solutions

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

### Mail Order Telephone

**0753-832212**

or come to our London Showroom at:

### The Desktop Centre

17-19 Blackwater Street, SE22 8RS

Tel: 081-693 3355 Fax: 081-693 6936

For small items under £50 please add £2.95 P&P

Large items over £50, courier charge £10

Dealer enquiries are welcome

## KeyClicks

### THEIR BACK!!

At long last we have this invaluable keyboard accessory back in stock. The Atari keyboard has never been famous for its good feel, but now you can cure this with KeyClicks. These are small rubber "mushrooms" that fit between the keypad and the actuator underneath. They will transform the feel of the keys. Easy DIY installation... for ST(FM/e), and FALCON 030 computers.

Price: £19.95 for a complete set.

### Special Offer:

If purchased with any other product only £15.00

## The Falcon Column

Are you planning to purchase a Falcon? How much of your old kit will work on IT? Or do you just feel tempted and want to know how much a complete system would cost? For advice and a personal quote phone:

London: 081-693 3355 or

Windsor: 0753 832212

### Now in Stock

### Falcon 030 Starter Pack:

4mb, 14" Mono Monitor & BlowUP £889

BlowUP 030 the Display Expander Using Software and/or Hardware the display expands up to 400%. Virtual screens up to 8000% are also possible.

BlowUP 030 - Software £15.00

up to 880x608 53/10Hz

BlowUP 030 - Hard 1 £49.95

Excellent for Multiscan's (1024x768)

BlowUP 030 - Hard 2 £69.95

VGA and other fixed frequency monitors.

falconWING SIMM memory board

Accepts 4x 1mb or 4mb SIMM,

falconWING - 0mb £49.95

falconWING - 14mb £69.95

Price includes trade-in on 4mb memory board.

Falcon Tower £179.95

Integrates the system, space for extra hard drives, separate or replacement keyboard. Phone for the Tower Fact Sheet and price list. DIY or ask for a quote on ready-to-run fitted systems.

We are now

dealers for

## Steinberg

Cubase Audio for the Falcon 030 is now up and running in the Showroom.

## Repairs & Upgrades

All repairs are carried out by qualified personnel. If you would like a quote, please ask for an estimate. Need it back in a hurry? Then ask for our professional next-day service. Call us to discuss your upgrade requirements. We fit all quality upgrade products available. We can collect and deliver.

Call the professionals now for your personal quote.

### Windsor Service Centre:

Windsor Business Centre, off Duke Street,

Windsor, SL4 1SE. Tel: 0753-818816

### London Service Centre:

The Desktop Centre, 17-19 Blackwater Street,

East Dulwich, SE22 8RS. Tel: 081-693 1919

# ATARI WORKSHOP

# Euro News

Don Maple rounds up the latest highlights from the European Atari scene



## Eye witness

SCREEN Eye is a real-time integrated video/sound digitiser for the Falcon which enables video signals to be taken from a video camera, recorder, TV or S-VHS source.

Screen images can be grabbed, or whole sequences stored as films. These can be played back and manipulated in a number of ways using the software video editing kit.

The video window can be opened in several fixed sizes and display rates. These range from six to a full to 25 pictures per second for a quarter window.

The Screen Eye program also be run as

accessory to watch live a video signal with sound in a window while simultaneously doing something else.

This signal can come from a TV or monitor camera elsewhere in the house. Screen Eye runs only in true colour mode.

The package also contains a developer kit and necessary drivers to program the hardware directly. The product is available from Matrix, Talstrasse 16, 71570 Oppenweiler, Germany.

In Britain telephone Compo Software on 0480 891819.

## Key to success

PERFECT Keys is a hardware interface enabling any ST or Falcon owner to replace their keyboard with an external, professional AT-style one.

In this way a keyboard with nice tactile feedback can be used and it becomes detachable so the ST can be put elsewhere, giving you a tidy desk with more space.

The interface is installed by unplugging the ST's keyboard and inserting the Perfect Keys connector. The ST keyboard can remain in the computer.

No soldering or software driver is required and the interface contains standard joystick and mouse ports as well as a third port for a MicroSoft-compatible mouse.

The interface comes in four versions, some with a keyboard and some without.

Top-of-the-line Tracky is an AT keyboard with an integrated interface and a trackball priced at DM348 (£140). Perfect Keys is identical but with cursor keys at DM299 (£120).

Perfect Keys Set contains an unmodified keyboard and an external interface going for DM249 (£100).

Finally, Perfect Keys Interface alone comes in a small box containing all parts priced DM169 (£70). For more information write to Galactic, Julienstr. 7, 45130 Essen, Germany.



## JML Snapshot

A SNAPSHOT utility saves the screen as a picture file. JML Snapshot runs as an accessory and is extremely flexible as well as one of rare programs to handle the Falcon's true colour mode.

To configure the program rename it into JML\_SNAP.PRG and run it. A dialogue box with four options will appear.

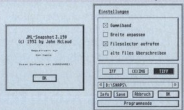
Rubber band on, allows the user to select a portion of the screen with a rubber band. In off mode, only the contents of the window under the mouse are saved or, if there is no window, the full screen is saved.

A default directory where to save the snapshots can be specified and the screens are saved as IFF, (X)IMG or TIFF images.

Pictures are saved either under a default name of SNAP\_xx.ext where xx starts with 00 and automatically increments with every new save, or you can have a file selector pop up.

JML Snapshot is available in two versions, a free demo version with some features such as true colour disabled, and the full shareware version which the author will send you upon receiving the registration fee of DM20 (£10 from the UK).

Write to: John McLeod, Mozartstrasse 1a, 65439 Flörsheim am Main, Germany.



• The CD of Atari shareware announced here a few months ago is now a reality. It contains latest versions of several hundred shareware programs – too numerous to list individually.

The whole project is a non-profit undertaking so the price covers production and mailing costs only.

Foreign orders, for example from the UK, should be accompanied by a Eurocheque for DM38.50 (£16) to avoid falling prey to the greediness of local banks.

Aside from being an exceptionally good deal, this project should be supported to encourage its continuation.

The CD can also be read on a PC-compatible, so even if you don't have a CD-ROM attached to your Atari it's still worth buying.

Simply use the PC to copy individual programs from CD to a floppy. Since the Atari ST can read PC disks, the programs can be copied over that way. At long last that PC at work can be put to some good use!

For more information or to place an order contact: Bernd Lohrum, Schlossbergstrasse 36, 66440 Blieskastel, Germany.

• Following the success of the Fried Bits Eastern Coding Convention, the organisers are now preparing for the second party.

Provisionally scheduled for April 1 to 4 in Bremen, Germany, the gathering will welcome all major Atari demo coding groups.

Several Falcon competitions will be held to select the best music, best graphic and best overall demo. It will cost about DM25 (£10) to get in and the party will go on around the clock.

The information is subject to change so contact the organisers The Independent at the following address for the latest: Frank Kurpiela, St.-Moritz-Str. 8, 28325 Bremen, Germany.





## OFFICIAL ATARI REPAIR CENTRE

### • COMPUTERS • MONITORS • REPAIRS WITHOUT DIAGNOSTIC FEES

520/1040 ST/STM/STF/STFM/STE .....	£59.95	} Including delivery back by courier service
Monochrome, Colour Monitors excluding CRT, L.O.P.T. ....	£59.95	

**★** We pick up computers for repairs and memory upgrades for Next Day delivery to us by Courier Service for only £5.00 + VAT

### MEMORY UPGRADES

MARPET DEVELOPMENTS OFFICIAL XTRA-RAM DELUXE INSTALLERS

520 STF/STFM to 1 Meg .....	* £59.95	520 STE to 1 Meg .....	* £17.95
520 ST/STM/STF/STFM to 2.5 Meg .....	* £89.95	520 STE to 2 Meg .....	* £59.95
520 ST/STM/STF/STFM to 4 Meg .....	* £139.95	520 STE to 4 Meg .....	* £114.95

**\*FREE FITTING**

### **NEW** PROTAR PROFILE SERIES II HARD DRIVES QUANTUM/MAXTOR MECHANISM WITH CACHE

Compatible with all ST/STF/STFM/STE/Mega ST/Mega STE/Falcon

Profile 50DC .....	£249.95	Profile 170DC .....	£369.95
Profile 120DC .....	£319.95	Profile 240DC .....	£479.95

● POA for Higher Range of Profile Series II and SCSI Bare Drive

### SCSI BARE QUANTUM HARD DRIVES WITH CACHE

50Mb .....	£129.95	170Mb .....	£269.95
120 (Maxtor) Mb .....	£199.95	240Mb .....	£349.95

### STFM, STE, FALCON 030 COMPUTERS

1040 STE Family Curriculum Pack II  
1040 STE Music Pack  
Falcon 030 with or without Hard Drive

**NEW VERY LOW PRICES**

**P.O.A.**

### STE TOS-SWITCHER

with Hardware Switch

#### Solderless DIY Kit

STE TOS SWITCHER...£39.95     STE TOS ROMS...£39.95  
STE TOS SWITCHER + 2.06 ROMS...£69.95

### **NEW** STFM TOS-SWITCHER

with Hardware Switch

#### Solderless DIY Kit

**£79.95**  
including 2.06 ROMS

### MONITORS

**AMITAR** £129.95  
including VAT  
excluding delivery  
High Resolution Monochrome Monitor

### ACCESSORIES and EMULATORS

ST/STFM Scant Lead .....	£14.95	10 Blank Sony Discs .....	£9.95
ST/STFM Lead to Philips CM8833 10/14.95		10 Blank Unbranded Discs .....	£5.95
Philips CM8833 Dust Cover .....	£6.95	Forget Me Clock .....	£21.95
Twin Joystick/Mouse Port ext Lead .....	£5.95	PC Speed .....	£59.95
Squak Mouse .....	£14.95	AT Speed 8 .....	£134.95
Dust Cover .....	£4.95	AT Speed C16 .....	£199.95
Mouse Mat .....	£4.95		

### POWER SUPPLIES

STFM/STE Power Supplies (Service Exchange) .....	£29.95
NEW STFM/STE Power supplies with ONE YEAR WARRANTY .....	£49.95

### DISK DRIVES

1 Meg 3.5" Internal Drive .....	£44.95
High Density 3.5" Internal Drive .....	£54.95
High Density 3.5" Internal Drive + Module .....	£79.95

### PRINTERS — HP510 £299.95 — HP550 Colour £549.95

- All prices include VAT and NEXT DAY DELIVERY subject to availability
- Fixed charge for repair does not include Disk Drive Replacement & Keyboard
- All prices subject to change without notice
- We reserve the right to refuse any ST Repair
- Please allow 5 working days for cheque clearance



GUARANTEED SAME DAY DISPATCH (subject to availability)

**PROTAR PROFILE SERIES II 50DC HARD DRIVE**  
**£249.95**  
compatible with complete ST Range and FALCON

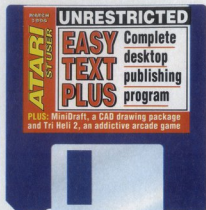
**SPECIAL OFFER**  
FOR A LIMITED PERIOD

Professional Service with no surcharge

# WHILE-U-WAIT!!!

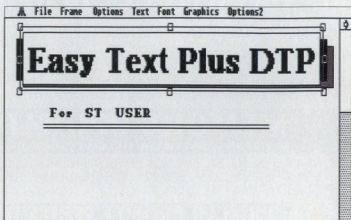
◆ MEMORY UPGRADES ◆ TOS UPGRADES ◆ DISK DRIVE UPGRADES ◆ EMULATORS ◆ ACCELERATORS ◆ many REPAIRS





# disk COVER

This month we have **Easy Text Plus**, an easy to use and powerful DTP package. Or you can chill out playing **Tri Heli II**, a great horizontal scrolling helicopter game



Using Easy Text Plus, you can learn the ins and outs of creating posters, leaflets and other documents with ease

## Easy Text Plus

Create your own posters and documents and print them out with this easy to use desktop publishing program from zzSoft

By: zzSoft  
Configuration: All STs - medium or high resolution  
Start program with: EZT14A.PRG

DESKTOP publishing is one of the areas where the ST is extremely popular. There are many packages, such as Calamus, which offer masses of features but are expensive to buy and are difficult to learn. Easy Text Plus may not be as feature packed as Calamus, but it is designed to be easy to use, providing all the tools and functions you need to create good quality documents.

For a more detailed description about some of Easy Text Plus's features, as well as how to install the program to your floppy or hard disk, turn to the disk tutorial on page 16.

## MonoPack

MonoPack is a utility that lets you use your colour screen as a high resolution monitor, thereby allowing high resolution-only programs to be run

By: Shrimp of New Core  
Configuration: All STs and STEs  
Filename: X\_MONOPK.TOS -  
Self-extracting archive  
Disk space required to extract:  
20,480 bytes  
Start program with: BMAKE1\_2.TOS

AS MOST of you will know, the ST has three standard resolutions: low resolution giving 320 x 200 in 16 colours, medium resolution giving 640 x 200 in four colours and high resolution, also known as mono, giving 640 x 400 in two colours (black and white).

The low and medium resolution modes can be used with a normal TV or dedicated colour monitor, such as the Philips CM8833-II monitors, and operate at frequencies of 50 or 60Hz.

Unfortunately, the high resolution mode requires a dedicated mono monitor which will operate at the higher frequency of 70Hz. This makes for a very stable and crisp display.

Because of this clear picture quality, high resolution mode is used by programs such as desktop publishing, CAD and the majority of Midi applications. These mono-only programs

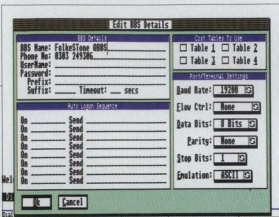
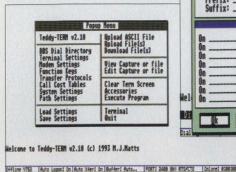
cannot be used on a colour monitor. They will either produce an error message and refuse to run, or they will run, but the screen display will be totally screwed up.

MonoPack is one of a few utilities which, when run, will essentially fool your ST into using your colour monitor as a high resolution one. It does this by emulating a high resolution screen mode with the result being that you can run many high resolution only programs.

Because this is achieved through software means, there are a few drawbacks. First, the pseudo-high resolution display is a far cry from the quality offered by a real mono monitor and second, the ST is continually having to use some processor time (about 35 per cent on an ST) to keep the high resolution emulation going, which means your ST and any programs loaded will run slower than normal.

It is still quite usable though and MonoPack

Teddy-TERM's pop-up menu system makes for quick and easy access to all of the available features



The built-in dial directory lets you store all your favourite BBS phone numbers ready for automatic dialling

## Teddy-TERM v2.10

Do you have a modem and need a good comms package? Then Teddy-TERM is the answer, being extremely easy to use and featuring pop-up menus

IN THE world of the modem and telecommunications, the comms software scene has been best supported by shareware and PD authors.

Chances are that if you know someone who has a modem, they are probably using a shareware or PD comms program, such as Freeze Dried Terminal or Unterm.

The quality of these shareware programs is excellent, offering many features at a very affordable price.

Teddy-TERM 2 is one such quality program which has been designed with ease of use in

provides STE owners with a separate emulation routine which only takes up only 28 per cent of processor time. Which means it's a lot faster on an STE.

When run, MonoPack will allow you to save either the ST or STE-specific mono emulator into a floppy disk boot sector. It is then a simple matter of switching on your ST with this altered floppy disk in the drive in order to activate the mono emulator utility.

You can test MonoPack's ability with the MiniDraft program on this month's CoverDisk, which – although it will run in medium resolution – does look a mess in that particular screen mode.

1. Save a great mono-emulator made by SHIRTP of CORE onto your bootsector!!!!
2. Save the STE-only version. (uses the blitter)
3. Clear the bootsector.
4. Set mono-emulation speed.
5. Pause screen updating while using drive. (on/off)
6. Exit.

MonoPack features two versions of the emulator, one for standard STs and a mega-fast Blitter version for STEs

By: M J Mattis  
Configuration: All STs -  
Medium or high resolution  
Filenames: X.TERM.TOS -  
Self-extracting archive  
Disk space required to extract:  
35028 bytes  
Start program with: T.TERM2.PRG

mind. Although not as feature-packed as other shareware packages, all the essentials, such as dial directory are there.

What's more, thanks to the pop-up menus and the user interface, Teddy-TERM is extremely easy to use for beginners. A simple click of the left or right mouse buttons brings up either the dial directory or menu window for quick selection of phone numbers or commands.

The external protocol and editor feature means that you can use your own favourite transfer protocols, such as XYZ.TTP, or editor such as Edhak.

Remember, this is a shareware program with no disabled features. Everything is there for you to use. Just be sure to send off that registration fee to the author who slaved away to bring you this quality piece of software – it's well worth it.

## Correctly addressed

May we remind readers who are experiencing problems with a damaged CoverDisk that such disks should be sent to the address listed in the "If a fault turns up..." box on page 14, and not to us at Europa House.

If you have sent a faulty CoverDisk to the correct address but have not received a replacement within 28 days, please address your complaints to Atari ST User Customer Services, Europrest Enterprise, Europa House, Adlington Park, Macclesfield SK10 4NP.

## Using the CoverDisk

Write-protect your CoverDisk now by sliding the write-protect tab so you can see through the hole at the top right corner of the CoverDisk.

In order to fill the disk with as many programs as possible, ST User employs disk compression techniques when placing large programs on the CoverDisk.

These files are termed "archived files" and cannot be directly executed from the CoverDisk. Archived files are identified by their names beginning with X\_.

Any files that do not begin with X\_ are actually folders containing files which are not compressed.

These uncompressed files should also be copied to a blank disk. Following are a series of step-by-step instructions for using the CoverDisk.

Important: The ST User CoverDisk uses an extended format of 10 sectors and 81 tracks to increase storage space. This means you will not be able to copy the disk using the ST's built-in copying feature.

To make a backup of the CoverDisk, you will need a copying utility, such as FastCopy 3. Such utilities are available from all good PD libraries.

Alternatively, you may use a formatting utility, to format a disk to the same 10 sector, 82 track specification as the CoverDisk and simply copy all files to this.

### Using archived files

Note: When copying files, the ST refers to disk A and disk B in its onscreen instructions. Disk A refers to the disk being copied while disk B refers to the disk being copied to (usually a pre-formatted blank disk).

1. Format a disk.
2. Copy the required archived file to the formatted disk.
3. Run the copied archived file. It will now automatically "extract" to its full name as the X\_ filename as this is no longer required. The formatted disk should now contain all the files that were in the archive file.

### Normal uncompressed files

1. Format a blank disk.
2. Open the required folder and copy all files in the folder to the formatted disk.
3. You can now immediately run the program's as is.

### Highlighting and dragging files and icons

1. Click once on the item, it should turn black (the item is now highlighted).
2. If you keep the left mouse button held down on the item, a dotted outline of the item appears and you may then

re-position it by moving the mouse to the required position (effectively dragging the icon) and releasing the mouse button.

If you are new to the ST and did not understand some of the terminology in the preceding steps. There now follow an explanation of some basic techniques needed.

### Formatting a disk

1. Place the disk to be formatted in the drive.
2. Highlight the drive A icon.
3. Move mouse pointer up to the FILE menu at the top of the screen and select FORMAT.
4. A box will appear. Click on OK.
5. Another box will appear. Ensure DOUBLE SIDED is selected then click on OK. The disk is now being formatted.

### Copying files to another disk

1. Select the file to be copied by highlighting it and dragging it to the disk B icon.
2. A box entitled COPY FILE(S) appears. Click on OK and follow instructions on the screen exchanging disks as requested.



## Tri Heli II

Save the survivors of an apocalyptic planet who are entombed in diamond-shaped cocoons using your helicopter

By: Janet Dean and Kathy Steinbach  
 Configuration: All STs - low resolution  
 Filenames: X.TRIHEL.TOS -  
 Self-extracting archive  
 Disk space required to extract:  
 188,416 bytes  
 Start program with: TRIHELII2.PRG

## MiniDraft

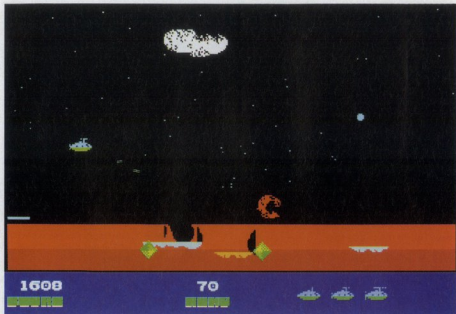
A brilliant computer-aided design package with loads of features for the designer types among you

BEFORE any product reaches the manufacturing stage, it first has to be designed. The majority of designers use computers and design software to literally make their ideas take shape.

This computer design technology falls under the acronym of CAD, which stands for computer-aided design.

MiniDraft, although not as sophisticated as the software used by the professionals, is packed with features and tools to help you create designs.

The uses to which MiniDraft can be put to are varied and numerous. Those interested in electronics can use it to design circuit boards, complete with components, or, if you are about to do some DIY work to your home, such as installing a fitted kitchen or simply trying to re-design the layout of your bedroom, MiniDraft



Although the graphics aren't up to the standards of the Bitmap Brothers, Tri Heli 2 is definitely an addictive game

TRI Heli is a great little game, similar to one which appeared on the 8-bit Atari 400/800 computers in the 80s. Although not graphically stunning, it is still quite addictive.

You must rescue the survivors of a holocaust who have been entombed in diamond-shaped cocoons underground. Using your

helicopter, you must drop bombs on the surface to blast holes which you can carefully navigate through.

To rescue the entombed survivors, simply touch the cocoons with the helicopter then return to the base to drop them off. You have limited ammunition but if your run out, simply return to base to recharge.

By: J H Taylor  
 Configuration: All STs -  
 high resolution  
 Filenames: X.MINIDRAFT.TOS -  
 Self-extracting archive  
 Disk space required to extract:  
 423,936 bytes  
 Start program with: MINIDRAF.PRG

can be used to draw out the plans.

The version of MiniDraft on the CoverDisk is PD with some functions disabled. If you want to get the complete version, simply send off the registration fee, which is a bargain at £12, for the full version, notification of updates, and inexpensive upgrades.

To run MiniDraft, you ideally need a mono monitor. It will run in colour but the display will be a mess. However, being very thoughtful, we have also included a mono emulator utility, called MonoPack, on this month's CoverDisk.

Check out the included disk documentation on how to use it and you will be able to run MiniDraft in the emulated hi-res mode.

## CoverDisk Hotline

Hotline number: 0625 859766,  
 2pm to 5pm every Wednesday

If you have any other problems with the CoverDisk, our technical editor, Darren Evans, will be available on the Atari ST User CoverDisk Hotline. Help is only available within the times specified, and no advice will be available outside these hours.

## If a fault turns up...

With thousands of disks being duplicated each month, a few will inevitably be faulty. Fortunately, we can help you. Send the faulty disk to:

PC Wise, Dowlais Top Business Park, Merthyr Tydfil, Mid Glamorgan CF48 2YY.

A replacement will be sent free of charge but please allow 28 days for delivery.

## Support shareware

Many of the greatest programs which appear on the Atari ST User CoverDisk and in PD libraries are distributed under the shareware banner.

Shareware allows the user to try out the program and if it is found to be suitable, the user is requested to send a registration fee to the author as payment for the program.

This fee is nearly always minuscule, and ensures that the author is encouraged to produce more programs. Generally, once paid, the registration fee also entitles the user to notification and distribution of upgraded versions of the program for a nominal fee, to cover postage, and in many cases, other programs are included free of charge.

So, support shareware, send in your registration fee to ensure that shareware authors continue producing quality programs for the ST.

## Single-sided service

Single-sided drive users wanting the contents on this month's disk on single-sided disks should send their original CoverDisk and a cheque for £1.50 - payable to Atari ST User - to SSD Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP.





Installing Easy Text Plus (ETP from hereon) is a piece of cake thanks to the custom installation routine from those nice people at zSoft.

Before you start though, make sure the CoverDisk is write-protected to save it from data loss or save infection from a virus.

If you are a really careful person, you will also make a backup of the CoverDisk. You will need a copier utility though as the ST's primitive built-in copying routine can't deal with the extended format which we use to cram lots more onto a disk than normal.

If you intend to install ETP to a floppy disk, you will need to format a double-sided disk before you start. This tutorial also assumes you are using a floppy disk but hard disk users will find the differences minor.

All done? Right, here we go. Run the INSTPLUS.PRG file to start the installation process. The installation routine will only work from a floppy disk, so those of you who have already copied it to a hard disk and tried to run the installation from there will now be cursing at the error message on the screen. You will need to delete the files and run it from the floppy.

Once the alert box appears, click on the Proceed button and you will be taken to the Installation menu.

From here, you can select where you want to install ETP to (floppy or hard drive partition), which resolution you will be running ETP in and which printer to use.

So, if for example you have single floppy drive system, click on the A: floppy disk button, choose the screen resolution and the printer and then click on the Install button to start the installation.

When prompted for the destination disk, insert the formatted disk. When asked to Place disk with ST User files in disk drive, this refers to the CoverDisk or the backup of the CoverDisk.

The installation shouldn't take more than five minutes and after it is completed you will be informed that your ST will reboot. This is required in order to load the GDOS driver in the Auto folder, which is required to access

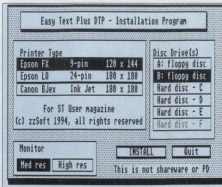
fonts. Eventually you should be left with a disk containing all the files you need to run ETP.

Locate the file EZT\_14A.PRG and run it to start the program. When the introductory box appears, click on OK to continue.

ETP essentially provides you with a work surface much like a blank piece of paper which you place your text and graphics.

In order to be able to provide a method of being able to make laying out text and graphics together, ETP uses frames.

Frames are rectangular areas of user-definable size that you create using the mouse. Once a frame is created, you can alter its size, shape and position on the



Thanks to the installation program, installing Easy Text Plus onto your hard drive or floppy disk couldn't be easier

# Publishing the

## A guide to getting Easy Text Plus up and running, complete with a quick tutorial on some of its features

work space with ease.

Anything that is within a frame, such as some text or graphics, will move as its frame is moved. This makes designing and adjusting the layout of text and graphics very easy and intuitive.

To see how easy it is to create a frame and enter some text into it, move the mouse pointer to the Frame menu and select Start Frame.

If you now move the pointer back to the Frame menu again, you will see that there is a tick mark next to the Start Frame menu item. This indicates that you are currently in Frame use mode.

The mouse is used to actually draw a box. Holding the left mouse button



down, move the mouse and you will see box outline appear.

Choose how big you want the box and release the left mouse button to complete the action. At this point, you can use the mouse to position the frame anywhere on the screen.

To do this, click and hold down the left mouse button with the pointer within the frame box and move the mouse to control the frames position.

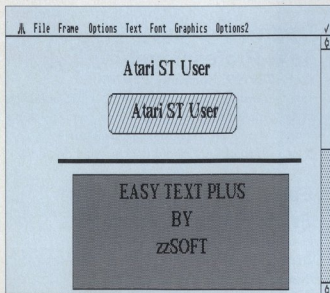
If the frame you created is not exactly the right shape and size you wanted, you can easily edit it by moving the mouse to the Frame menu and selecting Use Frame. Alternatively, you can just click on the frame to change with the right mouse button.

Do this now and you will see that another line outlines the frame with smaller squares on each corner and four sides.

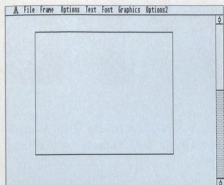
These smaller squares allow you to re-size the frame with ease. If, for instance, you wanted to make the frame taller, click and hold down the left mouse button on the small square on the top or bottom edge of the frame. If you now move the mouse, the frame will stretch in the vertical direction.

Using the small squares on the left and right hand sides allow you to enlarge or shrink the frame in the horizontal direction. The corner squares alter the shape of the frame both horizontally and vertically.

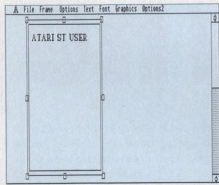
Well, that's how easy it is to create and edit a frame. Let's actually put something into it. The first thing you must do to put text into a frame is first create a frame and then select Use Frame from



Easy Text offers basic graphic frames such as rounded rectangles and lines, with the ability to use fill patterns

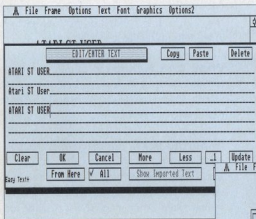


Creating a frame is easy. Just use the mouse to draw the frame to any size you want

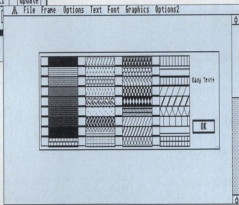


You can change the shape and position of a window very easily through use of re-sizing squares

# the easy way



Editing your text is done via the edit/enter text box which also has copy and paste functions available. Alternatively, you can import text from First Word or First Word Plus



To use Easy Text's built-in fill patterns, simply bring up the fill pattern selector and click on the one you want. Easy Text will then create the pattern

typing, you will undoubtedly make a mistake and need to make changes to the text in a frame.

To edit text, you first need to ensure you are not currently using a frame by moving the mouse to the Frame menu and select End Use Frame.

Next, choose Select Frame & Edit from the Frame menu. Now click the mouse pointer over the text or frame you wish to edit. A box will appear containing any text that was already in the frame you selected. If there are any errors, you can use the mouse and cursor keys to move to the offending text line and correct the error.

Only eight lines of text are shown at a time, so if your text is greater than eight

lines, you can click on More or Less to scroll forwards and backwards eight lines at a time.

Once you have finished editing your text, click on OK and the edited text will replace the text in the frame.

Another way to enter text into a frame is through use of the Import Text function. This allows you to create your text using a dedicated word processor such as First Word or First Word Plus.

You can also spruce up your document by using graphic boxes which can be filled with various patterns. As an example, let's create a box with rounded corners and drawn with a thick line.

This is also a good time to explain how to delete a frame which you no longer want. To do this, Move the mouse pointer to the Options2 menu and select Trash Frame.

You then simply need to click on the frame which you want to delete. To avoid any accidental erasing, you will be asked for confirmation before the delete will occur.

To create our graphic box, we first need to choose the line width. Move the mouse pointer to the Graphics menu and select Set Line Width. Choose the thickest line width. You can choose Set Line Style too if you feel like it. This will let you choose from solid through dotted or dashed line styles.

## NEW FRAME

Next, select Rounded Rectangle from the Graphics menu. Once you have chosen the fill pattern and line width, you need to create the new frame. This is done in exactly the same way as creating a normal frame.

Move the mouse pointer to the Frame menu and select Start Frame. Draw the frame to your preferred size and then release the mouse button.

As you can see, nothing has happened yet. The rounded rectangle is only displayed when you select Use Frame. Do this now from the Frame menu or simply click on the Frame On screen using the right mouse button.

You can even fill the box with a pattern to make it even more attractive. First select End Use Frame or click on the current frame with the right mouse button.

Next, Move the mouse pointer to the Graphics menu and select Fills. Choose whichever fill pattern takes your fancy by clicking on the box left of the pattern and then click on OK.

To make the change, move the mouse pointer to the Frame menu and choose Select & Change. Now simply click on the frame to change and it will be filled with the selected pattern.

And that's how easy Easy Text Plus is to use. Of course, there are many more functions available to help you create some excellent documents.

If you want to get the most from Easy Text Plus, you can send off for the complete printed manual which has information on all of Easy Text's features. For information on how to get the manual, as well as upgrades and additional GDOS fonts, turn to page 15 for details.

the Frame menu, or click on the frame with the right mouse button, to activate the re-sizing squares.

Now, using the keyboard, type in any text which springs to mind. As you can see, the text is displayed in the frame. It's not possible to edit the text directly from within the frame, so if you make a mistake, don't worry, we will get on to editing text within frames shortly.

Once you have finished typing, pressing Control and Return, Alternate and Z or selecting End Use from the Frame menu will end the text entry and store the text within the frame.

Entering text this way is only possible the first time a frame is created. Once the text is stored in the frame, you have to use the Select & Edit menu item explained shortly.

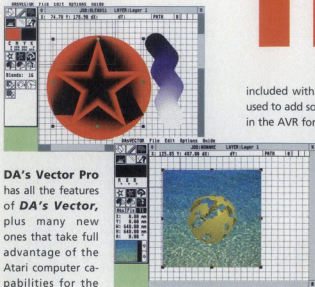
You probably found that the text you entered was a little on the small side. This is because the font size defaulted to ten when Easy Text Plus loaded.

To change the size of the text, move the mouse pointer to the Font menu and select the size of font you want. To make the change, move the mouse pointer to the Frame menu and click on Select & Change and then click the left mouse button on the text.

Unless you are perfect at spelling and



# They're



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

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

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

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

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

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

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

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

**Movie compiler.** This compiler program is

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

## DA's Picture

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

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

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

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

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

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

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

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

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

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

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

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

**Print.** *DA's Picture* can output directly to HP 550/LaserJet II, III, IV, Atari SLM, Canon CLC, Star NL-10 and NEC P67. You may also print to disk as IMG or TIFF/TIC/TH.

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

**Options.** *DA's Picture* is a modular program, this means peripherals such as scanners and Digitisers can be used without leaving the program. The first module (available now) is capable of digitising directly to a Falcon in 24 bit colour, and of course any other resolution, by using the *FalconEye* digitiser from Matrix. This incredibly powerful device fits into the inter-



# here...

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

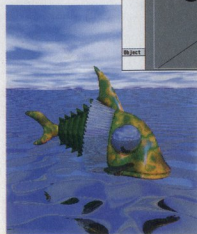
## InShape

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

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

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

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



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



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

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

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

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

## Vector Graphics.

**DA's Vector** owners can import objects that incorporate pictures and gradient fills. Other formats supported are CVG, and GEM Metafile. Once imported, objects can be edited with the vector editor, you can also make objects from scratch. Also included is a bezier tracer for converting pixel graphics. Objects may be saved in libraries that are automatically loaded with your document.

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

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

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

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

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

**Tabby Graphics Tablet.** **Tabby** makes drawing freehand directly to the screen an easy task. Simply plug the hardware into the serial port, **i n s t a l l** **Tabby** program and it's ready for use. Ask for details on the forthcoming



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

## Price List

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

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



or write to:  
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books to the one you are planning. There is no shame in using other designs as the basis for your own as long as you don't actually copy the design itself.

Page size is usually decided for you because most of us use A4 paper in printers that can't print much bigger than that anyway. If you really need a large document such as a poster at A3 size, and above, you could always consider producing an A4 master and having it enlarged by photocopier or commercial printer. Smaller documents, such as A5 booklets and manuals, can be produced by printing two pages side by side on A4 landscape paper and folding or cutting them afterward.

#### GOOD MARGIN

Once you decided on page size, you have to think about margins. The classic book style is to have a lower margin about

# Unlocking the black art

Andrew Wright introduces a two-part guide to mastering desktop publishing

**D**esktop publishing isn't the black art that many people think, but while almost every ST owner will have dabbled in it at some time or other, it still remains one of the hardest subjects to master.

Why? Probably because DTP is 50 per cent basic principles and 50 per cent creative flair. Unfortunately too many would-be practitioners think they have the latter and can go on to produce sought-after documents without first getting to grips with the basic principles of document design.

And design rules there are, despite the fact that most designers break them more often than they follow them! In keeping with the old saying that you have to learn to walk before you can run, you have to learn the basic tenets of DTP before you can throw them out of the window for any particular purpose.

Now that you've got a free DTP package on the CoverDisk, let's look at those principles and put them to good use in designing some documents! In part one we'll look at the basics of good docu-

ment design and next month follow it up with a step by step tutorial and some specific advice on the range of documents you can turn your hand to.

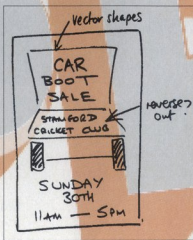
The quickest and easiest way to start is still to use a pen and paper - draft out your design idea in rough and work out what you'll need to make it work. Will you need to create graphics or logos from scratch? Will you need to scan an image?

All these things should be done beforehand so you can work as efficiently as possible while your DTP program is running. You don't have to stick to the plan but at least it gives you something to aim for. It's also a good time to think about the information that might need including - time, date and location for an event, month and year of issue for a newsletter and - stranger things are forgotten! - your name and address on advertising material.

If you're full of enthusiasm but short on ideas, never be afraid of looking through other magazines, similar publications, or even dedicated DTP source

twice that of the upper one which as a general rule of thumb gives good results in most other documents.

If the side margins are very wide the document will give the impression of wasting paper or not having enough to say, while if they are very narrow it will be



It almost comes out better with a little forethought...



## Going graphic

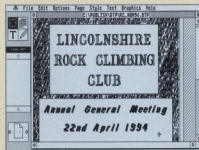
Adding graphics – and I include such features as rules and borders – to your work is remarkably easy with a DTP package. Unfortunately doing it right isn't so simple.

There are several reasons for adding graphics. Firstly they can illustrate something, be it a product picture in a sales leaflet, a person in a newsletter or a screenshot in a software manual.

Secondly they can enhance something or create atmosphere – a poster advertising a car boot sale could include a picture of a car.

Thirdly they can be used to break up text to prevent it becoming boring. Rules and borders are good examples.

Fourthly they can help identify a publication or its target audience. Corporate logos or religious symbols spring to mind here. Finally they can be used as part of the page itself, especially as borders or backgrounds.



In this quick and easy poster the border was created by importing a large scanned image of a rough surface (chipboard is a good one!) and using it as an eye-catching background

unpleasant to hold, especially if photocopied as the ink/toner invariably transfers itself to the fingertips.

Naturally this won't matter if the document isn't designed to be picked up – posters and some flyers can have picture borders right to the edge of the paper, for example.

A newsletter needs to look a little busier than other publications to convey a sense of importance and an abundance of content, so I would consider trimming the margins as far as you can in this case. Three quarters of an inch is fine but half an inch is the narrowest I would dare go.

Some publications, particularly reports and dissertations, can look very good with a distinctly exaggerated left margin and if you are intending to bind or staple the document in any way, you must make allowances for it, perhaps by making one margin a little wider than the other. Just because a DTP package offers the chance to create two, three or even four column output, it doesn't mean that

this is the best way. Often a single column with a generous margin will be much neater, particularly for business documents such as reports and proposals.

In many cases the choice of the number of columns you go for will depend on the type style and size, and a good rule is to aim for between 50 and 65 characters a line (around nine to 12 words a line) at the most and 30 characters (five to six words) at the least.

That sounds a lot but try it and you'll see how narrow this makes a single column at a typical point size – let's say 11 points. The reason for what seems a strange rule is that the eye becomes tired when forced to read lots of short lines as it is constantly switching backwards and forwards.

With long lines the problem is keeping track of which line is actually being read. Experiment for yourself with different

pages set at 20, 60 and 100 characters per line at the same point size.

In fact, the two-column layout lets you stick to this rule more closely when using standard sized text, say 10 or 11-point in a proportional typeface like Timeworks' or Easy Text's Dutch. It does have its disadvantages though as it doesn't offer a very flexible grid.

The "grid" is a hypothetical way of dividing up a page so that it maintains a balanced, uniform look, especially if the document contains several pages. It is a useful way for beginners to start page design, particularly if you're wondering where to put pictures and boxes.

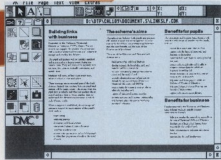
Three column layouts offer the most flexibility in design for publications like newsletters and help keep to the rules regarding line length and legibility.

Four or five column layouts look more like small newspapers and while this can look attractive in some circumstances, to maintain five words a line you would probably have to reduce the point size of the text beyond the limit of legibility or cause large gaps to open up between words.

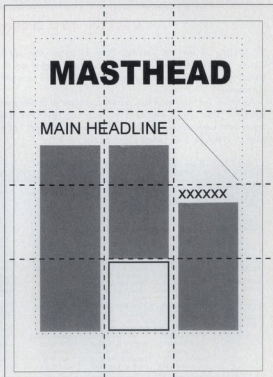
If you are incorporating more than a paragraph or two of text in your document, it makes sense to use a word processor to write it and then import it into your DTP page.

All you have to do is make sure that your DTP program can understand the file format your word processor uses. If it doesn't, save your text in Ascii format (often referred to as Save as Ascii or Save As Text in some word processors).

Choosing the right typeface for a job is vital. Research has shown that sans serif faces are far more readable than sans serif ones and this is mainly because of the small serifs which enables the human



This leaflet is produced on A4 paper but folded into a third of the original size to make a handy giveaway document



The grid concept – with a clearly defined grid everything can be planned comfortably in advance

brain to identify letters and words shapes more quickly.

If you're using Easy Text or Timeworks, the Dutch or Serif fonts are ideal for the bulk of your text with Swiss or Sans for headings and the others for display purposes like titles, mastheads and the like.

Don't be tempted to use too many typefaces in the belief that it will show off your skills and make the document a masterpiece — three different typefaces is a good working maximum unless there are good reasons for doing otherwise, such as the use of varied display faces for a poster or perhaps different headline faces for a light-hearted newsletter.

Use italic and bold forms sparingly — they should be used only for emphasising words or phrases and not to make whole sections stand out.

Point size refers to the relative height of the text though it is important to realise that one typeface at 11 points may be considerably larger than another at 12 points.

For most purposes though accepted type sizes range from 8 to 12 points for the main body of the text, though the resolution of your printer will have a bearing on the size you choose.

For nine-pin dot matrix output you should go for 11 or 12 point body text while nine or ten point is more suited to higher resolution devices like inkjets and lasers. For headlines and display purposes, you can make the type as large as you need it. Leading (pronounced "leading") is a measure of the space

between each line. Reducing the leading to nothing is known as setting the text solid — it gives a more closely-packed appearance which can be attractive in a newsletter composed of lots of short features but for other publications a wider spacing makes for easier reading and at the end of the day, that's what it's all about.

In many DTP packages, such as Timeworks, ten-point text is set at 12 points by default — a difference of just two points — but there are times when more is needed to increase legibility. My own personal choice is a difference of at least three points, perhaps four points for text heavy business documents. You can also decide on

## Display Typeface

### Sans serif for headings

A serif typeface is best for body text

*A script typeface*

Typefaces can be lumped into four main groups — display, sans serif, serif and script

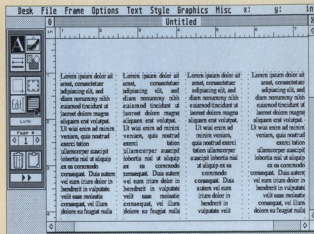
whether you want paragraphs to be indented or not on the first line. It's largely a matter of taste but it depends on the width of the columns and the size of the text.

In general the first paragraph in a section shouldn't be indented and it might be a bad idea to consider it at all if the columns are narrow. An alternative way of separating paragraphs is to introduce paragraph spacing — only a small amount is needed.

## Justify my body

To justify or not to justify? That is often the question. Most body text is either aligned left (also known as ragged right) or fully justified at both ends. Headings and titles, of course, can equally well be centred or even right justified if necessary.

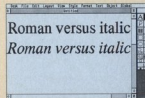
As often, for body text it is purely a matter of preference and what looks right when you take other design elements into account. However, if line lengths are short, justifying at both ends can lead to what are known as "rivers" of white space appearing on the page. If in doubt, stick to left aligned text.



These four columns are, from the left, left aligned, justified, centred and right aligned — note that with the narrow column width the justified is the least attractive option while centred text should never be used for body text except for short paragraphs on "designer" pages

## DTP jargon

- A4 ..... The standard page size in the UK. A5 is half of A4 while A3 is twice the size.
- bitmap image ..... An image made up of a pattern dots arranged on a uniform grid. A bitmap font is stored in the same way, restricting it to one particular size.
- crop ..... Cut an illustration or photograph to fit the required space.
- font ..... A particular size and weight of a typeface. Helvetica 36 point bold is a font; Helvetica is a typeface.
- halftone ..... A printing process that represents a scanned continuous tone image by converting each grey area into patterns of black and white dots of varying size.
- italic ..... Text slanted to the right is wrongly referred to as italic in Atari GDOS terms. True italic, however, is a separate typeface with stronger serifs and a handwritten appearance.



True italic is a very different typeface but it should be used sparingly

kerning ..... Decreasing the space between characters.



landscape ..... If a page is wider than it is tall, it is termed as landscape orientation.

leading ..... The space between lines of text.

point ..... Typographical measurement equal to 1/72 inch.

portrait ..... This magazine is in portrait orientation. In other words, it's taller than it is wide.

Roman ..... An upright typeface, for example, Dutch or Times Roman.

vector graphic ..... A resolution independent method of defining a drawing that relies on it being made up of discrete lines and shapes rather than dots.



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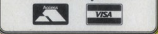
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One of the bugbears of desktop publishing and graphics on Atari computers has always been the large variety of file formats used by different programs, making it very difficult to exchange data between them.

The only complete answer to such problems is to stick with a combination of programs which are known to work together reliably, preferably from the same software house.

Digital Arts, the German company behind DA's Vector, DA's Layout and DA's Repro, have gone furthest in providing such an integrated illustration and publishing environment that extends even into colour animation and video production.

Colour and halftone images can be shuffled around freely between all three in DA's proprietary TIC/TIH/TIM formats or standard TIFF, combined with vector paths in the common RVP format, and fonts in Didot, Calamus or PostScript format.

## RETOUCHING

It is therefore a bit of a surprise initially to find that Digital Arts have come up with yet another colour art and retouching program that, on the surface, looks suspiciously like their own DA's Repro – also and perhaps better known as *Retouche Professional* – in terms of its features and functionality.

But then again, DA's Repro has always been the odd one out in the family

CGS ComputerBild, already a strong force in the Atari graphics market with DA's Vector, DA's Repro and Chagall, have come up with another contender in DA's Picture. Günter Minnerup is impressed

# Picture

because of its unusual and initially rather difficult user interface and its heavy emphasis on advanced prepress functions such as colour correction and colour separation.

For the professional needing all these features and willing to invest the effort

required to come to terms with its quirks, DA's Repro will probably remain the first choice.

DA's Picture, by contrast, is primarily aimed at the more casual user looking for a more intuitive, standard GEM interface, and who is probably more interested in the creative aspects rather than the production side.

The latter can, after all, be left to a good DTP package – such as DA's Layout – or even to the professionals in the output bureau.

To facilitate creativity, the user interface has been kept very simple. The effort to remove all unnecessary distractions from the really important business has produced some impressive technical innovations: background windows, for example, do not need to be brought to the foreground to be edited, as you can simply move from window to window without tedious "topping" mouse clicks.

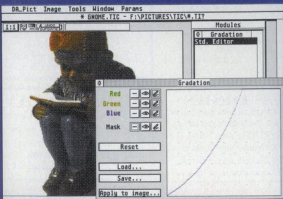
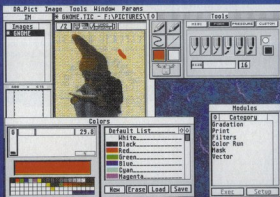
Similarly, inactive toolbox windows are always accessible via the right mouse button. Just about every option can be accessed through keyboard shortcuts or various Shift/Alt/Control, plus mouse click combinations.

Different tools can be assigned to both mouse buttons for additional speed and flexibility. Given enough hard disk space – up to two gigabytes! – there is no need to run into insufficient memory problems since a hard disk swap file will act as "virtual" memory.

Very large pictures indeed can be edited in this way, up to 16,384 x 16,384 pixels in fact (a figure which will probably remain a very theoretical maximum for most of us).

The initial appearance of DA's Picture

With all the toolbox windows on the desktop, there is not much space left for pictures on a standard VGA monitor. If your funds do not stretch to a larger screen, it may be a good idea to call up the toolboxes only when needed. The keyboard shortcuts will then save you a lot of mouse clicks. Note the Colors window at the bottom of the screen with its little "paint pots": colours can be "dragged and dropped" from these onto any tool, from colour lists into the paint pots, and also picked directly from the screen



The scan was a bit dodgy – messy background, too dark and poor contrast – so we can use the gradation curve editor to clean it up, initially by simply eliminating the dirty yellow background. The new curve is simply drawn using the mouse, and frequently required standard curves can be saved to and re-loaded from disk.



is that of a very minimalist GEM program: just a menu bar over an empty desktop. It is brought to life by opening an existing picture or a new blank window from the Image menu and selecting the four options in the Tools menu.

The small Image Manager, Tools, Modules and Colors windows now on the desktop are probably best left there since they will be frequently required, although this reduces the number of active windows available under the operating system and also highlights another problem common to all standard multi-windows applications – that of limited on-screen real estate. A large monitor is highly desirable if you intend to regularly

different mono masks can be used at one time and selectively switched on or off. Masks do not, of course, have to be imported images or even generated using the drawing tools – with the Magic Wand, particular colour ranges can be selected for masking automatically.

Next to the mask, the most frequently used editing operations on scanned images will be the block operations and the filters. Combining blocks with masks you get a very flexible "lasso" tool for cutting out irregular shapes, and the filters are particularly useful for eliminating minor blemishes and imperfections from scans, or adding special effects.

Not everybody has a scanner, however, and not every illustration

colours like a wet finger or drop of water on real paints; sharpen contrasts; add structure; copy one section of an image to another; undo changes; and fill entire areas.

The magic wand picks colour values to mask automatically and densitometers and a measuring tape ensure accurate work where needed. The stamp is an endlessly configurable tool, offering a number of wonderful effects. All these tools can be configured to work in a variety of ways, at various pressures, and with various kinds of paint.

## INGENIOUS

The handling of colours is particularly ingenious, scoring an Atari first by using the drag and drop method: colours are picked up from the palette, or a colour list loaded from disk, or the picture itself, and dropped over the tool or another location in the palette or colour list. No tedious dialogues to go through at all!

The current state of the colour palette is remembered and restored when you next load the program, along with the status and position of the toolboxes.

Perhaps the most outstanding feature of DA's Picture, however, is the way vector paths are integrated with the image editing and painting functions. Straight lines and Bezier curves are not only available as drawing tools but can be

# power

work on more than one image simultaneously, especially if these are fairly large.

Despite the radically different user interface, the basic principles of operation of DA's Picture are rather similar to those of DA's Repro. Two copies of each image are held in memory, one of which constitutes the Undo buffer.

Only one copy is affected by editing operations until you hit the spacebar to copy the current picture to the Undo buffer – pressing Undo instead will swap the two versions around.

You can therefore always go back to a previous state if you are not happy with the result of an operation, provided you have used the spacebar only when you were really sure that you wanted to keep what you had done.

The masking function, however, is incomparably more versatile than in DA's Repro or indeed any other image editing program. The basic purpose of masks is to protect certain areas of an image from the effects of an editing operation, and most programs are content to offer mono masks which are either on or off for each particular pixel.

DA's Picture goes much further and supports 8-bit masks which are in effect halftone pictures in their own right and can be edited as such, using all the tools available for ordinary pictures.

Since each pixel in the mask can now have one of 256 intensity values, it is possible to achieve "graduated" masking effects with areas of the picture being only partially protected from editing operations. Alternatively, up to eight

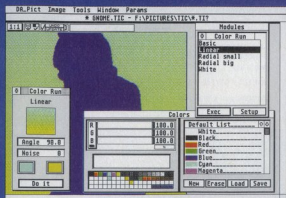
needs scanned material. DA's Picture is also a very capable painting program in its own right, cleverly combining bit image and vector techniques.

The painting tools give very passable imitations of "real" tools such as pen, crayon or airbrush; can blur and smear



Before applying the Sharpening filter, the background is masked out – not strictly necessary at this stage, but useful preparation for the next step when the mask needs to be inverted to cover the gnome only. The same Invert filter is used for that, but in Mask edit mode or the entire picture would be inverted!

The gnome safely covered by the mask, we can now fill out the background with a simple graduated colour fill. Once again, the start and end colours are defined by simply dragging them from the little paint pots into the colour fields in the dialogue on the left. Unfortunately the translators of the software have called this function Color Run which suggests an accident in the washing machine rather than this standard graphics function



imported in the RVP file format produced by DA's Layout and DA's Vector.

Since these programs can import GEM and Calamus vector files and then convert them to RVP, as well as vectorise imported bitmap graphics, you have access to an unlimited number of clip art and sophisticated artwork objects as well as, of course, PostScript and Calamus font outlines.

DA's Picture is not a vector drawing program as such, but uses these paths as guides for its painting and editing tools, including the editing of masks.

This can be particularly handy when you need absolute precision in masking out intricate objects (human hair, the leaves of a tree and so on) or when a tool has to be applied repeatedly along exactly the same path. Of course, vector paths created in DA's Picture can also be exported to DA's Vector, to take advantage of the far more powerful facilities offered there (calculator, projections etc) before going back to DA's Picture.

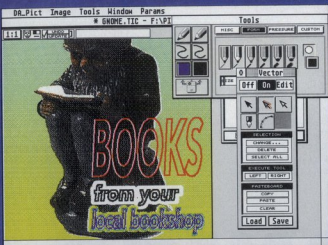
## EXTENSIONS

One disappointing omission from a program of this type is the ability to scan directly into a DA's Picture window. Since there is provision for modular extensions in the program's architecture, it is to be hoped that this will be rectified soon since it is a bit tedious to have to quit, load a scanner driver, save the image to disk, re-enter DA's Picture and open the file when you need to import a new image.

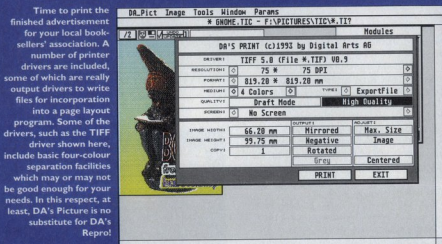
But otherwise there is little to moan about — the program runs very fast and smooth in every resolution on every Atari computer and has shown itself to be extremely stable indeed.

Like the other Digital Arts products, an on-line manual is available when the DA's Knowhow desk accessory is active, and provides extensive context-sensitive help.

If the English manual turns out to be a faithful translation of the German one used for this review then there is no cause for complaint on the documenta-



Now for a neat trick using vector paths: since DA's Picture has no text functions of its own, we import the text as vectors from DA's Layout or DA's Vector, position and scale it to the required size, and finally use the Execute Tool option to retrace the letters with one or more of the drawing pens. The yellow and white backgrounds to the second and third lines were created by a second run with a broader pencil



One of the most versatile creative tools in DA's Picture is the stamp tool, a sort of miniature picture assigned to the drawing pen. Only a small number of the large selection of predefined stamps supplied with the program are shown here. It is also possible to create your own by simply selecting a small section of an image as the stamp

## BOTTOM LINE

### FEATURES

Very powerful and versatile painting and editing tools.

Excellent  
Good  
Average  
Bad  
Appealing

### EASE OF USE

Aimed squarely at the beginner, and accordingly easy to use.

Excellent  
Good  
Average  
Bad  
Appealing

### VALUE FOR MONEY

Compares well with similar programs like DA's Repro and Chagall.

Excellent  
Good  
Average  
Bad  
Appealing

Product: DA's Picture  
Supplier: CGB ComputerBild, 231 Northborough Road, Norbury, London SW16 4TU

Telephone: 081-686 8121

Price:

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It is not very often that a program actually adds a whole new dimension to the way you use your computer. Most new products on the software market are improved versions of established tools, adding extra features and capabilities to take full advantage of the hardware, but rarely venturing far from the well-trodden paths.

Thus there are plenty of competing word processors, databases, spreadsheets, painting and drawing programs, Midi sequencers, hard disk utilities, programming languages and so on, but few off-beat packages breaking new ground.

Thought!, however, is just such an innovative product. To describe it as an outliner would not do full justice to its versatility, but then how many outliners are there for the ST? The only one I know of is part of the word processor Calligrapher so you may not even be familiar with the concept of an outliner at all.

In essence, an outliner is a planning tool for writers, a sort of high-tech version of the back-of-an-envelope technique of developing a basic idea into a structured essay or book.

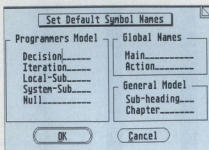
#### FURTHER

Thought! describes itself as an ideas processor, but – in case you wondered – this does not involve any additional hardware to plug your brain into the computer's DMA port. Instead, it allows you to draw up hierarchical links between different levels of thought, expand each level further, swap them around and so on.

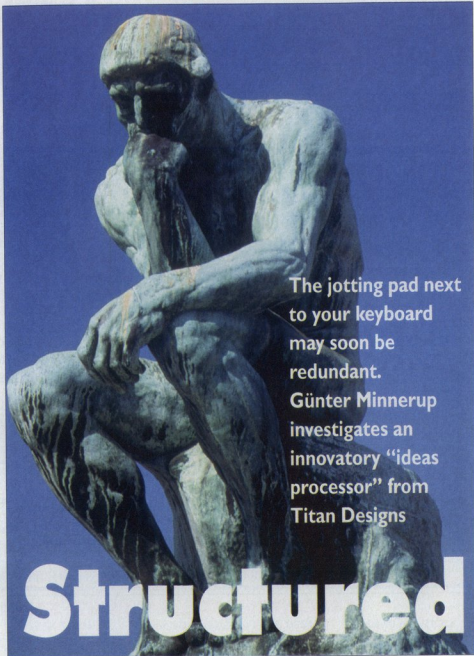
Perhaps the best way to illustrate this is to give a simple example: you're applying for a job and need to compile your CV (perish the thought – Ed). The first thing you have to think about is what sort of information should go into it.

You will probably think of the various items – previous experience, educational qualifications, current employment, current salary, relevant interests, and so on – in random order, and you could enter them into Thought! just like that. All these would be little boxes with labels connected with the heading CV.

Next you have to check that you actually have all the required information at your fingertips, so you break down each category into its constituent parts: under educational qualifications, for example, you have the name of your school, any O and A-levels, colleges attended, vocational qualifications and so on. Each could be a little box of its own connected with the box Educational



The default symbol descriptions are editable and thus adaptable to the most esoteric requirements



The jotting pad next to your keyboard may soon be redundant.

Günter Minnerup investigates an innovative "ideas processor" from Titan Designs

# Structured thought

qualifications. Once you have entered the details into each box, you may well decide that the order of presentation is totally wrong and change them around. One or two of them may turn out to be superfluous and can be deleted, yet new ones may also have to be added or inserted if you had forgotten something.

All this can, of course, be done with an ordinary word processor in the form of an "expanding list" and using the block cut-and-paste functions, but you will not be able to see everything on screen at once, there will be no hierarchical links between items, and your view of the important headings will be obscured by lots of detailed text. With Thought!, by

contrast, if a box is moved around at any level, all boxes "below" it in the hierarchy will move along with it, including any text contained in them, and you can switch at any time between the overview and detailed text editing.

Such text can either be entered directly into the Thought! boxes, or, if it gets too long and you need all the editing tools of a fully-fledged word processor, you can call an external program associated with the box, giving a filename as a parameter.

Each box can therefore be linked with a word processor document file, such as essay subheadings or book chapters. The external programs need not be word

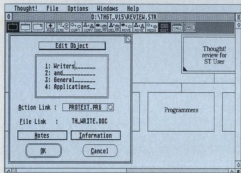
## Speaking in code

A major target group for Thought! are programmers and software developers. In fact, on running Thought!, you are given a choice between two types of models: General for writers and the sort of applications mentioned in the main text, or Programmers/Designers.

The latter differs in the kind of functions offered, as the box symbols here denote either a process, a decision, an iteration, a local subroutine, a system subroutine or null, and can also be assigned a set of standard logical operators to describe the actions and conditions described by the symbols.

In essence, therefore, the Programmers' model is a freely editable flowchart with the same additional capabilities as the general model, such as calling external programs from each symbol (obvious examples would be a programming editor or a compiler). An important benefit of using Thought! for software design and coding is that it forces you to adopt a very structured and modular approach, and it is of course ideal for modern object-oriented languages.

The symbols are, however, themselves editable and configurable so that you can adapt them for other design projects. Architects or engineers, for instance, could easily use Thought! to manage their particular projects by redesigning the symbols and calling different additional software.



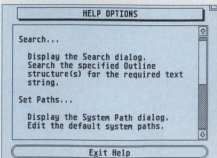
Clicking on the EDIT icon opens the Edit Object dialogue where the symbol description can be changed and external programs and filenames selected. A click on the relevant buttons opens the Notes or the Information editor

processors, and can be different ones for each box: if you are producing a manual, for example, you can have boxes representing the illustrations and call a scanner driver, vector drawing software or a screen capture utility.

In other words, you can do everything from within Thought! as a shell and use it as a complete project manager rather than just an ideas processor.

This capability can be taken a whole lot further, even to the extent of using Thought! as an alternative desktop and application launcher. If data files, too, are represented by boxes, you can link them to an application and launch both by clicking on the data file box, and as an additional bonus you can label these boxes with file names longer than the eight characters plus extender limit imposed by TOS.

Both the General and the Programmers/Designers types of models



The on-line Help files, which you only receive upon registration of your purchase, are a bit sparse. This is one area where further program development should bring improvements

follow the same procedures in building a model structure, and share the same user interface. Thought! offers its own desktop, with four icons for different structure files, a printer icon and a trash-can which, however, does not delete files from the disk but only erases them from memory.

At the top of each structure window, there is a row of small icons to add, copy, move, delete and redo (redefine) symbols, as well as to edit them and select program and data files associated with each symbol. It is not, strictly speaking, necessary at all to run an external word processor as the symbols contain two text entry options, Notes and Information.

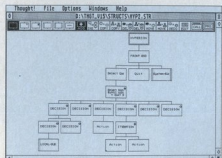
Notes is restricted to 80 lines of 40 characters wide text, but Information seems to have unlimited capacity and could therefore hold the actual text itself provided there is no need for sophisticated text formatting.

### NAVIGATING

The Find option will search for any text string up to 37 characters anywhere in the entire structure, so this may actually be an easier way of navigating around a shortish document than shelling out to a word processor and different files all the time.

The contents of the Information window can be saved to disk and could eventually be imported into your favourite word or document processor for the finishing touches.

It is important to realise that Thought! only prints the structure diagram but not any Notes or Information text, let alone external word processor files. This



An example of the Programmers/Designers model as applied to a fictitious Hyperion project. For clarity of overview, no "nested" sub-structures have been used here

means that the various bits have to be collated together in the right sequence into one printable file from some external program, which could be launched from the main title box.

The printed diagram will be needed for this to establish how the files fit together, or you need to drop back into Thought! itself to check at each stage.

A bit tedious this, and since I look at Thought! mainly from the perspective of a writer rather than that of a programmer, this is also the reason why I would still very much prefer to have an integrated outliner as part of my word processor, capable of swapping between overview and editing within one and the same file.

### POSSIBILITIES

Thought! is certainly an innovative product, and I am not sure that I have explored all its possibilities yet in the few weeks that I have been able to use it. The rather terse manual is not much help in this, as it covers the potential applications rather superficially. Perhaps understandably, given that it was originally developed by a programmer for his own personal use and has only just entered the commercial sphere, there are some rough edges and awkward angles.

The user interface sports some nice touches, such as movable fly-dial dialogues, but certain operations are far from intuitive: moving a symbol to a different position in the structure, for example, could be made much easier by introducing simple drag-and-drop techniques rather than multiple mouse-clicks on various icons and arrows.

Thought! has no competition in the Atari market and it is therefore difficult to say if it is overpriced at £69. On balance, I think not and would recommend it as a very valuable tool for the kind of users who do a lot of project planning of one kind or another.

It is certainly very stable, compatible with the entire Atari range of computers and all versions of TOS, including MultiTOS, and future upgrades should benefit from the critical feedback that only a large user base can provide.

## BOTTOM LINE

### FEATURES

An essentially simple but very versatile tool.

Excellent  
Good  
Average  
Bad  
Appalling

### EASE OF USE

Not difficult but there are still some rough edges.

Excellent  
Good  
Average  
Bad  
Appalling

### VALUE FOR MONEY

No competition to compare it with, but £69 will expand your computing horizons.

Excellent  
Good  
Average  
Bad  
Appalling

Product: Thought! Ideas Processor

Supplier: Titan Designs, 6

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Birmingham B29 4AX

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Price: £69.95

Configuration: All Atari computers

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This selection bridges the gap between premium, full price games and budget software. The motto is 100 per cent quality, 100 per cent value, nothing compromised, and the brand has continually dominated the top slots in the Gallup charts.



The third parts of Space Quest and Hoyle's Book of Games are coming soon.

To enter all you have to do is send you answers to these two simple questions and the tie-breaker on a postcard, with your name, address and daytime telephone number, to: ST User Kixx XL Competition, Euress Direct, PO Box 2, Ellesmere Port L65 3EA.

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## King's Quest

Restore the land of Daventry to its former glory for the old and feeble king by recovering the lost treasure. Parts three and four are coming soon.

## Leisure Suit Larry

Become Larry for one night; the ultimate blind date nightmare. You'll drink, gamble and, if you're lucky, meet the girl of your dreams. Part three is coming soon.

## Hoyle Book of Games

The first releases in this series are available now.



**C**P-Gen stands for Control Panel Generator. It allows you to create and configure any type of Midi controller for any Midi instrument. Its main use will undoubtedly be to create synth editors but it could be used to control a Midi lighting rig, effects unit or any other type of Midi device.

It will be especially useful to anyone who has several instruments but who doesn't want to fork out several thousand pounds for individual editors.

CP-Gen uses a key disk for copy-protection. You can copy the program to another floppy or to a hard disk but in order to save a file, the program has to "see" the key disk first.

It's very much a DIY program and you really do need a touch more than a smattering of System Exclusive knowledge in order to use it to the full.

## ASSIGNING DEVICES

Basically, you select a range of devices, position them on up to ten pages (each page is equivalent to a screen) and assign them suitable Sys Ex messages (more on this later).

The devices are very well produced and it's fun to design the layout of your control panel. Say you need a device to let you alter a numeric parameter such as LFO speed. You can use a slider, or opt for a digital readout where numbers are changed by clicking on up and down buttons or a numeric keypad. The devices can be placed anywhere on the screen simply by clicking and dragging. Cute, eh?

There are Lock, Clip and Trash icons plus an icon to move through the pages. Lock is used to fix a panel once you're

Ian Waugh investigates a highly flexible Midi controller which can be used for everything from editing synths to controlling lights

# Panel beating

happy with it. Devices can be saved to the Clipboard and removed by dragging to the Trashcan.

CP-Gen has a number of internal variables for things such as Midi channel and it can handle mathematical and logical operators. You can connect devices using pipes which lets the value of one device alter the value of another.

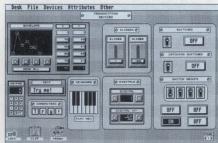
Use this to create a Roland-style Program Change device, for example, which selects sounds with Bank and Number values instead of a single numeric value. A device can have up to eight other devices supplying piped input.

One function which is missing is the ability to "get" a sound via Midi into the system.

The difficult part is assigning Sys Ex messages or strings to the devices. To find the strings to use, you will have to delve into your instrument's manual and/or employ a little trial and error. Having said that, once you get the hang of it, it's not too difficult.

The manual is well presented and describes the basic operations of the program. An experienced programmer adept at dealing with Sys Ex and hex messages will take to it like an MP to a directorship.

But if the program is to appeal to the



CP-Gen's transmitter devices

less knowledgeable, there really should be a solid tutorial section. Without it, the beginner will almost certainly founder.

The only other niggle is that a complete panel cannot run as a desk accessory. This would have been extremely useful, allowing you to tweak sounds from within a sequencer.

Several demo panels are supplied including one which shows all the devices, a mixer, a Midi monitor (which displays incoming Midi data) and editors for the Roland D110 and Yamaha TX81Z.

GRI-Soft intend to collate a library of CP-Gen panels and make it public domain. It makes a refreshing change to companies who charge for instrument profiles. However, we have yet to see how many profiles become available.

I suspect the majority of users will want off-the-shelf profiles and the success of CP-Gen could well rest on how many become available. But if you can handle Sys Ex, CP-Gen offers an easy and near-intuitive way to create your own editors and controllers.

At the time of writing, GRI-Soft were concentrating on producing a range of panels so it's worth giving them a call to see if your instruments have been CP-Gened yet!

If you want to try the program, an excellent and very professional demo package (including on-disk manual) is available for a most nominal £3, refundable should you order.

## CP-Gen devices

CP-Gen has eight transmitter devices:

character	containing a single character
digital envelope	provides a digital readout of a graphic representation of an envelope with up to six points
keyboard keypad	a one-octave piano keyboard a calculator-style numeric keypad
slider	a fader-type device
switch	a simple on/off toggle switch
text	for entering a text string

There are three receiver devices:

gauge	a receiving version of the slider
lamp	a receiving version of the switch
readout	a receiving version of the digital counter

And two passive devices which are used for decoration and information:

label	used to identify a device or area of the panel
sub-panel	appears as a shaded box and is used to move or delete devices as a group



CP-Gen's receiving devices

## BOTTOM LINE

### FEATURES

An excellent range of features for creating professional-looking editors.

Excellent  
Good  
Average  
Bad  
Appalling

### EASE OF USE

If you're comfortable with Sys Ex, CP-Gen will be easy to use.

Excellent  
Good  
Average  
Bad  
Appalling

### VALUE FOR MONEY

Especially as more profiles become available - for free!

Excellent  
Good  
Average  
Bad  
Appalling

Product: CP-Gen  
Supplier: GRI-Soft P.O. Box 488  
High Wycombe HP13 5FJ  
Telephone: 0494 443266  
Price: £79.95  
Configuration: Any ST, 1Mb RAM, mono monitor.

## About sampling

Analogue sounds such as those made by our voices are contiguous. In order to record these sounds digitally, they must be sampled at very short time intervals – thousands of times per second.

The quality of such a recording is directly proportional to the sampling rate. The higher the rate the better the sound.

The actual sampling involves measuring the sound's volume and recording this information. The process of converting analogue sound into digital information is performed by an A/D converter, while the playback is done with an D/A converter. The Falcon has these as standard.

The interval at which a sample is being taken, called a sampling rate, is variable, although some rates have been standardised such as the CD rate of 44.1kHz and the DAT rate of 48kHz.

### QUALITY

Although the Falcon is capable of these rates it's not always a good idea to use them since the amount of data produced is huge. A lower quality sampling is often more than adequate keeping the sample size down.

The other aspect of a sample is its resolution which is measured in bits. This refers to how many bits of data are used to store one sample. The more bits there are, the finer the distinction between the loudness of individual samples.

An 8-bit sampler, for example, can only differentiate between 256 different volume levels (there are 256 permutations of 8 bits). On the other hand, for CD quality a 16-bit sampler is capable of distinguishing 65,536 loudness values.

Again, the memory requirements increase with sound quality. An 8-bit sample needs only one byte of memory while a 16-bit sample needs two bytes. Add stereo and you'll start thinking about a new larger hard disk very quickly...

Don Maple investigates a sound and vision sampling package for the Falcon which promises to be the first in a long line of quality programs

enjoyment. Digit requires a minimum of 1Mb of RAM and it does run under MultiTOS but with memory protection switched off. Naturally, since MultiTOS is resource-hungry and relatively slow your high-rate samples may suffer from stammering as MultiTOS keeps interrupting the Digit task.

It's therefore better to run it in single TOS mode. However, you need to have a minimum of TOS 4.02 as the lack of 3D effects on lower TOS versions negatively affect the screen layout. On the other hand, Digit is not at all picky about resolutions so you can use any type of

# Sampling to

The software house Galactic may not be a household name in the UK, but in Germany they're one of the oldest and most devoted Atari developers, particularly in the area of sound programs.

This is further reinforced with their latest offering for the Falcon, Digit II Studio, pronounced "dig it!". Based on earlier programs for older STs, this new program has completely been rewritten and adapted to the Falcon.

At its heart, Digit is a sampler – that is to say it digitises incoming sound and converts it into computer data. This data can then be played back and manipulated in a number of ways.

A sampler can be viewed as a digital tape recorder. Digit can sample directly into RAM, to the internal IDE hard disk or an external SCSI hard drive.

### MODULAR

The package is supplied with a ring-bound manual and two disks. Since the program is inherently modular in nature the documentation concentrates only on features relevant to the supplied version.

The program is not copy protected – which is very commendable – and the manual calls for observance of the copyright which should certainly be done!

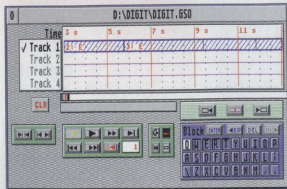
On the Atari, sound/music programs in particular suffer from copy protection so let's all support a program like Digit that does not interfere with the user's

monitor. When invoked the program greets you with the About box and it says its name aloud and with a lot of reverber! At first glance the desktop appears Spartan with only two icons in the upper left corner representing the two program modules: Sampler and Playlist.

All global functions such as Open, Load or Save are in the menu bar while individual module functions are local to each module. You open a module by double-clicking on its icon or by selecting the module icon with a single click and then using Open or New in the menu bar. But before diving in, a few words about sample file formats. There are many different file formats floating around and Digit adds another one called GSM/GSH.

The extensions merely indicate how the sample was created; GSM (Galactic SaMple) refers to RAM samples and GSH (Galactic SaMple Hard disk) to direct-disk samples.

This format is also a proposal for a new standard. To this end the appendix



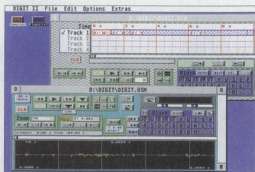
Sequencer module is used to manipulate the samples created in the Sample module



Digit II Studio: a new German sampler for the Falcon

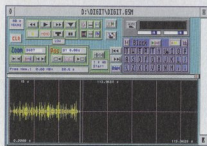
portion of the user manual contains the full description of the GSM/GSH file layout. This format addresses some of the shortcomings of AVR which is a de facto Atari standard. It's also very flexible but at this time only supported by Galactic themselves. Digit does understand other formats, though, and can import and export AVR, WAV, Sample Star and Wizard files.

The sampler window contains a number of buttons to control its many features. Some buttons reveal pop-up menus with further options. The sampler operates either in 8 or 16-bit mode. This



Digit II Studio in action

# sounds disk



Sampler module window is loaded with excellent editing and block manipulation tools

can additionally be in mono, stereo or karaoke for a total of six different modes. The sampling rate, marked frequency, spans from 8kHz to 50kHz in eight incremental steps. All sampling can be done either fully in memory or to a hard disk.

The bottom part of the window contains the graphic representation of the sample in memory. This plot automatically adjusts to changing window size. It can also be zoomed in and out by using the zoom controls in the lower left portion of the window.

The current position of the plot in relation to the total sample is shown on a thin bar immediately above the plot. This can operate in several modes to show, for example, current window position or start/end markers and so on.

Depending on which of these is chosen, the button will show digital information such as free/reserved memory and its length in seconds, window length in seconds, and marker start and end positions in seconds.

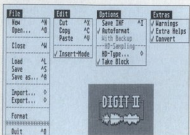
The digital tape recorder controls contain normal recorder buttons such as play, stop or record, as well as fast

forward and fast reverse playback. The remaining button switches on the trigger recording mode. When in this mode, the program waits until a certain volume level is reached before it starts recording. There are three pre-defined trigger levels: low (512), normal (3,000) and high (10,000). The volume controls are located in the upper right corner. The left slider moves both sliders together for stereo adjustments while the right slider moves alone for mono settings. Clicking on the AUTO button calibrates the recording levels automatically.

During playback or recording, the running counter shows current sample position in seconds. The left and right buttons in the position block move the sample window back and forth by one step. Double-clicking moves to start and end respectively. The third button in between the two jumps to the current marker position. Additional playback and record function are located in the so-called attribute block. The six buttons are: Loop mode, Play all, Find end of sample, Limit operations to block, Limit operations to window and Reverse playback.

Some sampler functions can also be controlled from the keyboard or to be exact from the numeric block on the right. To name a few: the digits 4 and 6 start the playback in the forward and backward directions, the 0 returns to start of sample and + turns auto volume on and off.

Digit is very powerful when it comes to block and marker manipulation. Up to 30 blocks per sample can be marked and assigned to a keyboard key.



A brief list of Digit II Studio menus

Pressing that key then plays the block. You can also move these blocks into the sequencer module but more about that below.

After setting the markers, either in static mode or during playback, the data between them can be played back not only from start to end but as a 1 or 2-second excerpt from start/end.

There is also a special one-second loop option for splicing two samples. It plays the last second of one block and the first second of the following block in a loop. All of these functions are very handy for fine tuning and editing.

Sampling programs on the Falcon are quite numerous thanks to its excellent hardware. Digit II Studio does hold its own in many respects although the lack of DSP support in the guise of effects is definitely a major drawback.

## PLAY AROUND

On the other hand, the comprehensive editing functions and the very powerful block and marker operations make it a pleasure to modify samples and just play around in the sequencer.

It must also be said that Digit II Studio is not a single program but only the first in a series of sound packages for the Falcon. The development will proceed in two directions, one catering to the musician and the other to the video user.

The former will focus on features such as Midi, real-time transposing, and even an additive synthesizer to name a few. The other version will concentrate on features important to video work such as SMPTE, interfacing and synchronisation with video recorders, slide projectors and broadcasting in general. Full DSP support is also on the drawing board.

In conclusion, and bearing in mind Galactic's past performance, this means that investment in Digit II Studio will promise a bright future, unlike some other sound programs whose manufacturers are abandoning the Atari platform. Version 2 of Digit II Studio has already been announced...

## BOTTOM LINE

### FEATURES

Editing and block function are excellent but there is no DSP support.

Excellent  
Good  
Average  
Bad  
Appalling

### EASE OF USE

Help mode displaying the purpose of each function makes it very easy to use.

Excellent  
Good  
Average  
Bad  
Appalling

### VALUE FOR MONEY

The price is reasonable but addition of effects would make it excellent.

Excellent  
Good  
Average  
Bad  
Appalling

Product: Digit II Studio  
Supplier: Galactic, Juliemat 7,  
Essen, Germany  
Telephone: 01049-201-79 80 B1  
Price: £85  
Configuration: Any Falcon



**B**ased on Replay 16, the proven ST sampler, this new Falcon sampling package is designed to push the whole concept still further by utilising the machine's superior features.

As well as a sample editor, there is a sample sequencer, a Midi keyboard emulator, a plethora of digital effects utilising the DSP to the full, and – crucially – direct to hard disk (d-t-d) recording. Neat!

The package comes in a sensibly sized box, containing a clear and friendly user manual, a set of four disks in their own wallet bearing the software, the clock card (effectively a dongle), a special audio input lead, a manual and registration card.

The disks aren't copy-protected, and immediate back-ups are definitely recommended, as is prompt return of the registration card. One program detailed in the manual, called Midiplay, is not supplied with this version, but as it's a bonus anyway, this does not detract from the package's usefulness.

The small plastic time clock provided, supplements the Atari's hardware, which conveniently means that Clarity 16 will not run without it. Anyway, it plugs into the DSP socket on the far right of the machine at the back, and a red light confirms that it's supplementing duties are being carried out OK.

#### SOUND INPUT

It is also necessary to connect your sound input to the Atari. The Falcon is provided with a 3.5mm mini jack socket, purportedly for plugging in a microphone.

Most of you, however, will be planning to sample from a sound source with a line output. Such devices – including CD and DAT players, personal stereos and the like – may have phono sockets or mini jack outputs, but the point is that their output is much higher than the Falcon can handle.

To this end, Clarity includes a phono-to-mini jack lead, which has resistors discreetly wired in to reduce line signals to microphone size in order to feed them into the computer.

Output from the Atari is, confusingly, also via a 3.5mm socket, but this time it can be plugged straight in to any amplifier, headphones or hi-fi – assuming a spare input. You'll probably need a jack-to-phono adaptor, but there's no need for any stepping resistors this time, so a trip down to the local Tandy is all that's required.

The Falcon's internal speaker can be used, but you're hardly gonna' get people dancing around the living room to the kind of volume that little buzzer is capable of that!

Finally, to make use of the package's Midi capabilities, it is necessary to plug your equipment into the Midi sockets in the usual way, taking care with connections if you are using the

# A clear winner

Phil Morse test-drives Clarity 16, HiSoft's flagship Falcon sampler which with its impressive spec sends a warning shot across the bows of standalone samplers everywhere



#### What is sampling?

Confused by kilohertz? Alienated by algorithms? Well, here is a very short guide to what this sampling lark is all about.

A sample can be any sound – a drum beat, a guitar being strummed, a voice, a door slamming – all you do is get that sound into your Falcon, which "remembers" it – either in memory or, in this case, on its hard drive. Sounds are "remembered" as binary data, and the more binary data you use to store a sound in, the more true to real life it will sound – the "resolution", or number of times a second the sound is sampled (also known as the frequency) – gets larger, more memory is needed, and the sound quality rises.

Once recorded, sounds can be manipulated in any number of incredible ways using editor software, and "sequenced" into meaningful songs or passages.

More likely, samples will be combined with other musical sources in a finished production. Most modern music relies on sampling sounds from elsewhere, before they are re-arranged in a new way to create the song. It's a rare musician indeed who hasn't used a sampler for something or other. And now you can turn your Falcon into one...

slightly non-standard Midi Thru facility (the Falcon doesn't have a separate Midi Thru, instead combining it with its Midi Out socket).

The first task is to set the input level for your samples, which has to be adjusted to suit the volume of your particular choice of input device. By clicking once on the Editor's tape deck-style Rec(ord) button, the Record Control window is shown.

From here it is possible to alter the amount of gain on the signal provided by the computer, and to view visually the signal coming in to check that its oscilloscope-style readout on-screen is not clipping (distorting).

It's not a difficult job, yet crucial for getting your samples loud enough without distortion.

Two versions of the editor software are provided. They are virtually identical, except for one fundamental difference: the first, EDITOR.PRG, samples from the outside world

straight into memory, while the second, EDITORHD.PRG, samples straight on to hard disk.

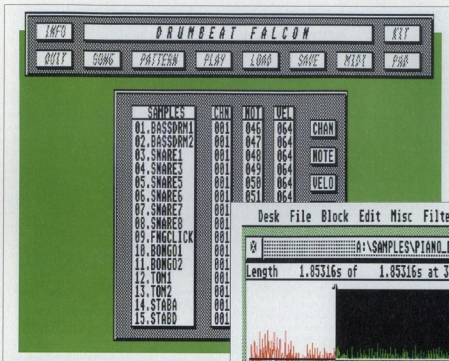
Sampling into memory is limited by the amount available, after the program has had its chunk, and the amount needed by any cutting and pasting you're intending on doing.

With the hard drive version, these problems are overcome, but as the sample is stored on disk, editing can be much slower (and more destructive – it's harder to undo changes made on a hard drive!).

Both versions, of course, have their uses, and it's the combination of the two in knowledgeable hands that will unlock the true scope of this software.

Apart from some tape-deck style record and play controls at the bottom of the screen, the display resembles the GEM desktop, with menus along the top and some icons on the desktop itself.

Clicking on the Disk icon, for instance, brings up the disk options



◀ A drum kit is here being configured for use with Midi

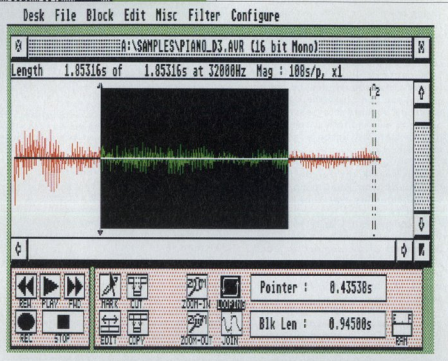
Here a sample is being processed. The "block" which has been highlighted is the area that the selected operation will affect

in the form of a file requester. It's an intuitive set-up, and one you'll quickly feel at home with.

Two desktop icons – Section and Sequence – control the putting together of various samples once they're in memory (or on hard drive). Section is where samples are put into blocks, to be used by Sequence as parts of the finished arrangement, but more on these functions later.

The Block Control panel is a large area at the bottom of the screen used for looping, joining, cutting and pasting – all the things you'd do to a sample in order to fine-tune it to your needs.

All of these operations are carried out by clicking on the various icons



which appear in this window as and when their uses become apt. This section is highly complex and powerful, but sticks to conventions which carry across from word processors

to music programs to databases – copying, pasting, cutting, marking blocks and so on.

The buffer can be used for storing sections of samples, you can identify a block and "hide" it so that the computer directs its attentions to the whole sample while not forgetting about the existence of your block, and you can loop sections (or all) of a sample, too.

Apart from re-arranging the order that parts of a sample are played in, it is possible to alter the nature of the sample itself too, using digital signal processing.

Functions on offer include controllable fade and volume facilities, join and loop fade options for discreet sample looping, sophisticated cross-fading, panning and balancing functions, and special effects such as reverb, echo and flange. For once, these effects do sound good, thanks to the custom DSP chip.

There is also a set of filters on hand. These are akin to the graphic equalisers on hi-fis, allowing fine tuning of different frequencies within a sound.

An impressive FFT-3D representation of the sound supposedly allows identification of areas to be "doctored", although your ears are

## Connecting to external samplers

The Midplay program spoken of in the manual is, in fact, not provided with this first full release version (send those registration cards off, folks!) so I cannot comment further, but the Midi facilities that are supported are pretty useful and comprehensive anyway. Still, when Midplay does appear it'll be interesting to find out exactly what it is and does.

But on to what is supported. With two-way Midi connection and a suitable sampler able to transmit and receive samples in Midi's specified AVR format as well its own (invariably differing) format, it is possible to use Clarity 16's editors to transmit, receive and – crucially – edit samples from, say, a rack-mounted Akai S1000.

This is useful, as using a computer is a far more convenient and flexible way of altering samples than messing with tiny buttons and LCD displays while leaning on one leg over a packed keyboard rack!

To transfer a sample from Clarity to your sampler, its icon is clicked on and it is placed on the Midi icon on the desktop. Then progress bars report its transfer until the operation is complete. Dropping the Midi icon onto a dummy sample will allow Clarity to receive a sample from your external sampler.



The Akai range of samplers are industry-standard, and the ability to link Clarity 16 in with them (and other leading brands) adds considerably to flexibility of both components

the best judges as to whether a sample needs tweaking in this way, in my view. As well as fixed bass and treble filters, there are adjustable low and high-pass filters.

This is plainly a very powerful suite of programs, designed very much with the professional or serious home music maker in mind. Indeed, its features suggest professional use while its price and usability make it seem more like a home product!

But looks can be deceptive, and the user who simply explores the program by trial and error instead of sitting down for a good session with the manual will miss a large number of functions altogether.

Features which make it stand out include simple but crucially important touches, like the ability to format disks from within the editor so that you don't have the rigmarole of doing so before a session, or having to quit and format some disks just because disk space is getting a little tight.

Likewise, its immensely useful to be able to ask the Falcon for full information on what samples are being held, what type they are and their sizes.

Of course, it is Clarity 16's d-t-d functions which make it stand out from much of the competition, and there are useful appendices explaining some of the pitfalls (and they do exist) of using a hard drive as an audio storage device.

As you need 1Mb of hard drive space for every five seconds of 16-bit stereo audio recorded at the top

## Recording samples

All samplers must, of course, be able to record their own samples from an external input – those that can't must truthfully refer to themselves as sample editors, and not samplers. Of course, Clarity 16 is fully endowed with recording feature – all you have to do is find something suitable to sample!

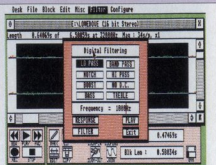
Firstly, a new file needs setting up by selecting the relevant option from the File menu. A Create File box appears, allowing you to choose whether to sample in 8, 12 or 16-bit (lowest to highest resolution and therefore quality), and in mono or stereo.

Having chosen where to record the sample (I chose drive E, a hard drive partition) the familiar sample window appears. Once the sample volume is set, pressing the Sample button will cause the Falcon to sample the source input, either until you press the right mouse button or until the available memory/hard disk space is exhausted.

The Set Frequency dialogue box allows you to choose a sampling frequency (the higher the better, but the more storage space that will be required) from pre-set buttons (you can choose your own too).

Full stereo/mono/channel switching functions are available, as is the ability to sequence sampled sounds in a simple order.

Once a sample has been made, it can be altered using any of a large number of built-in effects and processors



(48kHz) sampling rate, the serious user might well be looking at a 200-Mb hard drive and a decent chunk of RAM (14Mb sounds ideal...) for ease of use when cutting, pasting and using other memory-intensive functions.

My criticisms are limited to sketchy installation instructions in the manual along with no index and a tendency to use old ST screenshots, and within a rather mysterious less-than-immediate start-up time when pressing Record in order to sample a

sound. This virtually guarantees that editing the start of your samples will be a necessity.

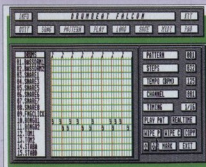
Overall, then, this is a very well programmed and solid product, no doubt due to its proven ST pedigree, which makes extensive use of the Falcon's DSP to provide an exciting degree of flexibility which at points excited me.

The possibilities are enormous; used in conjunction with a "real" sampler this makes a great editing tool, but with enough memory and hard drive space, it could easily replace a standalone sampler altogether.

It hasn't got all of the features of such a machine, but the convenience of using a computer you already own for a task which would cost you thousands of pounds to duplicate with custom hardware might prove hard to resist!

Now, when are they going to tell me what the missing Midiplay program is all about?

## Bangin' to the beat of the drum



The bonus program Drumbeat provides a great drum machine which can be synced to external triggers and/or sounds

sequencer, using a tracker-style (numerical) piano roll editor. By judicious use of the editing functions in this menu, it is possible to repeat any number of patterns any number of times, and jump around within your predefined patterns in order to construct a complete song.

The patterns themselves are dealt with by the Pattern menu which contains a list of all the drums in your kit down the left-hand side, and the musical time along the top.

Up to 50 patterns can be held in memory, and there's a real time option which lets you actually "play" your patterns in real time rather than clicking where a drum should play on the grid using the mouse.

Finally, Midi support allows the sending of all pattern data to an external device (another sampler, a drum machine – you could even have a channel turning lights on and off with the snare, for instance!) and there is Midi clock control to ensure that all involved devices are synced. Similarly, Drumbeat can be triggered with outside drum pads, plugged into the Falcon's Midi In.

A useful application of all of the sophisticated sampling and effects processing technology offered by Clarity comes free with the package, in the form of Drumbeat – a full drum machine capable of handling four kit of up to 30 drum sounds each.

Although all of these samples must be in mono, they can be panned separately giving a full stereo effect – a little like standing in front of a real drummer, where a drum roll goes from left to right on the kit. Conversion of samples into mono is easily done from within the Editor.

There is an example drum kit located on the Drumbeat disk – that is, sounds and sequences together – and loading and playing this gives a good idea of what Drumbeat is capable of.

The Song menu allows the user to string together a list of patterns, like musical parts in a piano roll editor. By judicious use of the editing functions in this menu, it is possible to repeat any number of patterns any number of times, and jump around within your predefined patterns in order to construct a complete song.

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Up to 50 patterns can be held in memory, and there's a real time option which lets you actually "play" your patterns in real time rather than clicking where a drum should play on the grid using the mouse.

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## BOTTOM LINE

### FEATURES

A wide variety of well-chosen features make the most of the Falcon.

Excellent  
Good  
Average  
Bad  
Appalling

### EASE OF USE

Well programmed and highly intuitive, but read the manual carefully!

Excellent  
Good  
Average  
Bad  
Appalling

### VALUE FOR MONEY

Incredible value at as price which will have sampler manufacturers worried.

Excellent  
Good  
Average  
Bad  
Appalling

Product: Clarity 16  
Supplier: HiSoft, The Old School, Greenfield, Bedford, MK45 5DE  
Telephone: 0525 718181  
Price: £99.95  
Configuration: Falcons



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CM 124: Klingon War (Star Trek)	CM 127: Striker
ADV 09: PORK 2	ADV 28: A Night on the Town
ADV 31: Susan	ADV 32: Christian Adventure
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## FALCON Software

After many years supporting the Atari ST, Floppystop were the first company to offer PD and Shareware for the Falcon 030. Unlike some PD retailers who advertise Falcon software and copy the disks on PCs, we have had a Falcon for over a year and actually take the time to test the software on our machine, ensuring a professional service all round. Both our catalogues are currently the most comprehensive available from any supplier. Over the coming months, our support will further extend into several new commercial releases of our own, all of which will be compatible with the new machine. We also have Falcon specific software under development. This in no way lessens our commitment to our ST and STE customers. We remain firmly behind the entire ST range. Our catalogues are disk based and simple to use. It has a powerful search facility and can output to printer if required. Floppystop are also distributors of the Budget UK Licenseware range. For a free copy of either catalogue disk, send us a blank disk with a note of your name and address, stating whether you require the ST or Falcon catalogue. Alternatively you can send a Cheque or PO for 80p and we'll supply the disk. Please make Cheque or PO (UK currency only) payable to Floppystop. Major Credit Cards welcome. UK Postage FREE. Overseas Postage to: Europe £1.00 per order, Rest of World 10% of order value (minimum charge £2.00).

## COMING SOON...

**ChromaStudio 24** - The Ultimate Graphics Tool for your Atari Falcon, is in the final stages of development. It will set the standards that others will follow, in art, animation, morphing and image processing, making it the most all encompassing program of its kind on any computer. Chroma is expected towards the end of the year, watch this magazine for release date and price.

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# The big



# squeeze

Andrew Wright looks at the latest space-saving software

Those of you who have been collecting various PD and shareware utilities and commercial programs since the ST first appeared on the home computer scene will at the very least have a couple of hundred floppy disks to look after.

Add a bulging hard drive stuffed with those little programs that are bound to come in useful one day, and you have what could best be described as a space problem.

If you're anything like me, every time a new program comes along, something else has to make way and keeping some free space becomes an uphill struggle. In fact, some days I reckon to spend more time in freeing up space than I do actually using it...

Happily there are several ways of freeing up space, many of which are surprisingly efficient. If you're contemplating upgrading your hard drive, or pondering whether to buy another big box of floppies, stop for a moment and think of the alternatives.

Hard and floppy disk storage space might be getting cheaper every day but they still cost money and you might be pleasantly surprised at what the latest compression software can do for you.

## TRADITIONAL

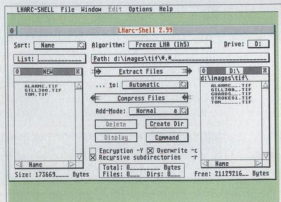
I've used compression software to include three specific types of program. Firstly there are the traditional archivers like ARC, ZOO, ZIP and LHarc which arrived with the growth of bulletin boards in the late 1980s.

An archiver's job is to take a group of binary or text files and make them smaller and more compact, hence saving money when they are transmitted electronically over networks and via modems.

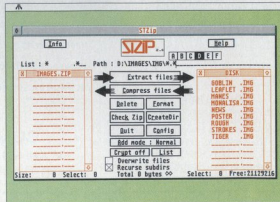
Normally a set of associated files, such as a program, resource file, source code and manual, is archived into one single file which makes it much more convenient to pass around.

The single file will typically be a third to a half the size of the uncompressed components, so there is a space saving too. The disadvantage, of course, is that the files are no longer ready to run and they have to be de-archived before they can be used.

The second type of software is the program packer. Packers work in a similar way to archivers — many even use the same compression algorithms — but the



The new LHarc 2.99 with smart GEM interface



Zip has revolutionised ST archiving but will it hold onto its lead?

UTILITY	TIME	ARCHIVE SIZE
ZIP 2.2 (best deflate)	55.9	130,939
ZIP 2.2 (fast deflate)	44.2	132,291
LHarc 2.99	88.0	134,813
LHarc 2.01h	118.0	134,822
ARC(602)	56.9	182,322
ZOO	62.7	175,374

Time taken to compress an identical group of files using various methods, together with final archive size. Times are averages taken over ten operations

resulting files remain executable despite having been altered and reduced in size.

A third type is the newer disk compression-type software that acts as an interface between the operating system and the hard or floppy disk. Any data about to be written to disk is automatically compressed "on the fly" before being physically written to the disk, and when the disk is accessed, the data is automatically uncompressed again.

The advantage of this approach is that the process is largely transparent and you can store up to twice as much information on a given storage unit. The main disadvantage is the time it takes, which can result in much slower system operation.

Archiving programs have been with us for years but many are gradually disappearing as the two main ones, ZIP and LHarc (which produces LZH files) take over completely. Early archivers like ZOO and ARC have had their day although it is still worth keeping a copy of ARC on your system somewhere for the day when someone does send you an older archive.

Even more obscure ones like SHAR and TAR can be disregarded completely while UUECODE and UUCODE are Unix-based systems only seen on some of the more techy online networks like Internet and Usenet.

The origins of LHarc go back to 1988 when the first MS-DOS and UNIX versions appeared, followed closely by a number of prototype ST versions in 1989 (LZSS, LZARI and LZHUJ, each using slightly different compression algorithms).

The main versions in use today are LHARC.PRG (v0.51beta or v0.6) and LHARC.TTP v1.31 which are still soldiering on in some unenlightened PD

libraries and BBSs. They use the earlier lhl type algorithm and can't be used to de-archive newer LZH archives created with the later LHARC.TTP 2.01x which uses the much faster, more efficient lH5-type algorithm.

This year we've seen the arrival of a brand new version, 2.99, with a very nice integrated GEM interface, with twin file windows similar to the STZIP interface, and even faster operation. As it is backwardly compatible with the earlier versions as far as LHARC 0.51beta, there is no need to have dozens of versions knocking around.

A year ago STZIP 2.0 arrived on the scene to instant acclaim, knocking spots off the ancient command line driven versions of ARC and LHarc that users were saddled with.

It featured a friendly point-and-click interface and dozens of features were accessible by simply clicking a button instead of typing in a cryptic set of switches. It also seemed faster than LHarc in most circumstances and could claim complete compatibility with PKZIP, the standard on the PC.

Version 2.4 of STZIP has just been released with several updates and improvements though whether it will survive the hot competition from the new look LHarc, it is too early to say. Its irritating several second delay on startup isn't going to win any friends but it still seems to have the edge on performance.

### FRIENDLY

Long before archivers like ZIP appeared that were equipped with their own GEM interfaces, third-party programs were often used to act as a shell. These shell programs display user friendly menus covering the operation of the archiving programs, making it unnecessary to string together complex command lines or memorise arcane switches.

In other words, the user would select a command such as Extract from the shell menu and the shell would call the archiver in turn, pass on any required parameters and then hand control back when it had done its job.

Until the arrival of the excellent German TWOINONE shell, there was no single shell for all the main archivers but TWOINONE, now up to v1.03 and with English menus, is capable of handling

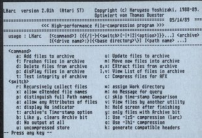
Add	extract	Hold Screen	Keep Backup
Move	Run	Suppress Compression	
Update	Copy to StdOut	Suppress Messages	
Freshen	List	Suppress Notes	
Delete	Verbose List	Overwrite Existing Files	
Test	cDvert	Include Subdirectories	
Def: ARC602.TTP	Bit:	Encrypt	Code: .....
Archive Type:	ARC Drive: F	LZH Comments	
ARC LZH	Group Extract	Overwrite LZH Mode	
DATA Drive: F	Go!	Info	Disk Config EXIT

ARC Shell ©1992 Charles F. Johnson

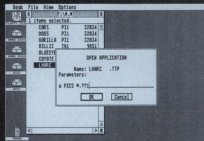
One of the oldest and best known archiving shells is Charles F Johnson's ARCShell

## Step by step

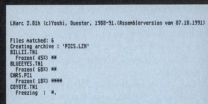
Just in case you haven't got the new version of LHarc yet and you want to get to work, here's how to use LHARC v2.01x, the most widely used version to date.



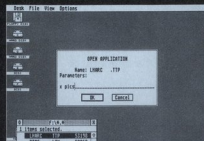
First, double click on the LHARC.TTP file and a dialogue will appear asking for parameters. Hit the Return key and the help screen appears. Note the command line parameters comprise a single command (usually add or extract) followed by various switches and archive names



Once you've exited the LHarc program, run it again. The simple command shown here will add (a) to archive PICS (extender LZH added by the program) the files matching the pattern \*.P\*. As no full path is specified, the program will look in the current directory and in this case include the TNI and PII files present. Note that had the pattern \*.\* been specified, the LHarc.TTP program file itself would have added to the archive!



### Archiving in progress



Here's the reverse command, this time used to extract the files again.



ZIP, LHarc, ARC, ZOO and UNARJ as well as Unix programs like UJENCODE and program packers like PFXPAK.

To get up and running, the archiving programs have to be installed in the relevant program slots, so you'll still need STZIP, LHarc and any other programs you want to use.

The program allows default switches to be specified for all the various archivers with separate English menus for each one but casual users who need regular access to straightforward archiving and dearchiving facilities will find it simple and intuitive to operate.

## DESTINATION

It uses the now standard twin window system as used by STZIP and LHarc 2.99, one displaying the contents of the archive itself and the other the destination directory or files which are to be added.

Operating the program is as easy as selecting files or archives on one window and hitting a button but if you get stuck, online help is available too.

If you're not already using archivers to save space, there's never been a better time to try. The excellent shareware program TWOINONE is a must that transforms archiving from a mystic art into a straightforward, painless process.

It is a vital addition to any software collection and the good news is that support and registration (a mere £9) is available in the UK. The English version should be in good PD libraries by the time you read this.

Other vital programs are STZIP which is basically postcardware (send a postcard to the author in France) and the new LHarc 2.99, which is public domain. Keep a copy of ARC handy too, in case someone sends you an old archive or

BINARY FILES	LZH201	ZIP 2.2	LZH299
Compress	274	212	412
Extract	55	80	114
Final ratio (%)	46.6	46.5	46.6
<hr/>			
TEXT FILES	LZH201	ZIP 2.2	LZH299
Compress	693	360	473
Extract	77	137	80
Final ratio (%)	39.6	38.1	39.6
<hr/>			
IMAGE FILES	LZH201	ZIP 2.2	LZH299
Compress	342	164	220
Extract	183	77	48
Final ratio (%)	26.3	26.9	26.4

Tables showing ratios of compression on different file types and the times taken to compress and extract them. Note these tests are average results using a wide selection of files and that the image files did not include GIFs or other already compressed files, nor did the binary files contain packed programs

you order an old disk from a PD library.

With the two main archivers compressing most files to between a quarter and a half their normal size, you can comfortably squeeze up to 2.8Mb on a single 720k floppy disk!

The new GEM interfaces let you pull single files from large archives, so you can retrieve data quickly and easily, even if it is archived on floppy.

Those of you with small hard drives can use archivers just as fruitfully, zipping up all the files you only use now and again and placing them in dedicated archive folders.

When a particular file is needed, it can be pulled out on its own at the press of a mouse button. Clip art collections are particularly handy for archiving as image files tend to offer the greatest compression ratios.

## The Datalite double

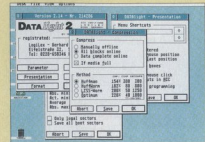
Datalite 2.0 is a disk doubling program from HiSoft that compresses data on both hard and floppy disks, making it take up less space. It comes on a single sided floppy disk with a printed manual and installation is pretty straightforward, involving copying a program into the AUTO folder of your boot disk and the accessory into the root directory. Datalite is a BIOS device driver that intercepts all read and write operations to the specified disk. Data is divided into blocks, compressed and then written to disk and as far as the user is concerned, the whole operation is completely transparent.

The whereabouts of individual files are kept in a list rather like File Allocation Tables or FATs so that when the data needs to be retrieved, the required blocks can be accessed and then decompressed. Datalite works on both floppy and hard drives with AHDI 3.0+ or ICD drivers and including the IDE drive in the Falcon. Everything is carried out from the control panel accessory and there are plenty of options for tweaking the system or fine tuning individual drives. Caches - areas of RAM used by the program to store data during compression - can be set to any size though overall performance increases with larger cache sizes.

Datalite is a surprisingly stable program that makes disk doubling easy, but while it has proved reliable on review, the risk of data loss has to be considered that much higher.

If you have a small, slow, overflying hard disk, Datalite can give it a new lease of life but don't expect to gain more than a 50 per cent increase in space and still work at a reasonable speed. Faster machines such as Falcons and TTs fare better as the CPU overhead is less noticeable and up to twice as much space can realistically be made available for a little loss in system speed.

Datalite's user interface consists of multiple windows and push-button operation



The oddly named Jam Packer

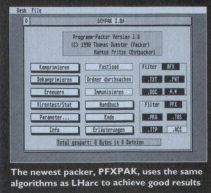
## Packing 'em in

Program packing works in much the same way as archiving except that once packed the program is still executable. The advantage of this is that it doesn't matter to the user whether it is packed or not - all that is required to run it is a double click on the icon.

A large number of commercial and PD utilities and programs are distributed in packed form to save space on the distribution disk that can be used for something else such as tutorial files.

One of the handiest is the Jam Packer v4 which offers four separate compression algorithms and a friendly interface.

Program packers are well worth looking at for floppy drive owners trying to fit a complete set of program files on one disk.



The newest packer, PFXPAK, uses the same algorithms as LHarc to achieve good results

Got anything to say to the ST community?

Then this is your soapbox

# Write Now

## Support sorrow

In response to the letter headed *The Way Forward* in the Christmas issue, I thought you would be interested in my experiences over the last two years with the world of Atari.

I bought my IMb 520STE, Philips 8833 and Panasonic KX-P1123 printer. Software used is First Word Plus, Easy Text Professional, K-Pread 4, Home Accounts 2 and a range of PD.

Since then I have discovered that retail support for the ST, apart from games, in my area is virtually non-existent. I have bought all my products through mail order out of necessity.

Small retail outlets cannot always compete with large stores when it comes to price, but when I bought First Word Plus one local shop had a copy at more than 100 per cent the price I paid.

When I asked for a demonstration I was told it would take too long to set up, and besides no-one in the store was familiar with it.

There were plenty of teenagers playing games on a range of machines already set up. This had been typical of the response I have received locally.

When it comes with dealing with Atari UK I have fared no better. On the two occasions I have spoken to them they have referred me to my "helpful" local supplier.

As for standards, how many times have we seen updated operating systems flawed on release, either due to bugs or incompatibility with earlier systems – or both?

I considered upgrading from TOS 1.62 to 2.06 but again could not find anyone locally to do this, and once again there was word of incompatibility with 1.62 on certain programs.

I am sorry to say my experience has been an expensive mistake, although at times very enjoyable.

Ray Levy, Clacton-on-Sea

**Unfortunately, many of your complaints are not limited to the Atari market. Sister**

**magazines published here receive letters from PC and Amiga owners also unhappy with service.**

**It seems many shops up and down the country don't train staff properly to use the software they sell and, in some cases, even the computers.**

**But the good news is that things appear to be getting better. A recent report showed service in the high street has improved for computer buyers during the last couple of years.**

**Small retailers find it difficult to compete in terms of price with chain stores and mail order operations, but usually they are able to offer a high standard of service.**

**And even your operating system problems aren't unique to Atari computers. Many PC owners have in the past had similar difficulties with the release of updates to the equipment they use.**

## Protect naivety

Surely Mr Spencer of Maidstone is a little naive if he imagines he will receive an excel-

lent magazine and a program costing around £150 for less than £4.

I appreciate times are hard. As an 80-year-old pensioner I certainly do. However, I also recognise that no magazine could afford such generosity and remain in business.

What your program did was give him the opportunity of a preview of the program before he spent £100 on software which might not meet his requirements.

Alternatively he can, if the new demo appeals to him, approach the manufacturer for a price to upgrade the version he has.

I became a computer addict some nine years ago and found programming on the old Spectrum a hobby which also kept me mentally active.

In those days I spent much of my income on programs that I found, once my money was gone, were hardly what I imagined I was going to receive.

Today, thanks to your disks and magazine which usually give the professionals' views on products, I can make a reasonable judgement as to whether I should invest in the product.

As a pensioner may I thank you for such disks. They certainly help to conserve my limited resources.

Mr Spencer, be grateful and should you know of any place or person willing to buy fivers at £150 a time please let me know. I have one or two still left in my wallet and the extra cash would be most welcome.

W Goddard, Wigan

**It's always good to hear from readers who enjoy Atari ST User and its CoverDisk, and especially so from those people who rely on our unbiased reviews for buying advice.**

**We always try to provide the best value for money magazine you can buy and we realise the importance of CoverDisk demos of top products such as Protect.**

## Waiting to hear from you...

To join the ST chat show drop a line to The Editor, Write Now, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

## Falcon wish list

£25  
Prize  
Letter

Well I did it, I bought one – a Falcon that is. It must be the only one in Norway. Why did I do it? Over the years this is the fifth computer I have owned. Three came from Radio Shack Color Computers and now two from Atari. There's the first clue, the hope that I wouldn't have to throw away all my Atari software.

But that isn't a big enough reason to invest £1,000. Here is the point of the letter; I thought Falcon suppliers might be interested to know what a mere punter's expectations are.

First, excitement. I am really excited about a new and powerful computer sitting on my home desk. I am not primarily in it for the games potential, but neither am I in it for the business power applications – enough of those at work thank you.

I want good graphics/picture editors, DTP for those party invites, sound sampling, graphic digitising, a CD-ROM full of my own snaps and some programming capability. It's my hobby not my business and affordable, interesting applications are the order of the day.

As the ST market has matured, the ST has developed into a machine for enthusiasts, and the role of public domain and shareware suppliers has been significant. Not only public domain, but commercial suppliers that have survived are also enthusiasts for the machine – CGS, Titan and HiSoft. Much of this impression came through the magazines like *Atari ST User* – another bunch of enthusiasts – highlighting the importance of a good periodical.

So there you have it – what I detect is enthusiasm for the fun of computing. The Falcon, I am sure, will provide that – a continuation of my hobby.

J Perry, Norway

**It's always interesting to read what ST and Falcon owners want to use their machines for and the kind of applications they are looking for.**

**It makes a change for a reader to say what they want to see produced for their machine rather than them just waiting to see what software houses deliver.**

## Heart Break

Programmed by: Rozwadowski

Available from: LAPD  
Disk No L.66

Here, at last, is a variant on Tetris that actually tries to add to the old classic. Though played by schoolkids to aging business men, this universal Russian title has become a little long in the tooth, especially with the continual influx of clones released across all formats nearly every month.

So when a package appears from a country called Sweden, one approaches it with a little more than just cynicism.

Well, imagine my surprise when on booting up, I'm presented with a seven by seven grid that can be filled up either horizontally or vertically to amass huge dollops of points.

The way to do this is through the use of tiles which don't fall from the heavens but in fact appear on the end of your pointer ready to be placed where you like on the board.

These tiles can come as single squares or as shapes that are very similar to the ones found in Tetris. On top of this, each set of tiles carries a different symbol that score differing amounts of points.

There are also special bonus tiles with multipliers and extra lives that are activated once the line is complete.

On other hand, life destroyers in the shape of skulls and useless blocks that stop you from making a perfect line crop up on an all-too-regular basis.

My only negative point is that the time limit in which to use each piece can be infuriatingly quick at the beginning, unlike the gradual learning curve of Tetris where you are able to warm up and get into the swing of things.

Heart Break is a fun and very addictive little game that is well worth a few hours of anyone's time. Recommended.



Make a complete line across or down the grid to pile in the points

# PUBLIC SECTOR

**H**ere we go again with the latest, greatest and worst of this month's releases from PD libraries all round the country.

Sit back and relax in your chair/stool/bath and soak up this bunch of reviews. Oh, and to all programmers out there - keep it rollin' in large and copious amounts. Remember, nothing is too bizarre/ strange/ wacky/ wonderous/ gross for these pages...

Adam Phillips takes a relentlessly analytical look at potential buys from the cutting edge of the public domain

## Clock Time

Programmed by: B J Amor

Available from: LAPD • Disk No M.166

I'm surprised that analogue clocks are still being manufactured. I mean, with the advent of the digital watch I'd have thought that the computer-ridden consumer would have shrugged off something so arcane as a watchface.

After all, it lacks flashing lights and pointless features such as waterproofing for up to five miles deep in water - useful for the cast of *The Abyss* but no-one else...

Thankfully, when the big hand is on the 12 and the little hand is on the analogue watches do ten - what time is it? Time to get a digital watch... seem to be one of the last bastions of a society that wasn't particularly bothered with fancy consumer goods as long as things did what they claimed to do - in this case, telling the time.

Clock Time is aimed at the very young, offering an easy to use and simple program for teaching kiddies how to read a clockface. Split into two different sections with five difficult settings, this takes the user through telling the "o'clocks" to more complex time arrangements.

For an inquisitive child who keeps asking for you to teach them how to tell the time, this package offers an ideal solution for everyone's needs.





## Lundberg Compilation

Programmed by: M. Lundberg

Available from: LAPD • Disk No G.337

I presume that if an author of software manages to have a whole compilation based around his games, it's a pretty surefire sign that he's prolific and his work sells well.

Mr Lundberg doesn't seem to be the exception to rule with this trio of very healthy, well programmed and dare I say in places, original programs.

First up is *Mushy Music* – a game like no other I've ever seen. You, as a miniature Mozart, must move round on the top of a music sheet, pushing the notes on it into the correct position that matches the music played by the computer.

To make life more difficult in later levels, various musical pieces of equipment attack you, such as satanic cellos. It's all a novel idea which has been well implemented with some nice touches such as falling off the edge of the music sheet. It is an enjoyable if a little frustrating at times.

After mashing your music, the idea of a *Good Knight's Sleep* might well appeal to you, and after that piece of hysterically funny journalistic humor, next up is a title that formed the basis for the joke.

Playing a stumpy knight, the player begins at the bottom of an immensely large, huge and to say at the very least, rather big tower which must be ascended to the top while avoiding the enemy knights who cascade down from above at very regular intervals.

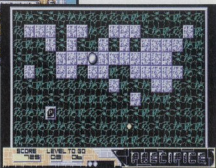
That's about it other than the frantic sword-wagging to hack the knights to death and while being rather simplistic, the presentation is professional, the scrolling smooth and there is a certain addition to getting to the top of the tower which seems to stretch up into the skies further than the CN Tower does in Toronto.

The third, final and best game on the compilation is *Precipice* – again, another simple concept but well executed. This time you



Try and reach the ever-elusive top of the tower while avoiding the plummeting, sword-wielding knights

Jump abysses and roll over power-ups to reach the exit before the ball knocks away all the platforms



control a metallic bouncy ball that must be moved along a platform hanging in space. Put one roll wrong and you'll tip over the precipice to your untimely death.

The object of the title is to grab all the power symbols in turn and head to the exit – gaps need to be jumped, varying obstacle in the shape of lasers, attractors (they drag you towards them with their magnetic force) and a breakout ball that slowly knocks away any part of the platform it bumps into.

This attention to detail gives the game a real edge and the gameplay is both challenging and very addictive, making this the most desirable title on the package.

For £1.50, the *Lundberg Compilation* is well worth the asking price so go and order it.

## The Gardener

Programmed by: J Hudson/Birsay/Orkney

Available from: LAPD • Disk No M.161

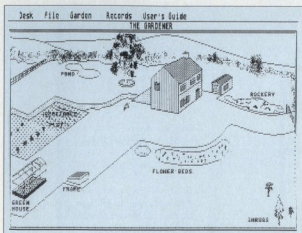
A friend of mine has been gardening now for the last several months, producing a forest of weed-like plants that have sprung up from mere limpy stumps to tall, thin wispy numbers.

These appear to be all over the garden and after much discussion, she decided to start a written database keep track of all of them.

Now, with the discovery of the *Gardener*, her life will be made much more easy and convenient. Providing a database for all green fingers and growbag grompers, it's a means for keeping planting records so that a search will show the exact position of a plant on a map of the gardening area.

Also, an unknown plant can be automatically identified with a click of a mouse button. By using art packages such as *Degas*, an overall plan/3D picture of your own garden may be imported for a more detailed breakdown of your planting property.

A simple and effective program which has helped my friend to yield a very good harvest this year – but of what she won't tell me.



Create a green-fingered database for all your garden-ly needs in the *Gardener*

## Bobby Ness Clip Art

Produced by: Bobby Ness

Available from: LAPD • Disk No m.A.83

For all of you out there who produce flyers, posters and newsletters on your trusty work-horse of a machine, and want to inject a little visual excitement into your work, *Bobby Ness Clip Art* offers a wide range of different IMG pictures.

There are well over 50 images to pick through on the quest for something "just right" to fill the top right-hand gap on the page, ranging from churches and mountains to tastefully drawn half-naked women (for the local private shop newsletter).

Most of the graphics are well drawn and will complement whatever you decide to use them on, making Bobby Ness and his clip art a worthwhile and useful purchase.



Lift these useful piccies and place them on a document to help with the presentation

## Bludgeon

Programmed by: Seaton Shareware Co-operative

Available from: Seaton Shareware  
Co-operative

Dungeons and dragons... I used to be a fan of this gaming phenomenon when it first raised its ugly little head a few years ago, which at the best of times involved hacking and slashing anything that moved to death.

Perhaps you're thinking, does this reviewer find D&D subversive and negative influence on society today like many other journalists in the tabloids?

Indeed, no. The games, especially other systems such as Call of Cthulhu, Judge Dredd and Paranoia, can be healthy for the imagination and create a sociable and exciting experience.

The problem I have with a large proportion of efforts in this genre is the fact that they are so boring. I knew people who continually nagged to get a massive kick out of walking around some piffing little maze gathering more and more infinitely tedious treasure while becoming orkalest after killing yet another zombie/ghoul/skeleton/mummy/hobgoblin.

At the same time, their imaginations managed to rot away into nothing and a nine-to-five job for life.

Role-playing can be a terrific and inspiring experience if interesting stories and even issues are dealt with to enlarge the mind instead of reducing it to the base level of repetition.

Bludgeon works. It works because it offers the user the opportunity to shape and mould an adventure to their needs. While hacking and slaying can be exciting in short, well-placed doses, different objectives and plots can be created by the "gamesmaster" through the generator side of the shareware version.

The actual system is viewed from above with differing characters represented by different colours - red means a fast moving but vulnerable character and green, vice-versa.

The player must move each of them around, deciding on strategy and tactics to vanquish the enemy through the use of magic or weapons and exploring the environment that they find themselves in.

Also included are two preset scenarios that place the player at the pyramids or in mortal combat with Lord Arachne, prince of spiders who must be destroyed at all costs.

From what I saw, neither of these were particularly exciting adventures but the system itself works well and with the Seaton Shareware Co-operative's commitment to continually increasing and enlarging the system, this offers good value for money.

There's a printed manual offering useful tips and advice, making this a good buy for all dungeoneers.



Plan, murder and plunder each customisable mission in this fantasy combat simulator

## Towers

Produced by: JV Enterprises

Available from: JV Enterprises

An American title, Towers is the Yanks, equivalent of a PD Dungeon Master clone. Flying in all the way from Las Vegas, this is a reasonable "tribute" to the classic of eons ago.

Storms have ravaged your ship and rendered it nearly wrecked. Only because of the magical powers of a man on board did you and your crew make land.

On making it ashore, it's apparent that this is nothing like the Grimby docks you left behind but a country of immense beauty with friendly people and monolithic towers.

Up in these stony peaks live the lords of the land and according to the locals, the higher the tower, the richer the lord - the "look, mine's bigger than yours" attitude.

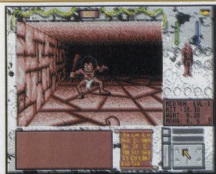
While this is all very Utopian and ideal, the small question of handy cash for your hotel rental fees become rapidly apparent with only a few dollars left to last you several weeks until the ship is mended proper.

On hearing that the sheriff wishes to employ the services of a courier, you and your crew gather yourselves and head down to the local job centre to enrol.

Apparently, one of the lords, Lordship Baniff himself, has not been seen or heard from for quite some time while sitting in his ivory tower. The mission is simply to make contact with him and report back.

Sounds simple but alas, like all such things, nothing is ever that simple. On arrival at the entrance, your party moves indoors as you wait outside for their return. Suddenly, the entrance caves in trapping your members.

Now it's time for the gameplay to begin -



Find out what happened to the Lord who lives in the tower

controlling one of the trapped dungeoneers, you must traverse through a dungeon... I mean, tower and move down into the bowels of the... sorry, up into the heady heights of the stony pinnacle and save the world from destruction... most probably.

Pick up weapons, food and incant magic to see off foes (the little caverns are especially cute) while searching for keys and other assorted goodies to help you progress further into the labyrinth of rooms and halls.

This is all fairly unremarkable stuff but as usual, if you're a badly-starved addict of the genre, it comes recommended but second place to the likes of Walls of Illusion which despite being in German is still a damn fine and very good looking game when compared to the stodgy nature of Towers.

One feature that deserves a special mention is the sound of the characters' footsteps as they hit the ground - a thick heavy crunching noise does add atmosphere to the proceedings.

If you want something that you might have played a few times before under a different title then this is for you - otherwise, look elsewhere

## Logic Problems III

Programmed by: Ben Weston

Available from: LAPD • Disk No L67

Do you remember those puzzle magazines cram-packed with crosswords, search-the-word and other novelties? If so, you may well recall those brain-aching logic problems where the player is presented with a grid and down the side and along the top are various categories.

By using the clues provided, you have to work out certain answers as asked by the computer by logical deduction, and ticking or crossing out the different categories in relation to each other.

Confused? It's elemental, take a look at the screenshot. There are plenty of different puzzles to choose from and each is a challenge to the thought process.

Smartly presented and with comprehensive



Deduce the answers from the computer clues in this game of logic

instructions which include tips on play, this is a good buy for puzzle buffs. If however, you should find yourself solving every one, there is a custom program to create your own in conjunction with Degas Elite so you can devise and construct mind-bending puzzles until the end.

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Once in a while, there comes an invention that influences the way in which society lives. The car, the television, the atom bomb, the computer... Now, virtual reality is beginning to show its first signs of growing up from the wildly speculative pipe dreams of its early years into a fully-fledged, commercially viable and above all, exciting industry.

It has the potential to be the next "big thing" to grab the collective imagination of the world. While television and film only offer a screen to look at, with audience participation rarely surpassing the heady heights of Noel Edmond's *House Party*, and the most involving computer games resembling a two-player go on *Galactic Body Blows*, virtual reality generates a multi-user, fully interactive environment where, in theory at least, the only barrier is the imagination.

## POSSIBILITIES

At present, not only does VR challenge the way games are played when compared to the likes of the ST and Super Nintendo, it has an endless stream of possibilities that can be used in all walks of life from 3D walk-through architectural plans to a surgeon training for open heart surgery.

Contrary to popular belief, virtual reality has been around for over 20 years and has only come into the limelight with the increasing technological advancements and due to people like Ivan E Sutherland, Jaron Lanier and Dr Jon Waldren.

As a concept, VR was created by Sutherland at the University of Utah in 1968 where he produced the first head-mounted display (HMD) showing a topographic map of the US. Due to the unit's weight, the kit had to be hung from the

ceiling, and it had a power cable running down the user's back with 50,000 volts coursing through it. In another American state during the 60s, Myron Krueger was creating the first VR games at the University of Wisconsin with the likes of

Critter which displayed a video silhouette of the user's head and shoulders. A bug would crawl up to the head to be subsequently removed by the player's hand.

In the 80s, Frederick Brooks created GROPE, where the user could manipulate molecules by the use of 3D image and touch.

Jaron Lanier, the owner of VPL (Visual Programming Language) was the man to come up with a label for all this experimentation - virtual reality.

His own achievements are as the inventor of the EyePhones, a head-mounted display unit for the home user, and the DataGlove, the inspiration for which he puts down to a desire to create the ultimate air guitar.

Still confused as to what VR actually is? Think of it as an artificial, computer-generated world, created by sophisticated programs and entered by the operator through the use of advanced, specialised peripherals, such as helmets and gloves, in either standing or sitting position, depending on the software.

It creates an environment which is 3D, affecting the three principal areas of sight, sound and touch. The peripherals monitor the operator's movements and duplicate them in the virtual world in real time, thus giving rise to an immersive experience, in which the operator is able to manipulate his surroundings via the computer.

At present, there are several peripherals that can be used in VR. These are split into two categories - the sensors and the effectors. Sensors send your

# Why watch a movie when you can be in one? Adam Phillips reports on the rapidly expanding and often controversial world of virtual reality

# Even bet the real

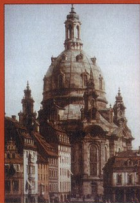
## Dresden virtually rebuilt!

On the February 15, 1945, the Frauenkirche, the Church of Our Lady in Dresden - part of the then East Germany - was destroyed by a firestorm. This was brought about by the heavy British bombing two days before which caused a fire to ravage through one of the greatest masterpieces of European architecture until its walls finally caved in leaving a heap of rubble.

Enter 90s technology to reconstruct the church from scratch using the original materials, sandstone from the Elbe valley and historic building techniques.

To help with the rebuilding, surviving detailed architectural drawings and photographs were used to create a model which was then turned into a 3D photo-realistic computer animation of a flight round the Dresden Frauenkirche.

The sequence of the church will prove invaluable for the reconstruction, giving the designers and builders the closest view possible without actually building it - a virtual reality.



Before its demise during the Second World War, the Frauenkirche was regarded as masterpiece of European architecture...



The virtual rebuilding had to contain the atmosphere and emotions to give the rendering authenticity

Picture Courtesy Dr Brian Collins, IBM UK Scientific Centre



E&S military simulators – one day all games will look this good...

## The JAGUAR closes in...

The new Atari Jaguar is an ideal machine for 3D manipulation and it seems only natural that its creators should be taking an interest in the possibility of a VR headset.

Peter Walker of Atari is hopeful that at some point in the future, VR may well become reality but unfortunately, after all the research done so far and the subsequent worrying revelations, is very wary of rushing into this area too quickly.

With all the safety concerns at present in the industry, Atari is waiting for full and conclusive health and safety checks before it steps out into the arena with its own product. For the time being, we'll have to be patient...

# ter than thing



A Division-produced game designed specifically for the recent SIGGRAPH show in America

signals to the computer and affect your actions in cyberspace (a computer-generated virtual world) while effectors send back data to the user.

An HMD, where the player sees the action, is an effector, while joysticks are sensors. The hand movement devices found so far in the British arcades are the basic joysticks which have one button to fire and the other to move in the direction you are looking.

Data gloves, available in America for some time, let your fingers dictate your movements. The next stage is a glove that will enable the user to "feel" their environment through the use of pressure pads in the peripheral.

### IMMERSIVE

Beyond this, the biggest and potentially most important immersive effector/sensor is the full body data suit. Virtual Presence's version features 96 sensors to track joint and body movement. With the titanium wiring, the suit is very light and if bought with their latest HMD it will set you back £5,000. A snip.

The VR technology everyday punters have access to is in the arcades, and appears a little unimpressive and arcane at the moment when compared to cabinet screen-based machines, with rather slow update rates and basic graphics.

But the makers of these machines, Virtuality Group plc, see these as only the first step in a long but definite route to achieving the ultimate in sensory experience. The company, founded by

Dr Jon Waldren in 1987 under their old name of W Industries, are the world's leading manufacturer of virtual reality equipment and software and have sold more than 350 systems in 20 countries at the healthy price of £25,000 each.

Waldren built his first VR system during his PhD at Loughborough in 1984. From there he established his now booming company and the following year won the British Technology Group Award in 1988.

They have continued to grow at a healthy rate, knocking aside that old British technological neurosis – great

idea, no business sense whatsoever – and have secured contracts with some of the world's biggest names such as MCA in America, Nabisco and Budweiser.

The real ace in Virtuality's pack, though, is the recently attained contract with Sega, when Waldren and company sold the first significant operating system licence to the Japanese entertainment giant. Licensing technology is Virtuality's attempt to standardise a still-young market.

The deal is to produce a high performance virtual reality game which, in the words of the ever-modest Dr Jon Waldren, will be "a landmark within the arcade entertainment field".

To top all of this, the company



E&S military simulators – one day all games will look this good...

## The negative side

The head-mounted display concept has recently come under attack in the press and under research by John Wann and his colleagues at the University of Edinburgh, among others.

Worries have been aired that the HMDs may well cause binocular stress on users' eyes along with nausea and headaches, among other symptoms.

After setting up a test involving 20 young adults seated on a "tethered" cycle and asked to ride round a virtual landscape with signs, buildings and bridges, over half the subjects reported blurred vision and one individual's eyes took 40 minutes to return to their normal state.

The equipment they tested was the VPL LX EyePhone with Fresnel lens which was regarded by many VR companies as a poor comparison to their own hardware.

Wann also claims that the similar problems have arisen with the LEEP lens systems, and that further research is required.

Virtuality had this to say about the subject: "With respect to physical side effects of VR, such as eye strain, any poorly designed equipment will introduce eye strain."

"It is the responsibility of good engineering and correct health and safety tests to ensure products do not reach the market in such a state."

Earlier this year the *Independent* launched an attack on Sega and its prototype designed for home use, the Sega Virtua VR HMD, developed with Virtuality's help, for being one of the guilty parties in the eye strain wars that could possibly cause squints in young children if used for too long.

The equipment the tabloid-style article wrote about was still being researched and tested in the labs and was not available to the general public. It's possible that the machine will now be delayed until the late spring.

The reason given is the continuation of extensive tests which are taking longer than previously thought, and to improve the games that were to be released with the system, possibly after the very mixed reaction they received.

With the Health and Safety Executive sinking £200,000 into further research on the possible side-effects of VR use, it's obvious the matter is being dealt with seriously, and all parties are apparently giving full co-operation.



Still in research, Sega's VR HMD can be expected early in 94

were recently floated on the stock market and fetched £10 million from the newly acquired shareholders with premiums at 73p on the first day.

Their machines are run by Amigas that have been stuffed to the brim with graphics cards and boards introducing processing technology many times in excess of the basic unit.

With Virtuality Group plc's financial holdings well and truly anchored, how does Dr Waldren see VR's future?

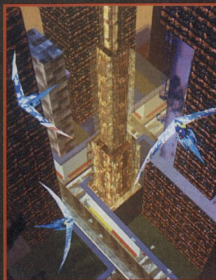
"We envisage the technology becoming significantly lighter and less cumbersome. In terms of the most important aspect, that of the software development, at the moment entertainment applications and other VR applications are very crude.

## SOPHISTICATED

"As we speak, these are becoming far more sophisticated in their complexity and in their usability. It is critical that environments are both compelling and highly enjoyable, but at the same time immediate and uncluttered by technology or aspects of primitive software interfaces."

While Virtuality's main field is in entertainment, they are also placing a firm investment in many other areas of development.

Included in these is "edutainment", a mixture of education and entertainment where VR is already being used in the design of experiences which depict the



The VR hang glider game showing off the realised potential of virtual reality

issues related to an environmental type of simulation. In the future, imagine a classroom without the need for a blackboard and a high velocity chunk of chalk where the pupil walks in, sits down, puts on VR glasses and can be taught at first hand about battle of Bosworth or watch the siege of Leningrad reconstructed in a virtual world.

These systems are also planned to be used in universities and museums and

## A legend in its lifetime

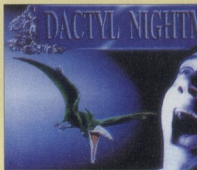
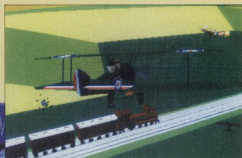
So what are the current crop of arcade games like and are they worth the money? While the likes of *Dactyl Nightmare* and *Gridbusters* are reasonable titles, *Legend Quest* is by far the best example, really showing what virtual reality is capable of.

It takes the clichéd format of an adventure set in dungeons where you, the player, may select to be either a dwarf, an elf, or – if you're in a really daring mood – a human.

Choose a profession – fighter, thief or magician – and the quest begins. Split up into several levels infested with monsters, puzzles and treasure, up to four players can move through the adventure, amassing fame and fortune and generally having a damn fine interactive time.

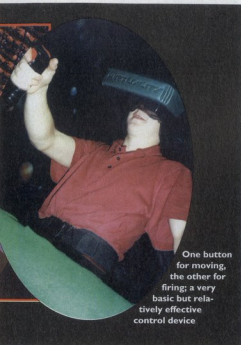
Calling to your fellow companions in a distorted sound-synthesized voice through the VR headset to watch their backs because of the several skeletons rising from the floor and discussing strategies

Flying Aces, a World War One flying sim, is played in the sit down pods, the SD1000...



Watch your back and shoot the opposition in one of the first VR games...





One button for moving, the other for firing; a very basic but relatively effective control device

again offer a potentially excellent learning experience.

Finally, for those of us wishing to have a virtual world in our own front room, a home-based virtual reality kit is been discussed with several manufacturers, for joint development of the computer gamer's dream.

Another British company doing financially well both at home and abroad are Division. Founded in 1989, their speciali-

sation is in applications such as computer-aided design, molecular modelling, telepresence and simulation.

Last October, Volvo demonstrated their Division-designed Virtual Reality Crash Simulator where the user is able to experience a 25mph side impact and walk away unharmed. Charles Grimdale, MD of the company, said: "A full scale 3D model of the car can provide invaluable insights into both ergonomics and aesthetics of design."

## BUYERS

In the Netherlands, virtual reality has been used to show houses which have not yet been built. Prospective buyers were able to walk through and see their future homes, and during the two days that the VR system was in use, more

houses were sold than in any previous two-day period.

Clive Jones of Division said: "If you look at some of the ways virtual reality is going to help people interface with computers and some of the ways in which it's going to allow multimedia to come to life which it hasn't done before, it's more than just another step - it's quite a radical improvement."

Stateside, where things move faster and cost more, companies like Evans and Sutherland - the makers of military and scientific simulations for industry - have decided to turn their talents to the entertainment sector.

Unlike Virtuality and Division, whose philosophies are to make VR as affordable as possible for the mass market, E&S have pulled out all the stops and created Virtual Adventures for a bargain basement price tag of \$1 million each, to be installed in major theme parks this year.

The company's idea is to move away from the HMD into a more sociable and

**Virtual Reality won't merely replace TV. It will eat it alive!**

Arthur C Clarke

interactive environment where a group of people work together to win the game.

Their first product is a game where a team must work together to save the Loch Ness monster using a vehicle containing six people performing different tasks - one pilot, a navigator and robot arm operator among other roles.

At the recent SIGGRAPH show in America, the world's largest computer graphics get-together, Evans and Sutherland stole the event with their breathtaking virtual reality hang-glider ride which allows two participants to fly simultaneously through separate urban landscapes. Even though this was put

creates a real feeling of teamwork and excitement as you work together to progress into the later levels. It is possible to save your game to return to later if you run out of money.

Winner of *CyberEdge Journal's* VR software of the year award 1993, Legend Quest is what virtual reality is all about - feeling like you're there.

Despite the basic chunky look of the graphics, the far from perfect frame update and the occasionally unresponsive controls that don't exactly show off state-of-the-art technology, insiders believe that there will be a dramatic improvement within the next 12 months.

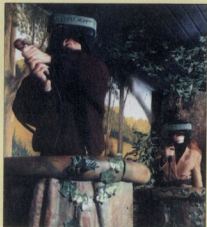
According to Clive Jones of Dimension: "The whole marketplace is technically developing incredibly quickly particularly in the graphics performance area."

With peripherals such as data gloves soon to be released into the arcades and five more games on the way including an underwater adventure, a Star Wars-type escapade and a boxing game as well as a flurry of entertainment activity across the Atlantic, VR is shaping up to be a healthy contender for the coveted title of the ultimate gaming experience.

One of the latest titles - a frenzied gladiatorial game set in the future...

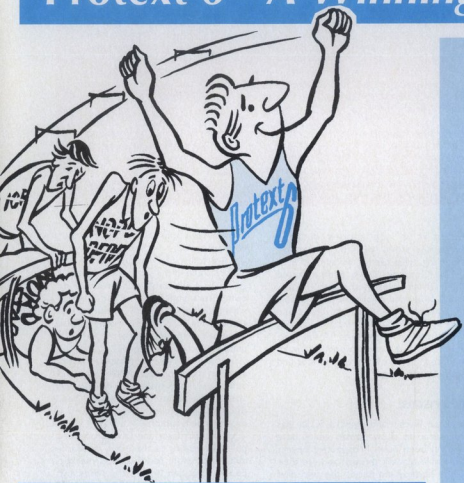


Dungeons, dragons and team work in this, the most interactive of all the virtual reality games so far...



The common set-up for standing games: Here the players stand in a CS 1000, a "pod" used for a safe playing area... in this example, Legend Quest

# Protect 6 - A Winning Performance



## Protect is still the fastest

- Fastest at editing.
- Fastest at spell checking.
- Fastest at printing.

## Protect still has the best printer support

- Hundreds of printers supported
- PostScript driver included **NEW**
- Scalable font support **NEW**
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- Automatic line spacing **NEW**

## Protect still has the most advanced features including:

- Styles **NEW**
- Graphics import **NEW**
- Spelling checker
  - Thesaurus
  - Hyphenation
- Document analysis
  - Glossary **NEW**
  - Footnotes
- Widows and orphans
- Index and contents
- Addition of numbers
  - File sorting
  - Mail merge
- Programming language

## Protect is now easier than ever to use

- Menus and dialogue boxes
- Interactive Help **NEW**
- Macro editor **NEW**
- Dictionary editor **NEW**

## Some highlights of Protect 6

### Styles

Styles let you make flexible use of printer fonts and effects. You can change a font throughout a document with a single operation.

### Document Layout

An easy to use dialogue lets you lay out your page precisely as you want using inches or cm for the page length, margins and tabs.

### Graphics

Graphic images may be imported into a Protect document. Supports IMG, PCX, GIF and IFF. You can select any resolution and scale the image. Dot matrix, inkjet and laser printers.

### Printers

Protect's unrivalled understanding of printers gives you the highest quality printing at the highest possible speed. Using a printer's built in fonts enables Protect to print pages in seconds rather than the minutes taken by some programs.

The list price of Protect 6 is £152.75 but you can order direct today for just **£99** inclusive. For the Atari ST and TT.

Phone us today and we will send you a usable demo version and a full specification, absolutely free. Upgrade offers available - please call us for the current price.



# ARNOR

together purely for the show, E&S have plans to produce a line of machines for under \$100,000 each.

While there are only a handful of companies throughout the world in VR production, many other industries are becoming increasingly interested in the uses for this new medium.

According to Ben Delany, editor of the American *CyberEdge Journal* (a paper specialising in all things cyberspace and virtual), among many of the proposed applications is telepresence where instead of a human going into a potential lethal situation such as a massive fire in a petroleum refinery or a meltdown in a nuclear plant, a remote-controlled robot is sent in operated by a person wearing a data suit which causes the machine to mimic their actions.

## DISTURBED

VR's uses spread as far as psychology where patients will be able to talk to an unassuming virtual therapist controlled by people out of sight – potentially useful in dealing with highly disturbed children.

Other more controversial VR techniques will be in genetic engineering where the engineer will move about in the fish-tank-like setting of a virtual cell, grabbing and moving organelles at will. At the same time, laser cytometres will be performing the actual manipulations on real, living cells, copying the actions of the operator.

You may have read articles about virtual reality before and grown tired of the endless stream of hyperbole: "It's the dawning of a new age", "It's not life as we know it, Jim," to the other extreme:

"It'll destroy society, crush the souls of children, annihilate human communication..."

While the above comments are on the extreme side, whatever VR is capable of, it is up to the people who develop and use it to make sure that this powerful medium that's coming of age is used responsibly and creatively.

While virtual reality may be just

another step up technology's evolutionary ladder, the signs are that this is no flash-in-the-pan craze, and that we'll be seeing more of VR in the months and years to come.

In the words of Clive Jones at Division, questioned on the future of virtual reality: "Has it reached the unstoppable roll? It's very, very close to it."

## What the software companies say...

When virtual reality is eventually released on a home computer format, no matter how good the technology, how fast the frame update is or how slick the graphics are, without a Sonic, Starwing or Mario as a software flagship for the hardware, it will never hit the big time in the front rooms of Britain.

We decided to ask two leading software companies their opinion on VR who in the future could well make or break a virtual reality machine when it finds its way onto the shelves of our local tech stores:



### Stephen Hey

*How do you see VR developing over the next few years?*

It is clear that the sort of virtual reality heralded by William Gibson, that is total sensory immersion, is a long way off. In the shorter term manufacturers will be clambering to produce the first generation of VR equipment – scaled down versions of the existing arcade machines.

*Do you see yourself becoming involved with VR at some stage when released on a home format?*

We already are. When you watch a film you have to believe it's real – that is suspension of disbelief – and to some extent this is what people already experience with some computer games.

The very latest PC simulators like TFX enhance the gaming experience. TFX's "cinematic" effects and techniques such as the virtual cockpit create the most "real" effects yet which set the heart going and the adrenaline pumping.

*Are you concerned with the physical and possible mental side effects such as eye strain and addiction?*

The whole area of virtual reality is riddled with problems ranging from the physical side-effects of the mechanics of the medium to the moral implications.

In virtual reality you could murder with no retribution, steal with no punishment, the possibilities are endless – you could scare yourself to death.

*What excites you the most about VR?*

The potential of VR is amazing – imagine *Family Fortunes* in your own living room, complete with all the virtual wit of Les Dennis. The implications of VR in all areas of life from science to sport is mind-boggling – in gaming, even more so.

VR is the ultimate recreation activity – so what if we all become VR vegetables? It's safe, fun and cheap! Prepare for mind-enhancing games.

Bullfrog  
Productions



### Peter Moyneux

*How do you see VR developing over the next few years?*

Well, there are two types of VR, the individual experience with headsets and the group experience like the *Universal Back To The Future* ride. For anyone that has been on that ride, this is really where the future lies.

Everyone walks out of that completely awestruck. Until the technology of the headsets increase, I think we are going to see group VR experiences popping up all over the country.

*Do you see yourself becoming involved with VR at some stage when released on a home format?*

Yes I would like Bullfrog to be involved, however its like the chicken and egg situation, you have to write a special game for a headset and you would not write a special game for headsets until there are enough headsets and there will not be enough headsets until there are good games.

*Do you think that VR is the next generation in computer entertainment?*

No, I think some sort of multiplayer is the next generation of computer play and VR is just the start of that multiplayer advance.

*Are you concerned with the physical and possible mental side-effects such as back ache, eye strain and addiction?*

I must admit that it's a bit worrying that it could put strain on someone's eyes or neck, so possibly this is something that should be looked into.

*What excites you the most about VR's potential?*

As I mentioned before, the possibility of group experience is much more exciting using multiplayer, after all playing against another human is more exciting than playing against another computer.

## Further reading

Mondo 2000

CyberEdge Journal  
(Tel: 0101415 3313343)

Virtual Reality by Howard Rheingold  
Adventures in Virtual Reality  
by Tom Haywood

## Virtual viewing

**Brainstorm** – The first and so far best VR film made starring Christopher Walken as the scientist tapping into the human mind to create the ultimate sensory experience.

**The Lawnmower Man** – A very weak, limping plot just held together by the superb VR sequences created by Angel Studios.

**Emmanuelle's Seventh Heaven** – Another chance for the porno industry to sink their teeth into something new. Emmanuelle conducts sex therapy through the use of virtual reality in this soft porn flick.









## Auto mystery

In issue 94 of Atari ST User, you mention that the CoverDisk program called Autosort needs to be placed in the Auto folder.

I understand that some disks load straight from booting up, but as a beginner, I can't find the program or folder which does this.

Can you tell me where to find the Auto folder, or can I buy a program from somewhere? I hope you can help me and keep up the great work in your magazine.

P A Wetherall, Selby

*First of all, Autosort appeared in issue 80 and does not need to be placed in the Auto folder. Autosort is simply a utility which allows you to specify the order in which programs in the Auto folder execute.*

*With regards to the Auto folder feature itself, all you need to do is to create the folder yourself by moving the mouse pointer to the File menu at the top of the screen and select Create folder.*

*When you do this, a box will appear requiring you to type in a name for the folder. Simply type Auto and press Return and you have created a Auto folder on the disk.*

*You then copy any appropriate programs into the Auto folder. The ST will then simply look in this folder and execute any programs in there.*

## Falcon SCSI drive

I have been using a Protar Progate DC II hard drive unit with my Atari 1040STFM without any problems. Then I bought an Atari Falcon without internal hard drive, thinking I could use my Protar.

I was told I needed a SCSI II cable, so I set things up with one of these and switched on. Unfortunately, although the Falcon works without the drive plugged in, there is trouble when it is connected.

Switching on the Falcon with the drive plugged in, I get the error message "Boot laufwerk C (ABCDEd) Andern?" and two bombs.

I note that the SCSI port at the back of the drive is marked SCSI Port, not SCSI II. Could this be the trouble? If so, is there anything I can do about it?

C T Davies, Basingstoke

*The German message you are getting is not an error message. It is simply asking if you want to change the current boot partition.*

*Unfortunately, the bombs you are getting do mean you have a problem and suggest that the Protar hard disk software does not like the Falcon.*

*To get the Protar drive working with the Falcon, first open the casing. You should see a ribbon cable coming from the external SCSI port going to a circuit board and then continuing to the back of the hard drive mechanism.*

*The circuit board is simply an interface to enable the ST to communicate with the hard drive mechanism, which is not required as you are connecting it to the Falcon.*

*Unplugging the cable from it simply means that you have a direct connection from the external SCSI port to the SCSI hard drive mechanism, without the interface in the Protar sitting between them.*

*After putting the drive back together, you will probably need to re-format and*

*partition it using Atari's hard disk utilities, so if you have any important files on the disk, backup the drive before doing so.*

## 1Mb drive

I have seen adverts for floppy disk drives with a capacity of 1Mb. The floppy disk in my drive only formats to about 726k. Will the 1Mb drive allow me to format a disk to give me a full 1Mb of storage space?

P Watson, Berks

*Unfortunately not. The figure usually refers to the unformatted capacity. When the ST formats a disk, it places lots of information on the disk so that it knows such things as where tracks and sectors start and end, what files are stored on it and other technical stuff.*

*The maximum amount of storage space you can get on a ST disk is approximately 800k. This is achieved through formatting a disk to ten sectors and 81 (0 to 80)*

# Advice

*tracks. This is only possible by using a formatting utility program as the ST's built-in formatting feature uses a default of nine sectors and 80 tracks.*

*Some formatting software allows you to format over ten sectors and 81 tracks but this will result in unreliable disks and possible data loss, so stick to ten sectors and 80 tracks*

## Falcon video grabbing

Is there a product which will allow me to connect a video source, such as VCR and a camera, to my Falcon, and then digitise both video and sound at the same time?

R Bailey, Surrey

*The answer to your question is VideoMaster Falcon reviewed in last month's issue.*

*VideoMaster Falcon is the best video and sound digitiser currently available for the Falcon and comes from HiSoft on 0525 718181.*

## What a bomber

Sometimes, when I switch my Atari STE from medium resolution to low resolution, my computer crashes. Pictures of cherry bombs also appear on the screen.

Can I fix this myself or will I have to send my computer off to a repair specialist?

I Watson, Stockport

*It sounds as though you may have memory-resident programs, such as accessories or programs loaded via the Auto folder, which do not like the change in resolution.*

*Also, any desk accessories which are*

*loaded go through a re-initialisation procedure when the resolution of the display is changed and may not have enough memory available after the change, which is usually caused by the memory cleanup routines not releasing memory correctly.*

*You can get around the problem by using disks which boot in the required resolution and then re-boot the STE instead of changing resolution.*

## Scart output

Up until a month ago, I had been using my 1040STE with a Bush television set. As you will know, the display is not too clear when using the modulator for screen output.

I have since changed my Bush television for a Sony Trinitron FST, which has a Scart video socket on the back.

A friend tells me that if I can get a video lead to connect the monitor socket on my STE to the Scart socket on the Sony, I will get a

much better display than using the modulator lead.

Are there any ready made leads available for the STE which will allow me to do this?

S Hall, Salford

*Using the Scart connection of a monitor to connect your computer certainly does improve the picture quality by a substantial amount.*

*The leads required to do this are readily available from any computer store. From your address I would "pay a visit" to the Game computer store in the Manchester Ardale centre.*

*They are the largest computer games store in the city centre and stock a number of leads for various computers. The leads should cost no more than £10 to £15.*

## High density desire

At a recent second-hand computer show, I managed to buy two high density 1.4Mb disk drives which were used on a PC.

I know the MegaSTE uses 1.4Mb drives because my friend is always digging me about having a "measly 726k" disk drive.

Will it be just a matter of fitting a 1.4Mb drive in place of the one inside my humble 1040STFM to get the benefit of a massive 1.4Mb increase?

E Miller, Liverpool

*I'm afraid it's not as simple as replacing your "measly 726k" internal drive with the 1.4Mb one. The STFM has a specific disk drive controller chip which will not be able to talk to the 1.4Mb drive.*

*However, System Solutions (0753 83212) can supply or fit an upgrade which will allow you to connect the drive. The*



upgrade is available in kit form (complete with a drive) for £79.95, or you can just buy the module for £39.95 and fit your drive to that.

Give System Solutions a call and tell them what drive mechanism you have. They will be able to confirm whether the upgrade will work with your drive.

## Need for speed

I have an STFM and frequently use the Cyber range of graphics programs for doing 3D modelling and rendering.

However, I understand that a 68882 maths co-processor actually speeds up the all-mathematical process by a considerable amount.

Could you tell me whether the increase in performance using the Cyber programs justifies the expense of having a 68882 fitted?

L Myers, Bedford

I'm afraid the Cyber range of programs will not run any faster with a 68882 fitted.

This is because they are not secured very well to the circuit board and tend to move as you plug in your joystick. Eventually, the solder joints become loose and intermittent electrical connections start occurring, causing the spurious mouse and joystick problems.

If you know anybody with electrical and soldering experience, have them re-heat the solder joints for the ports. Failing that, send it off to an authorised Atari repair centre.

I would also strongly urge you to go and buy some mouse and joystick extension leads as these will prevent further problems with the ports.

## It's an STE - not!

A friend of mine gave me a disk with lots of useful PD utilities on it. However, when I load it into my computer, it always comes up with the annoying message "This is not an STE".

Although quite true (I have an STFM), it's

they would fit on one disk.

He also mentioned in the READ.ME file that I should simply double-click on the TOS file and the programs will self-extract to the disk.

When I do this, the screen goes white and lots of "x" symbols start to print on the screen along with filenames. However, after quite a long time, I always get the message "Write error" and the process stops.

The actual PD\_PROGS.TOS file is approximately 740k long and the READ.ME file is 10k. Has the file been damaged in the post or am I doing something wrong?

I cannot contact my friend over the matter as he has gone to work abroad. Please can you help?

K Blake, Manchester

I would guess that your friend has a hard drive and simply placed all the programs into the one archive, which by average standards is quite a large archive file.

Unfortunately, you will also need a hard drive to extract the files from the archive. It seems your friend has placed the files he sent you on an extended formatted disk which has probably been formatted to approximately 800k using a formatting utility.

With the 740k archive and the 10k text file, there is not much space left on the disk. I would guess that there is well over 1Mb of files within the archive your friend sent you, which therefore means you will need that much space to extract them. Obviously this is impossible using a floppy disk which can only be formatted to a maximum of approximately 800k.

If you know someone with a hard drive, ask them to extract it for you.

# SERVICE

Programs have to be specifically written to take advantage of a 68882 in order to benefit from it.

If you want an increase in actual processing power, you would be better going for a hardware accelerator instead. System Solutions have the most comprehensive range of accelerators such as the Turbo 25, which can triple the processing speed.

I would also suggest you take advantage of their fitting service as fitting the accelerator is not a trivial task. System Solutions can be contacted on 0753 832212.

## Crazy mouse

I have recently been experiencing annoying problems with the mouse on my STFM. It started out with the mouse pointer starting to move to the top of the screen on its own.

Next it started to behave erratically and jerkily whenever I moved the mouse. It has now got to the point where it just doesn't respond at all.

I also think it's affected the joystick as the left, right and up directions do not work. Is it an electrical fault with my mouse and if so, how do I get it fixed?

V Helen, London

The problem isn't with your mouse, it's the actual mouse and joystick ports under the keyboard. You know, the ones which send everybody swearing and shouting the much-spoken phrase "what a bloody stupid place to put a mouse and joystick port!"

They are not only difficult to get at, they are prone to damage as you plug and unplug your mouse and joystick.

beginning to get on my nerves every time I boot up with this disk. Is there any way of getting rid of this bothersome message?

J Philips, Kent

It would seem that a program specific to the STE is resident in the Auto folder, which no doubt exists on the disk. Look in the Auto folder for any filenames which might suggest it's an STE program, such as STEFIX.PRG.

Failing this, simply de-activate each program in the Auto folder one by one by replacing the last letter in .PRG with an X, and then re-boot to see if the message still comes up. If it doesn't, you have found the offending program, so just delete it.

## Archive agony

After buying my ST a couple of months ago, visited a friend who had his ST for a few years. Over the years, he has collected a large number of excellent PD programs which he says will make using my ST much easier.

He said that he would put the more useful ones on a disk and post them to me the week after. Returning home, I eagerly awaited the arrival of this collection of software. When the disk finally arrived, I ripped open the Jiffy bag and loaded the disk into my computer.

Expecting to find a large number of files on the disk, I was very surprised to find only two files called PD\_PROGS.TOS and READ.ME.

After clicking on the READ.ME file, I found it to be a message from my friend, saying that he had archived all the most useful PD programs into a self-extracting archive so that

## Got a problem?

Are you at the point of taking an axe to your ST? Do you want to pulverise your printer? Well just count to ten and relax. Then, jot down the problems you are having, along with a detailed description of your setup.

Include information on the type of ST you have, the TOS version (if known), what peripherals are attached and any extra hardware that lurks inside your computer (accelerators, graphics cards and so on) and I'll do my very best to come up with a solution.

For those who have had problems and overcome them, chances are that someone somewhere is having the same problems and would benefit from your advice.

So get in print and send any tips or suggestions that other users may find helpful.

Send all tips and cries for help to: Darren Evans, Advice Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP



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## Important Announcement

We would like to thank all our customers and friends for their support in 1993, this has allowed us to grow and provide a continued and better service for 1994. We can now boast an actual human being on the other end of the telephone, 9am till 6pm Monday to Saturday to take your Credit Card orders, answer your queries and offer advice where needed. If you feel you would like to meet us in person then come along and see us at any of the ATARI exhibitions, up and down the country, that you will see advertised in this magazine. We look forward to seeing you all and please remember that whatever you need for your ATARI, we will be happy to locate and supply those hard to find items at competitive rates.

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This final month, we'll be tidying up the Othello program by turning it into a desk accessory, and teaching it how to get along OK with other GEM programs.

Actually making a desk accessory out of it isn't particularly difficult. All we have to do is take the GEM application identification number, and call `menu_register()` with that number and a pointer to the string to be used for our program on the menu bar.

And the GEM APID number is simply the value returned by `appl_init()`. All of this is done in `init_gem()` in the GRAPH.C file on the CoverDisk.

The next stage is slightly more complex, since it involves AES messages. The two new messages to worry about are `AC_OPEN` and `AC_CLOSE`.

The former will be received by the program when the user selects the program's entry on the menu bar, while `AC_CLOSE` will be sent as an order to the program to "shut down operation immediately".

For our program, `AC_OPEN` basically means "open the window and carry on" while `AC_CLOSE` means the same as a "quit program" request from the user. The only difference here is that a desk accessory never exits completely.

No matter what happens, a desk accessory is always active in some fashion — though that may only be an `evnt_multi()` loop waiting continually for an `MU_MESAG` event sending an `AC_OPEN` message.

This means that we have to be able to open and close our Othello window without shutting GEM down entirely, and that we need a simple check that the window is open before any execution of the program is performed. None of this difficult to do, and it's all done in the `Othello()` function in the MAIN.C file on the CoverDisk.

No, the really awkward part of writing a desk accessory lies in making it get along OK with other programs. And the major portion of that, believe it or not, lies in the way `WM_REDRAW` — window redraw — messages are handled. Or, more generally, in the way that graphics are drawn on the screen by the program.

To handle this, though, we first need to talk a little bit about the

## Roy Stead tidies up his Othello game in this, the final part of his tutorial on programming in C



connection here: The AES insists that you draw only within specific rectangles, and the VDI provides a method of ensuring that what you draw is restricted to just a specific rectangle.

So, how do I make use of these wondrous features, I hear you ask. And well you might. To set the VDI clipping rectangle, you use a call to — what else? — `vs_clip()`, which looks like this:

```
vs_clip ( vdi_handle,
         clip_flag, xyarr );
```

Where `xyarr` is, as usual, a four-int array describing the rectangle to restrict — `clip` — graphics to, given in the VDI format of top-left then bottom-right corner co-ordinates. The second argument is an int which can be either `TRUE` or `FALSE`.

If `(int)clip_flag` is `TRUE` then VDI clipping will be switched on using the given rectangle. If it is `FALSE` then VDI clipping will be switched off entirely, which — while a risky thing to do when using windows — speeds up graphics operations, sometimes dramatically.

As to that rectangle list, you access that using `wind_get()` call of the kind we looked at a few months ago. To remind you, then, a `wind_get()` call looks like this:

# The final touches

window rectangle list.

For each and every open window, GEM maintains a list of rectangles — in the AES `GRECT` format — corresponding to the visible portions of that window. This list can be as small as no rectangles (if the entire working area of the window is hidden), or as lengthy as it likes.

When drawing, you should be careful only to draw within the visible areas of your window, otherwise you could be corrupting the contents of another window.

So, how do you make sure of this fact? Well, the VDI provides a handy method of restricting your graphics to a specific rectangle of the screen. If you attempt to draw outside that rectangle then no error messages will be generated, but neither will what you tried to draw appear on the screen.

I hope that you can see the

```
wind_get ( window_handle, flag,
          &rect_g_x, &rect_g_y, &rect_g_w,
          &rect_g_h );
```

Where `(int)flag` indicates the kind of information you want to know about the window whose handle is given in `(int>window_handle`, with the requested information being returned in `(GRECT)rect`.

In this case, we want the first rectangle in the window rectangle list, so we use a value of `WF_FIRSTXYWH` for `(int)flag`, and `(GRECT)rect` will be set to that rectangle.

The first thing to check about the rectangle is whether it constitutes the end of the list. This fact is signalled by the width and/or height





fields being set to zero.

Having checked that, we perform whatever action we want to do (in this case, redrawing a portion of the window) and then we want the next rectangle in the list.

We obtain that with another `wind_get()` call, but this time using `WF_NEXTXYWH` for the `(int)flag` value. The same checks apply, and the whole procedure is followed for the new rectangle, and the next, and so on until the end of the list is reached.

In general, then, a window rectangle list walking algorithm looks like this, where `(int)wh` holds the window's handle:

```
GRECT rect;wind_get (wh,
WF_FIRSTXYWH, &rect.g_x,
&rect.g_y, &rect.g_w, &rect.g_h);
while ( rect.g_w && rect.g_h )
{ /* Perform some action on
the rectangle */
wind_get ( wh, WF_NEXTXYWH,
&rect.g_x, &rect.g_y, &rect.g_w,
&rect.g_h ); };
```

And that's basically all there is to restricting your graphics to only appear within the visible part of your window.

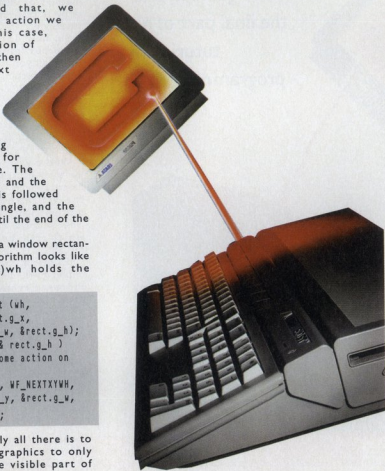
In general, you would repeat the sequence above within each of your graphics drawing functions, but – in the source code in `GRAPH.C` on the `CoverDisk` – I've written a single routine, `walk_rect()`, which contains the only rectangle list walker in the `Othello` program.

I've done this not because it's a good idea – it isn't, particularly – but to graphically (pun intended) demonstrate just why it isn't a good idea.

Most of the time, this method will work fine. If you get a particularly unruly user, however, who is moving windows on top of the `Othello` window, then moving them again within the area of the `Othello` window will show what I mean.

The overall window redrawing function is just too slow to keep up. In some cases, it is still redrawing from the previous `WM_REDRAW` message when a new one has been sent out. It can even, in these circumstances, corrupt part of another window.

The solution – which I'll leave you to implement – is to follow the procedure outlined above, and use a separate window rectangle walker for each of the graphics routines, returning to the main loop in the `Othello()` function, if possible, after each action to check whether a new redraw message has been received



in that function's argument declarations list. Then, to actually call the function passed-in with – say – two arguments, `foo` and `bar`, you would use:

```
(*arg)( foo, bar );
```

Simple, really – and you can see an example in the `walk_rect()` function in file `GRAPH.C` on the `CoverDisk`, where you will also find an example window rectangle list walker and much usage of the VDI clipping rectangle.

One warning note, however. The rectangle supplied as part of a `WM_REDRAW` message from the AES is not guaranteed to lie entirely within the visible parts of your window.

Thus, you must find out the area of overlap between the area to be redrawn and each rectangle obtained from the rectangle list before setting the VDI clipping rectangle and redrawing the area.

This, thankfully, is very simple to do. To find the intersection rectangle, you compare each side of the first rectangle with its corresponding side in the other one. The side which is furthest in the opposite direction is the one to use for your intersection rectangle.

For example, whichever rectangle's left side is further to the right is the one to pick, and whichever top side is furthest down should be selected, and so on.

## COMPLICATED

This sounds more complicated than it is – so take a look at the example in `walk_rect()` which calculates the intersection rectangle between `(GRECT)listrect` and `(GRECT)cliprect`, placing the result in `(GRECT)listrect` itself.

Now, as Andy Pandey used to say, is the time to say goodbye. We have finally reached the end of this `C` tutorial series. I trust that you're comfortable, now, with the `C` language, and you're happy about writing `GEM` programs using `C`.

A good place to make a start is by extending the `Othello` program further, and fixing the bug I've left in there for you (it's described in the `README.1ST` file on the `CoverDisk`, as usual, along with some ideas for extensions you could write).

Looking back, we've covered a huge range of topics. Of course, there are some topics which we haven't had time to cover, such as writing to and reading from files, the `GEM` file selector, VDI raster operations and `OBJECT` tree structure.

But however confident, or otherwise, you feel about writing `C`, the only way forward now is to write your own programs in it. If you haven't started already, that is...

and – if so – combining the two rectangles to be redrawn before going on.

The second reason I wrote the `walk_rect()` function was to provide a demonstration of how you can pass a pointer to a function around in a `C` program, and make use of it within another function.

The syntax here is straightforward enough. To pass the value in, you just use the name of the function without any brackets or parameters – as you can see in every call to `walk_rect()`.

In the declaration of the argument list for `walk_rect()` you will see the format for declaring a function as an argument – it's simply the type of thing returned from the function followed by the name of the argument, in parentheses, and an indication that this is a pointer that's being passed-in, followed by a pair of empty parentheses to indicate that it's a pointer to a function.

For example, to declare that one of a function's arguments, called `arg`, is a pointer to a function which returns a long integer, you would place:

```
long (*arg)();
```

March 1994

# ST ACTION



## Robinson's Requiem

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# Cruise for a Corpse

**S**T adventure games have been few and far between as of late which is crying shame because I can name countless amazing adventures that will delight and entertain you.

Cruise for a Corpse is just one of them, and luckily for all you adventure freaks, it's been re-released on US Gold's budget label, Kixx XL.

You play the part of Raoul Desentier, a Poirot-type figure, but better built, and his moustache isn't funny to look at. Raoul is a police inspector who's been invited on a dream cruise in the Mediterranean. All thoughts of getting a decent tan soon disperse because no sooner has the cruise begun when Raoul is plunged into mystery and scandal.

The scandalous crime in question is the murder of your host. It's Raoul's job to question the cruise ship's passengers, discover clues, find the killer and generally solve the day, just like Poirot!

I say "just like Poirot" because Cruise for a Corpse is very much in the style of an Agatha Christie murder mystery. It is unlike most adventures because you really do have to use your brain to find the killer. Other adventures you might have three objects; for instance a bucket, a trough full of water and a fire.

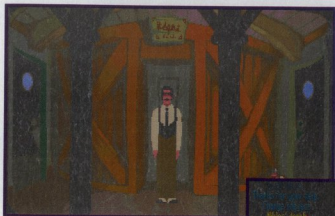
It is obvious that you'd fill the bucket with water from the trough and then throw it over

**Take a trip on the seven seas and find out whodunnit in US Gold's Agatha Christie style point 'n' click adventure**

the burning fire to get further in the game. Cruise for a Corpse is not as simple as that. You as a gamesplayer are also plunged into a world of mystery because you start off with nothing.

No, not one measly little clue! Only by grilling the suspects on the ship and snooping around will you start to get anywhere. In fact I found that I could walk all around the ship and go into every possible room and still be no nearer to knowing who the killer was.

A bit of snooping later though and I was



By talking to the ship's passengers you will find clues to as to who the murderer is



Raoul steps out on deck to try to catch a quick tan because to be honest he does look awfully pale

**ACTION GOLD**

hot on the trail of the murderer and this is basically how Cruise for a Corpse works. As usual with most games of this type you use the simple, but effective point 'n' click system. The game is coming out on the Kixx XL label as mentioned previously, but the creators of the adventure are in fact French software developers Delphine who list Another World, Future Wars and Operation Stealth as their many successes.

One of the best features of Cruise for a Corpse is its prowess in the graphic department. To say that the graphics are stunning would be a massive understatement. The sprites move about the screen fluidly and are more realistic than graphics you'd see in other adventures of this type.

Cruise for a Corpse is one of the most intriguing adventures I've clasped my hands on and considering the new cheap budget price you'd be a bit of mug if you didn't buy it this time around.

The graphics are exquisite and the whole way the game has been created just makes you want to play until you find out who the killer is.

The only real complaint I have is the fact that you don't seem to get anywhere at first. If you persevere with Delphine's adventure then you will grow to love it. ST adventure

Interviewing that cabin boy could give a few clues to the killer's identity. QUE? I know notheeng senor. Damn!



Mister Senor!

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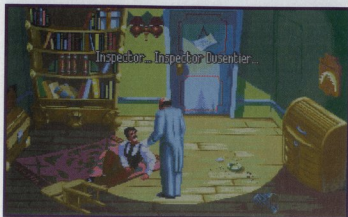
Mister Senor!

Mister Senor!

Mister Senor!

Mister Senor!

Mister Senor!



Inspector... Inspector Desentier...

The start of the adventure and the Inspector has already taken a bit of a bashing!

# BUDGET ACTION

<b>VISION</b> ★★★★★★★★
<b>AUDIO</b> ★★★★★★★
<b>DIFFICULTY</b> ★★★★★★★★
<b>LASTABILITY</b> ★★★★★★★★
Cruise for a Corpse is a hard adventure to get in to, but once you're there you won't want to put it down. A graphically excellent and highly enjoyable game.
<b>90%</b>
Publisher > US Gold Developer > Delphine Software Disks > 5 Price > \$14.99 HD Install > Yes Size > 1/2 meg

## ROBINSON'S REQUIEM

The creators of the Ishtar series of adventures are back on the ST with a piece of software that will test the endurance of the human spirit and the survival of the body...

**S**ilmarils have produced some of the best games ever to appear on the ST including the highly commended adventures, Ishtar 1 and 2. They've constantly proved the doubters of the ST games scene wrong by producing top quality software.

Arriving in April and published by Daze Marketing, Silmarils have got a survival simulation which promises to be that little bit different from the rest. First though, the story that sets the scene.

Many light years in the future, Robinson's Requiem is the ultimate test of human endurance in an alien world. You play government agent Robinson sent on a reconnaissance assignment to a mysterious unknown planet.

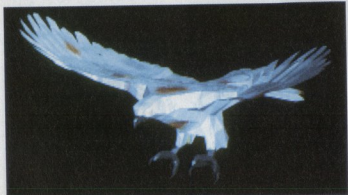
However, you soon discover that the entire mission is a trap set by your own government, who for their own reasons, no longer want you around!

Your ship has been tampered with and fallen out of control, and to make things even worse the planet which the ship crash lands on is in fact an enormous prison - a

Dealing with dinosaurs was not on your list of things to do



On his travels Robinson will "bump" into many foes just like the bird pictured here



One of the test sprite screens showing Robinson's various body parts

kind of astral Alcatraz from which no-one has ever escaped.

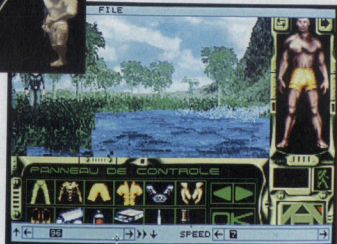
The game begins with you, as the hero, bailing out of your ship and into a dense and hostile jungle. The only thing which is to your advantage is that you are equipped with a survival kit which comprises of many medicines, tools and a micro-computer secured to your chest to

keep you informed of your physiological condition.

The aim of Robinson's Requiem is to simply escape from the planet and keep yourself alive at the same time. This won't be easy because the planet is plagued with numerous monsters and extra-terrestrials, but luckily



Prehistoric man presented in full 3D and wonderfully shaded



An example of some of the lovely backgrounds you will see in Silarimis' brand new adventure

you might meet a few supporters among your fellow prisoners who may help you try to escape.

If you are to succeed at in this adventure then all your human endurance will have to be tested to the limit. Not only must you be an effective fighter, you'll also need to develop a basic and irrepresible instinct for survival.

This involves having to hunt and gather your own food and, of course, you will need to keep your water supply fully topped up. Other skills essential to your survival include the ability to make your own clothing to ensure that you're protected from the ever changing climate and environment.

Looking after your own health in Robinson's Requiem is absolutely imperative thanks to all the diseases and hazards which are rife on the planet. From administering drugs (of the non-illegal kind) to taking X-rays to performing serious surgery on yourself, it's all down to you.

You can run the risk of contracting flu, sunstroke, food poisoning and malaria, as well as suffering from the effects of a drug overdose and drunkenness (hey, a man's got to drink, even when you're being chased around a foreign planet by dangerous alien beasts!).

The symptoms of your illness can range from sneezing, hiccups and coughing (all lovingly included in the soundtrack) through to hallucinations, crying fits, trembling and eventually madness.

You can keep tabs on your physiological condition with the help of the computer. It will bring up on screen a full display of your body including X-rays of bones and displays of muscles and limbs. Other read-outs pro-

vide data on your blood pressure, blood energy levels, blood water levels and body weight.

Robinson's Requiem is not only going to be a battle through the natural elements, but there's also a mini-war going on inside your own body. Keeping an eye on your health and staying alive is just the first step in your plan to escape.

While the escape is in progress you will meet various types of creatures that inhabit the planet. Some will help you while most definitely will not. The majority of enemies you face move around and change position throughout the game, so you must always have your wits about you.

There are four types of being you can bump into on your travels. The animals are half-dinosaur, half-fantastic hybrid monsters whose flesh provides meat and whose hides you can make into clothing. The aliens are all in their own different tribes and each one possesses one of the four elements needed to escape from the island.

All the prisoners are human and condemned to roam the planet. Life for them is

tough and most of the time they are very aggressive. Some of the characters are rather more disturbing (like certain STA staff members!), like the architect of the prison, entrapped in his own creation, and the trainer who accompanied by his beast, who goes out every night on ruthless hunts.

All the prisoners can be used to obtain objects like arms, food and clothing. The other beings you will meet are the Cyborgs who are responsible for protecting and maintaining the prison.

One of the most impressive features of Silarimis' survival simulation is undoubtedly the standard of the graphics. The viewpoint is through the eyes of the character. Movement is through a 3D universe in real-time and can be made sideways, forwards, backwards or through any angle.

The 3D graphics will feature mapped textures, lighting according to distance, shading and 3D bridges

and tunnels. This particular system of graphics will make it possible to display all the scenery accurately including postures, hills, cliffs, streams, lakes and underground passages.

The actual play area in the game represents over three square miles and includes ten different scenes. These include jungle, canyon, creeks, volcanos, forests and even a graveyard.

Via the use of a 3D studio, sprites in the scenery (trees, bushes, objects) have been pre-calculated at every angle of vision. They are displayed according to the vision of sight and zoomed according to their depth in the image on screen. I know it sounds very technical, but trust me they do look very sexy indeed.

Most adventure games have to played on your own and this means you probably lose contact with all human life for a couple of months, but Silarimis can come up with a handy solution to this problem.

The game creators have added a highly useful multi-player mode. Each player will then be able to each control a prisoner. The players will be able to fight each other or form pacts between themselves and face the dangers of the planet together, but only one player at the end of the game will be able to leave the hell-hole!

Robinson's Requiem looks like being a truly unique survival simulation. Set in a atmospheric world which alters your role as an adventurer as you progress, you'll have to summon up all your reserves of physical and mental strength if you want to make it out alive.

It is looking rather good, but don't take my word for it - you'll be able to find out for yourself when it hits the shop shelves in a few weeks time.



Now just look at the quality of those graphics and I'm not just giving you a load of old bull!



How do you battle against a dinosaur when you've only got a box of band-aids as protection?





## ST-aying Alive

I am sick and tired of the constant slugging off that Atari games receive and I would like to point out that the graphics are just as good as other supposedly better machines.

I recently bought a copy of Frontier, Elite 2 (having read the review in your excellent mag) and when my friend, who has the Amiga version, saw it he was soon eating his words. The graphics are just as smooth and detailed as other versions of the game.

The software houses are still making damn fine games for the humble ST and let's hope they still continue to do so and don't let all this ridiculous computer snobbery put them off.

Long live the ST!

Martin Sanders, West Sussex.

Nice one Martin! That's hopefully a reflection of what the majority think. The ST does receive an undeserved bad press though. So let's hope we can cure some of the doubting Thomases.

Just to prove your point though, here's a screenshot of Elite from the Amiga and one from the Atari - spot the difference folks! Not much, I think you'll agree.



Amiga screenshot



Atari screenshot, good hey?

After the Techmeister's unfortunate and untimely demise it has been left in my capable hands to do the letters page. So there's always a friendly ear here at **STA Towers** for your moans and grumbles.

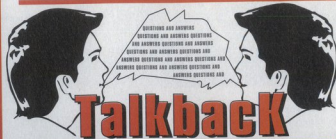
### Football trouble

A while ago I bought Championship Manager '93 from a shop. When I played it I found that the player histories wasn't working correctly. I went back with it and they gave me a new copy. But there are certain things about this one that don't work correctly either.

The shop say that I have to try and copy it again so I have tried about three different ways of copying the game and it still won't work correctly.

They now refuse to give me a

Put pen to paper and get writing to Tina's Talkback...



Send you post to : Miss Talkback, ST Action, Europa House, Adlington Park, Macclesfield SK10 4NP

new copy and say that I should try using a different copy for each season I play. Could you please advise me what to do?

Kenneth P Gibb, Shetland

If the software is faulty then you are entitled to a full refund or a replacement. So go back to the shop and get hassling!

Alternatively contact Damark on 081-780 2222 and see what they suggest.

### Monkeying around

Could you please help me get past 10 O'Clock in the Secret Of

Monkey Island as I cannot get the clock to change?

I met some people who told me I had to find a rat and an elephant to start the minutes on the clock. I have looked but I cannot find them.

Could you please tell me where they are?

Kyle Jones, Co Antrim

Well, we've all scratched our heads here (in thoughtful contemplation and not due to an outbreak of head lice) and I'm afraid nobody knows. If any readers out there have any ideas please drop us a line and we can pass your top tips on.

## The Poor Corner

### All you need is... Atari

Oh how I love my Atari  
Without it I would go barmy  
My wife, she did despair  
And she knew that it is my only car  
So she ran off with a guy with a

Ferrari.  
Robert Evans, Sheffield

Well, I think there is a valuable lesson there to be learned by all of us - sort of!

### Manuel's Maracas

There was a young techie from  
Caracas  
On computers he was crackers  
But folk thought it queer  
That he didn't drink beer  
But liked RAM boards attached to  
his maracas  
Manuel Manual, Venezuela

Wow, an amazing true story from abroad. I didn't realise we had readers from so far afield. If you've got a sad story that can be trans-

formed into a masterpiece, then get scribbling. Please can we have less correspondence from psychos - then again, why not? We're not prejudiced...

### Sega no go

Their platform plop makes me mad  
And the crappy graphics make me  
quite sad

Why can't they see  
That the good old ST  
Is a real machine not a fad

Consoles kiddie make me crazy  
They've no knowledge and are born  
lazy

I'd make them eat there own nicies  
Or chop them to pieces  
And after that everything's quite hayzy

If only they'd look at the facts  
As I reach for my nice shiny axe  
Then just for a lark  
I give a wool and a bark  
And chill them in nice freezer packs

Now the law doesn't like my obsession  
That I like to have a session

But it's quite a thriller  
As the ST console killer  
To teach some people a lesson

But I believe I'm being quite fair  
Though the law, it seems to care  
That I'm on the run  
And having my fun  
When I should be slumped in the  
electric chair

Peter Dephile, No Fixed Abode, USA

Look, no more nutters with sad tales of how their lives have gone to the walls of late. Please kids don't take to the streets and do bizarre things.

All poems (homicidal maniac-inspired or not) will be gratefully received here at STA. As will any queries, angry outbursts, or any manner of strange rantings you care to send us.

Is once a knight really enough? Perhaps not, if you're playing King's Quest.

Tina Hackett dons her feathered cap and fetching green tights to take a look at this budget release from Kixx XL

# BUDGET ACTION

# KING'S QUEST 1

Being fairly young in gaming years, to me King's Quest 1 seems very basic, especially by today's standards. But I'm sure there are those of you out there who remember the good ol' days of RPGs, having to type in the commands for your hero, spending hours trying to find another word for "walk" because your computer is having one of its pedantic days and waiting an eternity for each screen to load when your character moves from one area to another.

Well, I bet some of the more nostalgic among you are now saying "hey, I remember those old classics", and King's Quest 1 is one of the very same.

Whether this is a good thing or not remains to be seen. I mean how many

Myth/Knight-type Adventures do you really need? And when there are many other more spectacular examples of this genre clamouring for a place in your games collection, is £14.99 perhaps a little steep?

OK, so maybe you might fancy this blast

from the past, so what do you get for your cash?

Well, certainly not an original storyline, that's for sure. The King of Doventry is on his last legs, and you as his favourite knight, Sir Graham, need to retrieve three missing treasures to restore Doventry to its former glory and be rewarded with the crown.

You get some reasonable graphics, if rather basic, some nice effects such as waterfalls, birds tweeting in the background and monsters splashing in the moat.

Controlling the game is relatively easy (although getting your character to walk is a

little strange). Type in whatever instruction you wish your character to carry out and the computer will either let you do this or suggest that you try something else.

And yes, we've all tried it, boredom is looming so you try a few silly commands to liven things up (OK, so you don't, I'm just a little strange like that) but in this game you actually get a response!

For instance I tried eating the butterfly and was met with some remark about them not tasting very nice. Hmm! Computer games making wisecracks I can do without.

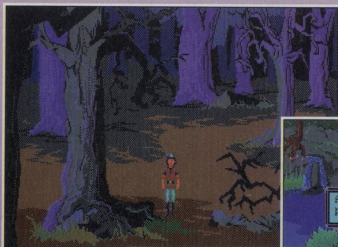
If you're a real RPG fan then it's worth a look. The game isn't too bad but at the moment there are many more original and impressive adventure games around, and it really can't compete with today's high standards.

TINA HACKETT

The woodcutter speaks to you, his voice broken with sorrow.

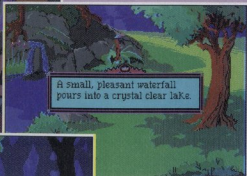
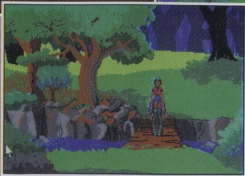


Here's a story that even Simon "Our Tune" Bates would be proud of



These woods look pretty darn scary to me, I wouldn't stay around here too long

And I thought trolls were these cute plastic toys with pink hair and no wedding tackle, not mercenary little devils who charge to get past bridges



A small, pleasant waterfall pours into a crystal clear lake.

"A small, pleasant waterfall pours into a crystal clear lake, and on the left we have the resort's communal swimming pool and building site." Would you buy a time share off this man?

## VISION

★★★★★

## AUDIO

★★★★★

## DIFFICULTY

★★★★★

## LASTABILITY

★★★★★

Fairly reasonable adventure game with plenty of puzzles to solve. The easy to use control system keeps it playable but overall it seems more old-fashioned than your brown cord flares.

68%

Publisher > Kixx XL

Developer > Sierra

Disks > 4

Price > \$14.99

HD Install > No

Size > 1 meg



# BUDGET ACTION

Dum, der-der dum-dum, dum der-der dum dum! It's time for the Ride of the Valkyries once more, and this time it's on an apocalyptic budget label

# GUNSHIP

There won't be many of you out there in Atari land who at some time in their games-playing lives haven't come into contact with

Gunship. Billed as one of the definitive simulations on the ST, it lived up to its reputation selling over a million copies across all formats.

Now, after some considerable time, Kixx XL have obtained the rights from MicroProse to release it at a budget price of £12.99.

Thirteen quid is an absolute bargain to muck about in a helicopter, but when you get all the shooty and missile bits thrown in as well, you've absolutely no cause for complaint.

Like all MicroProse products, Gunship comes equipped with a manual you could use as a doorstop or as a handy weapon to take out with you on dark nights.

Alternatively, you could read it and find out how to fly the state-of-the-art chopper included in Gunship, the Apache.

The Apache AH-64A, if you want to be formal, has been used since 1983 and as a front-line ground support vehicle in all major con-

flicts since. Being a simulation, and having a large degree of authenticity, the first thing you'll need to do is learn to fly. Fortunately Gunship includes a full training and tutorial to teach you both the theory and practical aspects of flying an helicopter.

Once you've grasped the principal of auto-rotation and grappled around with your collective (which is easier said than done, believe me), it's time to put yourself forward for active service.

There are five different war zones to test out your newly found talents in. These vary



Up, up and away in my big green chopper

you're going to be you can head out for the helipad.

However, if you've half a brain you'll get yourself down to the ordnance bay to stock up on weapons.

The Apache, being the macho type of chopper, has a large and deadly range of weaponry that can be exchanged to suit your mission at a moment's notice.

Once in the air, the Apache can be made as realistic a simulation as you require. It can be made to play as a simple 3D arcade style blaster, or a full-blown simulator.

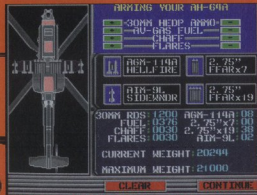
Although the graphics seem somewhat dated in comparison with newer simulators, Gunship contains elements of excitement and playability seldom captured in games.

On the whole it's a winner, and if you were too young to have flown it as a full-priced veteran, then at this budget price it's unmissable.

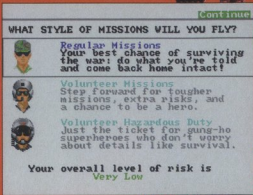
SIMON CLAYS



Before you take off it's a good idea to check that map out



The ordnance screen where you adjust your weapons



A nice easy war, that's what I want

<b>VISION</b>	★★★★★★★★
<b>AUDIO</b>	★★★★★★★★
<b>DIFFICULTY</b>	★★★★★★★★
<b>LASTABILITY</b>	★★★★★★★★
A reliable classic that is still worth anybody's hard-earned loot. I played it when I first took off from the helipad, and although it's a little dated, it's still great fun whipping your rotor into a frenzy.	<b>78%</b>
Publisher → Kixx XL	
Developer → MicroProse	
Disks → 1	
Price → \$12.99	
HD Install → Yes	
Size → 1 meg	



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TOP TITLES	ST	TOP TITLES	ST	TOP TITLES	ST
Hunter Killer</					

# BUDGET ACTION

Gambling, drinking, scoring and all sorts of debauchery are abundant in this budget offering from Kixx XL. Tina Hackett - as if not deprived enough already - takes a look



Relaxing for a quick pint in Lefty's seedy bar - hey Larry, don't fancy yours much

## Leisure Suit Larry

**R**ight, nightmare scenario time. Imagine if you can: you're down at the local disco, dancing around your fake snakeskin handbag, wearing your white stiletto heels and pink lycra skirt, blonde bouffant hairdo glinting in the flashing neon lights. Phew, do you look hot!

You feel a tap on your shoulder and turn around flashing your best smile - and take in the appearance of the "shoulder tapper". Horror grips you. He stands there, Brylcreem dripping onto his satin-look, aeroplane collared shirt. Opened down to the waist it reveals a black, curly chest wig adorned with hefty, gold medallions.

### SWEATY

He stands there oozing all the charm of an old, sweaty sock, "Hi, my name's Larry," he draws.

This conjures up the basic feel to the game Leisure Suit Larry. Seedy bars, casinos, beer, gambling and "chatting up" all combine to make this adventure game from Sierra. And what could be better?

It's great to see something original espe-



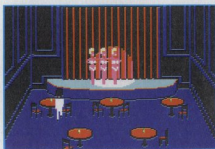
What would provoke such a reaction, I wonder?

cially in these gloomy days of the same old stuff being churned out. An entertaining, humorous game and no, before we get numerous complaints from feminists, it isn't sexist.

I am female (last time I looked anyway!)

and I do not find this game in any way offensive. Good, unobnoxious, harmless fun!

By using a simple point 'n' click interface you can frequent all manners of dubious night spots in your quest for woman, wine and song. Interact with the



Can-can Larry score with the good time girls?



As the actress says to the bishop... Here are some jokes that would make even Bernard Manning blush

"Oh, oh, oh, oh staying alive, staying alive..." Larry the Disco Demon gets on down complete with John Travolta-style flares



well animated characters as they insult you or avoid your ever-so-corny chat up lines.

Boogie on down at the disco with some amorous blonde to that musical masterpiece *Staying Alive*. Visit the casino which provides an interesting sub game of pontoon which can make or break you.

The humorous touches absolutely litter the game and will keep you amused, the actual puzzles will also keep you busy for quite a while. And if playability alone isn't enough then the great 3D animation and sound tracks added really make the game something special.

### SECURITY

One grumble though, the security system at the beginning (to make sure you really are an adult!) is a tad silly - the questions asked are rather American-ish, fair enough for those in the good ole USA but personally I don't have a vast knowledge on American Vice Generals.

But a highly playable game nevertheless and although Leisure Suit Larry has been around longer than Cliff Richard, it's definitely worth some of your hard-earned lolly especially at this budget price. School boy humour for grown-ups at its best - great stuff!

TINA HACKETT

VISION	
★★★★★	
AUDIO	
★★★★★	
DIFFICULTY	
★★★★★	
LASTABILITY	
★★★★★	
A highly entertaining bit of harmless fun. Great for a giggle or two with a nice puzzle element thrown in for good measure.	
<b>87%</b>	
Publisher >	Kixx XL
Developer >	Sierra
Disks >	1
Price >	\$14.99
HD Install >	Yes
Size >	½ meg



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# FAME, FORTUNE & FANS



Does money change lives? How do you deal with success at an early age? Adam Phillips interviews the pride of games world the winner of the UK Games Championships



the winners from that – there were 11 regions – went down to a Lada games show and they all played.

I didn't actually win the regional one but they wanted the highest runner up as well and that was me so I went down as well.

**Were you nervous going into the finals?**  
I was a bit, yeah.

**Could you believe it when you won the £10,000? How did you react?**  
I didn't really have a reaction, I was just quiet as a mouse.

**Shock?**  
No, I haven't reacted at all.

**What else happened while you were there?**

On the bus on the way back, there was a bloke sitting opposite us and I had an Atari Lynx and was playing on it. We were talking about something and he said they're [consoles] a waste of money and I felt like saying well, I just won £10,000 because of them...

**What do you want to do with the prize money?**  
Invest most of it – I've also spent £500 on a new telly and doing up my room...

**What's the reaction been at school? Have you suddenly made lots of new friends?**  
No, not really.

**How much do you play a day?**  
Whenever I get bored I'll have a go on the computer or console.

**What do you want to do in the future? Do you see yourself working within the computer industry?**  
I'd like to write for magazines but I'll have to play games because I can't do anything with a computer.

**In the future, do you think that gamesplaying will be regarded with as much respect as athletics, football and snooker? Perhaps even televised tournaments?**  
I think it might happen because people of my age when they grow up might still be playing them and [the likes of] football could be forgotten about.

**What systems do you own?**

A Mega Drive, a CD32, an Amiga 600 and an Atari Lynx.

**What's the most tempting console that you've either heard or seen that's coming out in the near future?**  
The 3DO.

**What about the Atari Jaguar?**  
I don't know.

**I didn't want to enter the competition but they don't let me have a go (on the game) unless you sign up...**

– Tony Brown on being questioned about his motivation for entering the competition that earned him £10,000.

**What are your favourite games?**

Streetfighter II Turbo on the Super Nintendo and Syndicate on the Amiga.

**And your favourite software company?**  
Sensible Software and Bullfrog.

**Which game releases are you looking forward to the most?**

Rise of the Robots – that's about it.

**Aren't you growing a little tired of the same games that keep coming out such as beat-'em-ups and platformers? Would you like to see a little more variety?**

I'm sick of platform games – they bring them out all the time – most of them are all the same. Beat-'em-ups are almost identical but I like them so it doesn't matter.

**What about the prices that you have to pay for software?**

It's too expensive. For the reviews for the newspaper, I borrow the games from Virgin Megastore and it's got titles that cost £60 – nothing is worth £60 like that. It's encouraging piracy on consoles through the use of copiers.

**Do you believe the reasons that the companies give for high prices? The cost of chips and the like?**

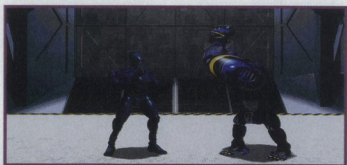
Apparently, it actually costs £10 to £20 to make one cart. Some blame piracy for it but CDs make the games so big that they can't copy them unless you've got a CD press or whatever they're called.

I'm buying games for my CD32 now and they're no different from normal Amiga games – they're just straight copies from the normal ones with extra sound or whatever and they're not worth it.

**What other hobbies do you have apart from gamesplaying?**

None really, watch the telly a lot. I haven't really got any hobbies apart from reading stuff such as magazines...

**With this, I said farewell and left with the distinct impression that Tony was going to go on from the recent triumph of games championship and end up as editor for a**



## How to become a game champion

Here at *ST Action* we believe that good gamesplaying is the key to a happy and fulfilling life, so the team have come up with ten tips to reach the top.

1. Put in plenty of practice to make the end results perfect.
2. Know when to call it a day and not to damage your confidence with tired playing.
3. Try to lay your hands on as many different games as possible to increase your skills in all areas from the mental to the reflexes.
4. Make sure you've got decent hardware such as a micro-switched joystick (Cheetah Mach One) and that you look after it.
5. Relaxing if losing is better for learning than getting completely hacked off and hitting the computer – be patient.
6. Play games on their hardest skill setting to really add to the challenge.
7. Find an expert friend to have a two-player bash with – humans are less predictable than computers when playing software and learn from their mistakes, therefore preparing you for the unexpected living opponent in competitions.
8. When stuck into a platform game or the like, there's no need to hurry through the level. Take your time to plan your route and find hidden rooms and bonuses.
9. Make sure you read the instructions all the way through no matter how simple the game is – it can only help in your understanding and success with the title.
10. Remember to sleep, eat, make regular visits to the bathroom and socialise with other members of the human race...



# SPEEDBALL 2

A set of hints and tips on how to succeed at the Bitmap's recently re-released futuristic sports sim

## In the gym

No matter what type of game you decide to play, the first thing you must do is take your team into the gym and improve their individual or overall performance ratings.

One way of getting a powerful team is to boost the whole team's ratings rather than just individual players. Concentrate on enhancing their attack, power and speed capabilities first and then later after you've got a bit of cash in the bank improve on defence, stamina, aggression and intelligence ratings.

When improving positions (defence, mid-field and attack) you need to remember that defenders need extra throwing and attack skills; midfielders need the same plus a bit of extra defence; attackers are at their best when their defence, stamina, speed and intelligence rating have been enhanced.

Individual players are even harder to sort out, but all you really need is to use a bit of common sense. Goalies, for instance, need high levels of intelligence, defence and throwing skills while the centre forward is at his best when he receives extra amounts of intelligence, speed and stamina.

If you have to improve one player over all the others then make sure it's the centre forward. He unfortunately takes quite a pounding because each time the game is restarted after a goal he is always the first into the action. If you don't significantly improve him, he'll be the first to get injured and you'll lose ten points immediately.

It also helps if you make your centre forward the "star man" because the computer defences are nowhere near

the standard of your lone attacker and most of time he will be able to run rings around them.

## Kick off!

First thing to do when play starts is to head straight for the score multiplier. This will multiply the point awarded for scoring goals, injuring players and collecting bonuses.

Keep your wits about you because the computer-controlled teams have the same idea in mind. A handy hint here is to throw the ball into the multiplier mid-run so that, if your timing is good, you'll collect it before the computer-controlled opposition gets to it.

Another method to use straight from the kick off is, providing you've built up your centre forward to maximum power, to go straight for the goal.

Obtaining possession of the ball is quite easy - when the ball is thrown into the arena, wait for your opposite number to jump for it and

then shoulder barge him out of the way.

With the opposition's centre forward out of action, plus the fact that you'll probably be faster than most opponents, you'll have a relatively free run up or down the pitch.

## Nice tackle!

As a rule in Speedball 2, it's best to tackle players from behind or the side. In this way you'll not receive any counter attacks and you'll be in a better position to throw the ball to one of your team-mates.

Never keep hold of the ball for too long as the opposition will soon close you down. If you want to risk a long solo run, keep weaving from side to side to shake off your opponents.

Passing the ball is easy. As you improve the intelligence of your players, you'll find that they position themselves better to receive passes. One of the best features in Speedball 2 is the ability to bend shots.

As in football games like Kick Off 2 and Sensible Soccer, after-touch can be added

Read the Cheat Mode carefully and you should see this joyous picture at the end of every match

# cheat mode

by keeping your joystick pushed in the direction you want to curl the ball after shooting.

A good way of keeping the opposition at bay is to hit one of the electro-bounce power-ups which will supercharge the ball and make it too hot to handle - for the opposition that is! The effect of the supercharge is multiplied depending on how many multipliers you've lit up.

## Keeping goal

Your goalkeeper is highly intelligent and will nearly always block a shot if he's left to his own devices. Controlling the keeper is probably one of the hardest elements to master. Move him too soon and you'll see the ball fly past into the back of the goal.

The goalkeeper is incredibly tough and will take a hell of a kicking before he gets injured. The goalies do have a nasty habit of throwing the ball straight up the field and this can almost always lead to a goal.

All you have to do is intercept the ball then throw it back at the goalie and while he's catching the ball, run it and smack him very hard leaving you with an empty net.

## Bonus!

The bonus stars at the side of the pitch aren't really worth concentrating on as they're only worth two points. It's best to collect them only when you're on your way up the pitch towards the goal.

Experiment hitting them though because it's sometimes possible to light two stars up with one shot. Another problem with the bonus stars is that any points you do score can be wiped out by the opposing team hitting the same star.

The only way out of this little problem is to light up all five stars, you'll then receive ten points which cannot be taken off your score. Money is a bonus which is vitally important to your success in Speedball 2. They are quite easy to run past, but considering how important they are it's sometimes worth going back to pick them up.

Concentrate on collecting them at any opportunity as the money you





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earn during the match is deposited into your bank fund which can then be spent on improving player's statistics between matches.

There are loads of tokens to pick up during the game. The best ones to go for are the freeze team, shield and boost stats tokens. If you can help it, never pick up the manic token unless you're sure of your games-playing abilities as this boosts both team stats to maximum for ten seconds and more often than not you'll find that this usually gives the computer player an advantage.

## Buy a star!

When you're in Division Two and have a fair bit of cash to spend, buy the best forward you can afford. Make sure he's got a high speed rating before you part with your hard-earned money.

Once you've got the man you want use him to batter the opposition as well as always making sure he's got the ball in his hands. Once you've gained more money, buy the best midfielder and defender that you can, which will eventually result in a strong and balanced team.

It's no good having a dream team of super forwards who can move faster than the opposition if you've got a bunch of slow nancy-boy weaklings in your defence.



In the gym where you improve your players statistics. Remember to concentrate on the centre forward first

Looking at the fixture list gives you a good idea of your opponents strength and ability



## Meet your squad

### Goalkeeper

The goalie is the heart of your defence and it's important to boost his statistics as soon as you can afford it. Boost his strength and his intelligence, as a goalie with a high IQ is more likely to go after stray balls, intercept passes and he'll also position himself better while not under your control.

### Defence

The main element here is the ability to block. Your players are going to need to be able to withstand a hefty tackle, punch or kick as they protect their

goal area.

Concentrate on building up their strength, power and passing abilities. Don't ever hesitate once a defender has the ball, chuck it up the field and let your attackers do the business in the opponent's half of the pitch.

### Midfield

The midfield are simply there to help get the ball from defence to the attackers. They can help out in defence though and particular midfielders can always go through the opposition like a hot knife through butter (just

like Chris Waddle) to score a superb solo goal.

You will need to boost their speed and passing abilities. The midfielder players can be used to hit the score multipliers when you're not under pressure and you'll thus benefit points-wise when you put the ball in the goal.

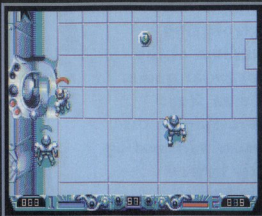
### Wingers

Your two wingers will both need high strength ratings. Aggression and intelligence levels will also need to be improved as the wingers main job is to close down the opposi-

tions goalkeeper and defence. This will make it a lot easier for your attackers to find the space they need to score a goal.

### Centre forward

The most important man in the game. His role is to win possession straight from the kick off, do most of the running around and score loads of goals for your team. Concentrate on improving his strength, speed and passing statistics. Your centre forward is the first individual player you need to build up if you're to get anywhere in Speedball 2.



Two multipliers improves your points whenever you score, injure someone or grab bonuses

Here is the squad of lads which you have to build up and take to the league title. Mean-looking bunch!



The kick off and you're ready to rumble. There's gonna be blood on the pitch tonight!



It's a goal, but unfortunately it's for your opponents. This will happen a lot if you don't read the Cheat Mode!

Companies have been quick to exploit the advertising medium of the computer game.

Simon Clays investigates the issues surrounding this newest method of selling products

# Playing the



Advertising is everywhere, in every corner of all of our lives. In an average day your senses will be assaulted constantly as you make your way through what some would consider a minefield.

If you walk down any high street in practically any town in Britain today, you can expect to be bombarded from every direction. The most obvious advertisements will be visual stimulation from posters, screens and displays featuring attractive icons and slogans that stick in your mind.

In all probability this visual attraction will be supplemented by sounds formed intoingles or tunes that clamp themselves to your consciousness. The bottom line is that if people remember a particular tune or picture and associate it with a product, then this can be deemed a success.

This is the more obvious form of advertising on the street, but there are other ways of penetrating the senses. Supermarkets and fast food chains now use smells to stimulate a purchase. For example, a supermarket without an on-site bakery might deliberately want an artificially-manufactured smell of fresh bread into the street to get people into the aisles.

However, this is nothing new. Ever since man has had goods to trade he has competed with the next trader to sell them; it is the nature of the beast to advertise in a free market.

Perhaps the biggest innovation for the advertising world was the mass production of the television set. While the cinema had been a large vehicle for advertisers, it still didn't grant access to the home.

Once established in the home, TV advertising grew and became a multi-million pound industry, with a product's success and failure not down to its quality, but down to the exposure and success of its advertising campaign.

This has now reached such an intense level that companies even sponsor TV programmes that fit the image of their particular product. For example, the ale-drinking CAMRA member Inspector Morse is funded by Beamish, the stout manufacturer, whereas programmes such as the weather have

sponsorship from companies like Powergen.

But as well as advertising's merits of making people aware of new innovations and products, there is also a darker side.

Such things as misleading product claims and brand stereotyping are two examples of practices that the advertising world's governing bodies, The Advertising Standards Authority (ASA) and The Committee of Advertising Practice (CAP) co-ordinate the fight against.

Together they instigate the British Code of Advertising Practice and have gained legislation to rid us of brainwashing techniques like flash advertising.

Banned because of its frighteningly effective method of persuading customers to buy products, this subliminal method places an engraving-like image in the brain leaving the customer little or no alternative but to buy.

## POTENTIAL

However, as technology has expanded through the home, so has the advertising potential. Perhaps the greatest growth expansion has been in the home computer market. Here in just short of a decade, prices have crashed as technology has gone through the ceiling.

Graphics, sound and memory chips are now so powerful that complicated images can be rendered and accurate sounds manufactured very quickly and economically.

One of the largest growth areas is in the computer game market, where both youth culture and adults alike sit in front of screens interacting and involved with on-screen sprites.

It seems that this audience is a captive market and one which can be targeted extremely accurately using a relatively cheap form of advertising.

One of the first people to spot such potential was Danny Bobroff, whose company

Microtime Media are now at the forefront of licence tie-ins and product placing in computer games.

The idea came some years back when Danny, who's a computer games enthusiast himself, was sat glued to a monitor screen.

"One night I was playing Kick Off. I was a Kick Off freak, and it came to me: There should be proper ads on such things as the side hoardings of the pitch, after that the time has now grown and grew."

"At the time I was working in advertising, and I'd spent a number of years working in the industry examining and developing new mediums to advertise in."

At first, although Danny was completely convinced of the concept, both software houses and manufacturers were dismissive.

"Although I never doubted that computer games would be a successful medium to advertise in, I never knew if I could survive long enough before the idea took off, but I knew someone would succeed."

The first success Microtime Media achieved was between United Biscuits and Millennium Interactive Software. After discussions with brand management for the Penguin biscuit and managing director of Millennium Michael Hayward, a deal was struck.

In the game, one of the objects of your Pond character is to walk over penguins which lie around the levels, and there are also loading animations which feature a selection of the aquatic biscuits.

At the time Millennium were a relatively small developer, and involvement with a strong brand added promotional weight and a larger audience to Millennium's James Pond Robocod character.

Keith Smith of Millennium explains how the tie-up came into being. "The initial idea was given to us by Danny Bobroff of

Microtime Media. He'd lined up United Biscuits and told us that they were interested in reaching a certain age group via a games medium. James Pond just happened to be reaching exactly that same targeted group."

Being the first game ever to feature a product tie-in, James Pond 2 was an experiment that was under the microscope not only of the companies involved, but the whole of the fast-moving consumer goods and software industries alike.

Fortunately for both Millennium and United Biscuits, Pond was a tremendous success, having now reached the million sales mark over just about every format conceivable.

This all sounds extremely straightforward, but there were slight hitches and compromises during production on both sides, as Keith explains.

"Once the tie-up had been agreed, the graphics had to be added. This meant that certain demands from the client were not possible, due to the complexity of the programming."

## PROMOTIONAL

However, compromises were found and it materialised that as a promotional idea for the Penguin brand, United Biscuits were extremely happy.

The benefits to a company that spends vast quantities of money researching its consumers were that this method of below-the-line advertising allowed them to reach a finely targeted audience.

A measure of the success has been the number of subsequent developments which feature licence tie-ups. Certainly companies like Microtime Media and Danny Bobroff don't have the same problems convincing manufacturers of the massive potential of advertising within this framework. Since the







## game



birth of the idea with the Robocod concept, there have been many follow up tie-ins, quite a few the brainchild of Mr Bobroff.

Most of the major players in the software industry have now had games which feature some form of advertising tie-up. Although Microtime Media haven't been responsible for all of the tie-ins, there's quite a few famous games which Danny has been responsible for the advertising aspect of.

United Biscuits featured again in Olympic Gold; PepsiCo and Duckhams Oil featured in Formula 1 Grand Prix; and perhaps the most famous of all is the Chupa-Chups lollipop tie in with Gremlin's Zool. Although only the sweet level featured advertising for the lollipop company, it worked extremely well.

So successful was the Zool and Chupa-Chups relationship that plans are afoot for some heavyweight promotions. As Gremlin's Steve McKevitt told me:

"It worked so well that Chupa-Chups European promotion for 1994 will incorporate Zool and Zool World as a key element. As we speak retail and consumer promotions are now being planned."

Another one of Microtime's successes was the Ocean and Walkers Crisps tie up. Using the Quavers brand and the Colin Curly character, Ocean devised two complete puzzle games.

Both Pushover and his younger brother One Step Beyond put the crisp-filling Colin on a quest for his favourite snack, and as Danny states: "It was a whole new game engine that carefully wrapped puzzle play with advertising as Colin attempted to reach the Quaver zone."

Since this advertising revolution, software houses themselves have been quick to approach manufacturers with ideas for tie-ups. One of the most successful direct

tie-ups is Gremlin's Lotus trilogy.

This slick, scrolling racing game featured two of Lotus's most prestigious cars. While Gremlin had a very fast, detailed set of codes, they felt the game needed more, as Steve McKevitt explained:

"It was our idea to link the product with Lotus, we felt it would benefit from the involvement of a real high performance car manufacturer, and let's face it, if Lotus 2 had been called split-screen racer, people wouldn't have identified with it."

### PERFORMANCE

The tie-in with Lotus enabled Gremlin to use imagery and artwork of real cars as well as being able to use visual information regarding performance.

As part of the deal, Lotus supplied promotions featuring the actual cars, and in return Gremlin had to follow a few stipulations.

Steve told me: "The only parameter Lotus laid down was that they did not want the cars to be smashed up during play. So in this game if a car leaves the track it bounces back into play, rather than exploding."

Others who have previously majored their attentions on film and television advertising have been quick to spot the potential that computer games offer.

As Richard Robson, director of JAC publicity and marketing, points out: "The major FMCG companies now recognise this area as an important new medium, that is, a

great way of targeting a specific market."

Like a great many of us, you're probably not only questioning some of the ethics involved, but also, what's actually in it for the games player.



But the software houses, and companies like Microtime Media and JAC, are quick to respond to both of the aforementioned notions.

They all believe very strongly that the concept of advertising in computer titles is a healthy idea and good for the industry.

Keith Smith says: "I can't see why people should think of it as an immoral practice. Young people are being subjected to more advertising messages than ever before.

"This is not a bad thing, it's just progress. If games are to be singled out, then once they've been torn to shreds the spotlight will fall on the likes of Take That or Jurassic Park."

Maryn Brown of Team 17, the company responsible for Superfrog and its tie-up with Lucozade reiterated the point.

"I don't think it does anybody any harm as long as the advertising isn't detrimental to the game."

The industry is adamant that games players can only benefit from tie-ups and sponsorship from large multi-nationals. Involvement with such companies brings in much-needed development money which brings a higher standard of software to the player. Danny Robroff explained some of

### Tied up in knots?

#### GOAL!



#### Goal • Virgin

Features Adidas logo and ball.

#### Bill's Tomato Game Psygnosis

Features Heinz tomato ketchup and included a free socket.

#### Global Gladiators • Virgin

Included lots of gratuitous McDonalds style tie-ins.

#### McDonaldland • Virgin

Speaks for itself!



#### Cool Spot • Virgin

Tie-in with 7-Up logo.

#### Jaguar XJ220 • Gremlin

Follow-up to the immensely popular Lotus tie-in, featuring the other prestigious sports car company to survive in the UK.



#### International Championship Golf • Ocean

Tie-in with Pringle golf sweaters.



#### Soccer Kid • Krysalis

Tie-in with Golden Grahams breakfast cereal on Soccer Kid's football ball.



# Action FEATURE

the benefits to the games enthusiasts: "Each campaign always features some benefit to the consumer.

For example, in One Step Beyond a whole new engine was designed for the game, and it was still launched at the reduced price of £19.99, about £10 cheaper than most software.

"Penguin Biscuits featured such things as free Mega Drives and free copies of Pond, and also on-pack offers giving gamers £10 off software titles."

On the opposite side of the fence is the

notion that games players are being exposed to a high level of advertising when they boot up their computers.

In television, people are exposed to short sharp explosions of hard-sell advertising: in computer games the sell is a lot softer. This is because the player very often sits at a monitor for over two hours and can therefore be subjected to much more subtle messages.

One of the key dangers are the false claims element of advertising. For example, in a game such as Superfrog, when our green friend walks over Lucozade bottles

he has his energy restored to its full status. Although the product does make similar claims, this potentially could lead children into believing such a notion is completely true.

This, however, is the tip of the iceberg in comparison to the prospects the future brings. Technological breakthroughs such as compact disc - with the ability to run such things as full motion video - open up new dangers for use by the unscrupulous. At the moment in the United Kingdom there is absolutely no legislation regarding computer games. This means

that techniques such as flash/subliminal photography, which was banned as an advertising medium on television years ago, can still be legally used within the framework of such things as computer games.

Although no-one has yet to test the authorities, Richard Robson admits it's just a question of time: "It's highly possible that some unscrupulous operator will do it some time."

Indeed, such is the concern of advertising's governing bodies, that they have set up Project 2000. The main aim of this commission is to investigate all areas of new technology media, but included in this bracket is computer software.

Following a meeting with advertising's governing bodies, software houses and companies such as Microtime Media, it was decided that while there is no immediate dissatisfaction, the industry needs a code of practice to cover the future.

Fiannuala Tennyson of the Advertising Association said of the software industry: "Legislation at the moment is not good enough with the strong element of advertising that is developing."

If the trend in advertising continues to course through the veins of new technology, then we could be in for some brave new world. It's also interesting to point out that most of the companies that we spoke to have games in development for new sponsors, but are reluctant to say too much.

## LIKELY

In the immediate future it's highly likely that products such as word processors and art packages will pick up advertisers from companies manufacturing items like pens and paper.

Reaching further forward into the realms of virtual reality and neural networks, like those written about in books such as William Gibson's *Neuromancer*, then a totally new can of worms opens up.

The potential within this new electronic society for advertising is huge, and the day of virtual reality worlds isn't as distant as you may imagine.

Soon, you'll don your headgear and journey into a new world within your front room. A world where electronic ad hoardings will beat out their neon messages, across the hum of a chip-controlled neural city.

This could be a world full of possibilities, but also is likely to be crammed to the brink with just as many messages as your everyday high street, with every sense interfaced and interfered with.

This doesn't mean we're necessarily heading for some Orwellian nightmare, because the advertising world, the software industry and companies like Microtime Media all want to see a code of practice introduced.

But as in so many other areas, technology is out-running the law, posing new moral questions which demand rapid sorting out and translation into workable legislation - before the damage has already been done.

## It's an ad, ad, ad, ad, ad world

### Zool • Gremlin

Features the popular lollipop Chupa Chups on the sweetie level. Promotions have free lollipops on mags, and such was the success of the tie-up that the whole of the Chupa Chups European promotion for 94 will feature Zool.



DRINK LUCOZADE TO KEEP YOUR ENERGY MAINTAINED



### Superfrog • Team 17

The Superfrog tie-in was the brainchild of Team 17. They approached Smithkline Beecham who manufacture Lucozade, the idea being that the magic potion that Superfrog drinks to recharge his batteries is similar to Smithkline's best-selling product.

### Lotus Trilogy • Gremlin

Gremlin needed a strong brand to launch their racing title, and so approached Lotus. Such was the success that a total of three games have raced into pole position in the public eye. Gremlin benefited from promotional support such as Lotus cars at trade shows and high speed test drives.



### PENGUIN



### James Pond: Robocod • Millennium

The first game ever to carry advertising has now sold over a million copies across all formats. The deal featured a tie-up with United Biscuits and their Penguin product. During play you use your Pond character to rescue various penguins across the multitude of levels.

### Formula 1 Grand Prix • MicroProse

This tie-up featured both the PepsiCo company and Duckhams Motor Oil. Though not featured directly in play, the game includes some screens that feature the products.



### Pushover/One Step Beyond • Ocean

These two games feature the Walkers Crisps advertising character Colin Carly. During play your objective is to guide Colin through a set of puzzles until he reaches the Quaver zone.

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Bristol BS7 8PQ  
Phone 0272 - 424743

**T.S.C.**

**T.S.C: The Shareware Company. Not all PDL's are the same!**

Seems we're still not flavour of the month with some people! Could it be because we've dropped F-Copy 3 from the "freebies" on the catalogue disk? We simply ran out of space: detailed descriptions for 100 or so more disks took up more space than was free. RIP F-Copy. But, the catalogue remains a thing of beauty and a joy to behold. Based, uniquely, around Terradesk, it's user-friendly, (and idiotproof!) Each of the 2,000 or so disks is described in detail, allowing you to make *sensible* decisions about what you want: the more we tell you about what you'll be getting, the better able you are to make a good choice and get the thing you wanted, rather than "almost, but not quite...". Games aside, every piece of shareware or PD was written for a reason: it was perhaps the solution to a problem which the author couldn't get "off the shelf", but had to write for himself. Maybe a patent package with nothing much to commend it to - but it has one "tool" that no other package, PD or commercial, offers. It's the job of a **good** PD catalogue to *know* and to tell you what makes a program "special"... (well that's our opinion, anyway - seems that not every PDL agrees with us.) Trouble is, taking that kind of care fills a **lot** of space, and keeping it easy to read and enjoyable takes time. The PDL's who *take* the time are few (but our customers know who we are!) If you need software, it's the job of a good PDL not just to take orders, but to be ready and able to advise you; with a real person on the phone, able to make suggestions, give free help & advice, chat about computers (and not only ST's!) draw your attention to bargains we've spotted... "Happy customers have deeper pockets!" We do our best for you because we think that, overall, our customers' loyalty is worth the extra effort. Many customers need (or at least, *want*) their disks as fast as possible: phone-in an order with your credit card number before 2.30pm, and it should be with you tomorrow. We're not the cheapest PDL - (could be, "you gets what you pays for" - quality service isn't free!) we're not quite the biggest - but as we've said before, we're a lot bigger than the cheapest, and a lot cheaper than the biggest. Good international contacts bring the latest software *direct* from Germany and North America. (recent arrivals include Terradesk v1.36, Idealist v3.3 and an IBM emulator - which is *quite* enough of a "list of titles" for a TSC advert!) You **need** a good PD catalogue as much as you need a good manual - it'll give solutions to problems you hadn't realised could be fixed (or possibly hadn't realised were there!), an insight into the amazing range of things your ST can do... Amazingly, we estimate that well under 50% of the 750,000 or so UK ST users buy PD or shareware regularly. **Crazy!** For a Good PD catalogue (please specify ST or Falcon) send us 3x1st class stamps or an SSAE with a (newish, please!) DSDD floppy. You'll be amazed!

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**Evesham**



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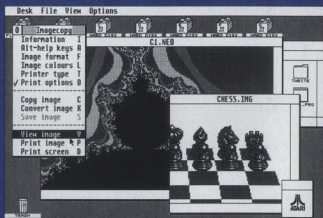


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*"Zool is probably the best platform title you're ever likely to see on the ST. Neat graphics coupled with a brilliant gameplay make the antics of Zool a winner from start to finish."*

Gamer, Atari ST User November 1993



**A**s music software developers wait to see which way the music market is jumping, new releases of music software for the ST and the Falcon are rather thin on the ground.

However, one area in which the Falcon is certainly the centre of attention is direct-to-disk recording. The Falcon's DSP (digital signal processor) can handle the processing required to digitise sound, store it on disk and play it back.

All other computers (with the possible exception of Apple's new AV Macs) require a dedicated card. Falcon d-t-d systems, therefore, can be had for as little as the price of the software – although for any kind of serious work you will have to budget for a large hard disk, too.

Audio Master is the latest Falcon d-t-d software to appear. As is becoming common in this area, it's another German development.

#### COMPATIBLE

The program is compatible with the K.A.T. (a remote control device also distributed by Q-Tek), plus MultiTOS, the UIS III file selected and NVDI, which no serious user is without.

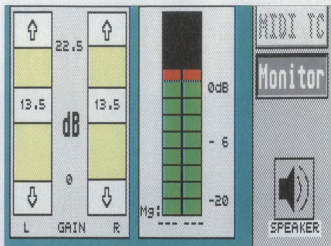
It's copy-protected by a dongle which plugs into the cartridge port which is where most music program dongles plug, too. Audio Master has no synchronisation facilities so it's unlikely that you'd be running it with a sequencer. But it would be nice to keep your options open.

The program is basically a stereo recorder and currently has no multitrack facilities. When you record, the audio sound is converted into digital data by the Falcon's DSP and stored onto a partition of a disk. Subsequent recordings will overwrite this.

In order to add new recordings you have to use the Record New function which appends a recording onto the end of previous ones. The result is one long file containing all the recordings you've made.

The waveform of the recording appears in a box in the top right of the window. A vertical line in the strip below this shows where each new recording

**SoundPool's Audio Master offers direct-to-hard-disk recording for the Falcon. Ian Waugh takes a look**



The peak meter shows the level of the signal at the Falcon's analogue input and you can adjust it using the gain sliders

# Musical megab

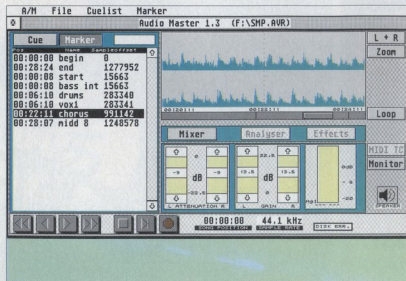
begins so it's fairly easy to find your way around.

However, this method of working means you can't use samples from other sessions and you can't re-record over a bad take unless it's the very first one.

The peak meter display lets you monitor the volume of the incoming signal before recording and adjust it with gain sliders. You can link the sliders so they

both move together which is useful for stereo recording. However, this applies only to analogue signals – you can't alter the recording level of data arriving via the S/PDIF interface.

You can adjust the volume of the output signal with attenuation sliders and, again, you can link them so they move together. You can use the Falcon's speaker for monitoring.



Audio Master has one main screen which shows the markers and the sample waveform or cue list

#### SAMPLE RATES

The program supports seven sample rates – 8.194, 12.292, 16.490, 20.770, 24.584, 33.880 and 49.170kHz. The 33kHz rate will suffice for many recordings although the quality is not as good as 44.1kHz (see the S/PDIF panel for more information). You can use the 49kHz rate, of course, but this will eat disk space.

After recording, you use markers to indicate the start of the samples you want to use to construct your music. You can name them and change them either by incrementing the sample offset (the distance from the start of the sample to the marker) or by dragging the marker across the waveform with the mouse. Markers can be set up on the fly, too. There is a zoom function but it only has one scale – 320 samples to the window. The marker corresponds to the

## Audio Master's S/PDIF interface

Although the Falcon's DSP can handle direct-to-disk recording, it has limitations. One is the sample rate. It doesn't support the 44.1 and 48kHz rates which are used by DATs and CDs.

The Audio Master S/PDIF (Sony/Philips Digital Interface Format) interface is a small black box which plugs into the Falcon's DSP socket. It has coaxial and optical ins and outs for connecting to a DAT or CD.

They allow digital information (the native data format of DATs and CDs) to be transferred directly between the device and the Falcon's DSP, so bypassing the Falcon's audio circuitry and analogue input.

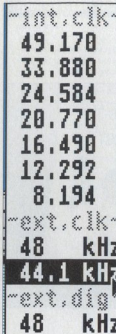
The result is higher quality and when you connect the S/PDIF interface, Audio Master automatically adds the 44.1 and 48kHz sampling rates to the sample rate menu.

Note that the S/PDIF interface is a digital device and you cannot plug a microphone or tape deck into it – it requires digital inputs.

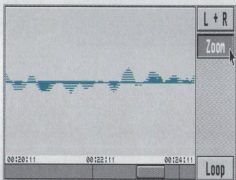
Although you cannot alter the volume of incoming digital data, you can change it on playback. One use for the program which the manual suggests is to increase the volume of a DAT recording.

Most of the suppliers of the other Falcon systems have their own S/PDIF interface, too, which shows they recognise that some users will need higher recording quality than the Falcon can provide on its own.

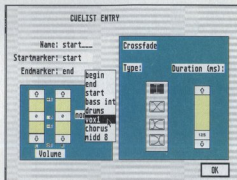
According to the manual, the Audio Master S/PDIF interface will work with Cubase Audio, Trade It's DigiTape, CompoSoft's Musicom 2 and the German AudioSlide program.



Plugging in the S/PDIF interface automatically gives you the additional sample rates of 44.1 and 48kHz



The zoom button only has one scale and provides an extremely magnified view of the sample



To create a cue, you select beginning and end markers which are offered from a pop-up menu

# ytes

very left of the display and you can scroll left and right to reposition it. Far better if the marker had been in the centre of the display and better still if there had been more than one scale factor.

The program automatically increments the names of the markers so verse1 will be followed by verse2 and so on, although you can still enter completely new names if you wish. The marker list can also show the time in bars rather than minutes and seconds.

Once the markers are defined, you can proceed to put your song together by creating a cue list. A cue is simply an instruction to play that part of a sample between two markers. When defining a cue, the markers appear in a pop-up list making it easy to select the ones you want. When setting up a cue, you can adjust the volumes of the left and right channels.

The cue page is where you create fades and crossfades, too. There are three fade types – linear, exponential and reverse exponential – which can have a duration from 125ms to eight seconds. The crossfades are produced in real time and the program's ability to do this is limited by the speed of the hard disk you are using. A disk error button will highlight if the disk is struggling. The manual

looks somewhat of a preliminary affair although nowhere does it say so. It's par for the course as far as direct-to-disk software goes – if nothing else, Falcon d-t-d programs are united by poor documentation!

But I sometimes despair that companies think it's OK to put out documentation which is not even up to the standard of the software. Anyone paying the price asked deserves better. All credit to the program – it's not difficult to use – but a good manual would dramatically reduce the learning curve.

### NO EFFECTS

Anyone with some knowledge of d-t-d recording may be wondering where the effects and EQ are. Well, alas, there are none. Audio Master is currently a single-track stereo recording and editing system, pure and simple.

In its favour, it does use non-destructive editing (unlike DigiTape) and it's currently the cheapest program on the market other than Musicom which wouldn't admit to being in the same league – but watch out for Musicom 2.

All of which suggest that Audio Master may be better suited to mastering, especially with the S/PDIF interface, than heavy creative recording, although if you accept the lack of effects, you can do serious edit work with it, too.

And it is software, after all, and soft-

ware is capable of being updated, so who knows how it may develop in the future (the same question can also be asked of the other systems?)

Meanwhile, the package price of the Audio Master software and S/PDIF interface is very good indeed. You have to decide if it does the job you require, and it's worth phoning Q-Tek to ask about the latest update situation before making a buying decision.

## BOTTOM LINE

### FEATURES

A basic stereo direct-to-disk edit system with few frills.

Excellent  
Good  
Average  
Bad  
Appalling

### EASE OF USE

Easy to use, manual should be better.

Excellent  
Good  
Average  
Bad  
Appalling

### VALUE FOR MONEY

The cheapest Falcon d-t-d system available so far.

Excellent  
Good  
Average  
Bad  
Appalling

Product: Audio Master, S/PDIF

interface

Supplier: Q-Tek, 99 Douglas Street,

Durdee DD1 5AT

Telephone: 0382 800808

Price: £285, £325, £499 for

both

Configuration: Falcon03D, 4Mb RAM,

T08 4.02 recommended

but not essential,

SHDRIVER v6.06 or later



## VIDI ST (12)

This offers a breakthrough in Multimedia Video. Jammed full of features that are suitable for almost any imaging application. Offering Animation, Image Processing, Image Capture and file support for no less than 3 computer platforms. Image capture is so simple, both colour and mono images are captured in less than 1 second. Images can be displayed in almost any resolution and colour mode up to 740x480 in true colour.

Main features include:-

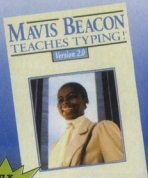
- Both colour and mono image capture
- No separate RGB splitter or filters required
- Fully functional Animation Workstation
- Mix images to almost any resolution
- All Atari colour modes are supported
- Many Image Processing effects



Product: Vidi ST (12) Price: £129.95 Order No.: 9403

## MAVIS BEACON TEACHES TYPING

Simply the finest typing program in the world, this award winning software takes you step by step through the keyboard. Coaching you at your own speed and skill level, monitoring your progress, the stunning graphics, the help facilities and complete typing text-book makes learning to type interesting and fun.



Product: Mavis Beacon Teaches Typing Price: £17.95 Order No.: 9477

## TRUEPAINT

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon/330 computer. Some of the highlights of the products are:

- Works on all STs and Falcons in all screen resolutions including 768x480 True Colour
- Easy to use Multi-Window environment with menus, toolbar and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc
- Flexible zoom, full screen mode with edit, colour picker, bezier curves...
- Animation, Font/Speedo GDOs support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more
- Extensive and informative 170 page manual



Product: TruePaint Price: £37.95 Order No.: 9250

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Order at any time of the day or night. Don't forget to give your name, address and credit card number

## VIDEOMASTER

The Ultimate Multi Media System for your computer. Videomaster is a revolutionary breakthrough in home computer technology combining the complexity of a Video Digitiser with a Sound Sampler in a single easy to use low cost unit, to bring you the ultimate home multi media video/audio editing package.

Videomaster will allow you to record monochrome, quarter screen pictures at speeds of up to 25/30 frames per second (Europe/USA) providing ultra smooth playback at high speeds. These pictures can be recorded from the output of a video recorder or directly from a video camera or a camcorder and replayed on your computer screen.

Videomaster can produce great 'grey' scale pictures from any video source with a pause or still frame facility. The colour filters provided in this package will enable the users of video cameras or camcorders to produce high quality still pictures in glorious colour.

Videomaster features a sound sampler as part of the hardware, though the software can be used with external sound samplers. This is supported by a full feature sound

recording and editing program within the videomaster software. The Videomaster system also features a video sequencer.

The complete package contains the Videomaster video digitising and sound sampling hardware unit, TR-Colour filters for colour camera use, comprehensive user guide and full system software.

Videomaster will work on any standard Atari ST with at least a single 1Mb floppy disk drive and a colour monitor. At least 1Mb RAM is recommended. RRP £69.95, save £15 with this offer.



Product: Videomaster Price: £54.95 Order No.: 9107

## ALFADATA SCANNER

The scanning package comes with the excellent Touch Up and Merge It packages and the AlfaData scanning rule. By using the Merge It software you can scan A4 pages in several passes and paste all the scans together. Other features include 100-400dpi scanning resolutions, 256 greyscale conversions, easy to learn & intuitive user interface, easy installation with 1 text and 3 photo mode selector switches, and award winning package.



Product: AlfaData Scanner Price: £115.00 Order No.: 9281

## REPLAY 16

At last, a low cost 16 bit sampling system for the Atari ST, featuring full 16 bit input and output in the same unit. The system comes complete with a sophisticated sample making/editing program, superb digital drum machine program, and a powerful MIDI keyboard emulation program which gives the user the ultimate in MIDI sample control.

**HARDWARE** - The 16 bit sampling unit plugs into the cartridge port of the ST. Audio connections to and from the sampler are provided via standard Phono connectors. An input volume control is also provided.

**SOFTWARE** - EDITOR - The sample editor is a highly flexible 'WMP' style program which allows conversion or editing between any AUI format 8/12/16 bit, Mono or Stereo samples. Sampling rates of up to 48KHz can be used, but the program can re-synthesise samples to practically any other speed.

Features include: • Volume control • Digital filtering and 3D frequency analysis • Cross fade looping • Record • Play • Fast Forward/Reverse with VCR style controls and much, much more...

**DRUMBATE** - A 4 voice polyphonic Drum machine with full MIDI control. Up to 30 different samples can be loaded into a hit at once and 50 patterns can be programmed in either realtime or steptime. Samples can be up to 1Mb in length each.

**MIDIPLAY** - Flexible keyboard emulator which can cope with up to 128 samples in memory at once. Any sample can be assigned to any note or range of notes in a 9 octave range. MIDIplay can play up to 4 VOICE/NOTE polyphonic with 3 levels velocity sensitivity while in single voice mode. An advanced sample loop point editor with AUTOLOOP (Zero Crossing) detection is also incorporated to ease loop point editing.

The system runs on any ST or STE with 502K (1Mb min is recommended), and comes complete with hardware, software and comprehensive manual.



Product: Replay 16 Price: £99.95 Order No.: P156

ONLY £99.95

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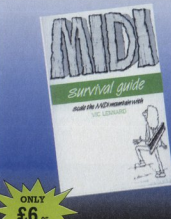


Product: 12 CoverDisks (Jan-Dec 92) Price: £15.00 Order No.: P143  
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## MIDI SURVIVAL GUIDE

Whether you're a beginner or a seasoned pro, the Midi Survival Guide shows you the way. No maths, no Midi theory, just practical advice on starting up and ending up with a working Midi system.



Product: Midi Survival Guide Price: £6.95 Order No.: P489

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## PRO PUNTER 2 PLUS

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The best racing software... available. The Racing Post.

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The NEW second generation Pro-Punter is written to professional standards and is attractive and easy to use. It features full editing and review of race data entered and also a unique low-maintenance database that does not need constant updating.

In addition to UK features, Pro Punter 2 contains unique weight/class editions and will configure to meet weight/distances, thus allowing configuration for racing worldwide.

Product: Pro Punter 2 + 11Mb disk Price: £75.00 Order No.: P170

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# GM changes

In January, we reported on General Midi's success story. GM tends to be inexorably linked to Standard Midi Files and although both are very good things, there are still a few rough edges which can cause problems. There is enough room within both specs for alternate interpretations to occur.

One prime example is the interpretation of voice which some manufacturers take to a sound element whereas most people would take it to be a single note.

This leads to the situation where a 28-voice instrument may only be capable of actually playing nine notes of the sounds you select, using three voices.

But I digress. Roland, the company which spearheaded the GM campaign (and who, it must be said,

## Ian Waugh reports on a proposed tidying up of General Midi's loose ends, and all the news in the ST music world

are one of the voice/note culprits), are proposing some changes and a firming-up of file standards. These include:

- A restriction on Program

Changes on Midi Channel 10, the one used for drum parts.

- A minimum length for drum notes.
- A ban on Reset Controllers and Bank Select messages.
- A maximum of one Sys Ex message per file.
- Lead vocal lines should be on Channel four.

One of the problems with GM files is that although the main 128 sounds of any GM instrument are roughly the same, some programmers use the variation tones which some instruments have for greater variety. If an instrument doesn't have any variations it falls back to the main tones. Fair enough, but then the sound is not what the programmer intended.

In fact, there can be a consider-

able difference between GM instruments. I have played files on a Sound Canvas which sounded great but on a Yamaha TG100, for example, sounded out of balance, and vice versa.

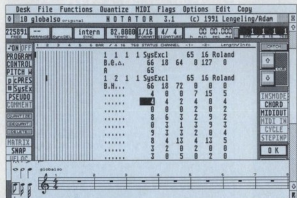
The files had obviously been tweaked especially for the Canvas but such programming niceties detract from the true GM nature of the file by making it sound sub-par on other GM instruments.

### TIGHTENING UP

So there would be considerable benefits in tightening up the GM/SMF specification even more. Many of Roland's proposals seem sound although I know some Midi file programmers who disagree with some of them.

The one Sys Ex message limitation, for example, seems needlessly restrictive and can prevent the programmer setting up an instrument in exactly the way he wants (but is that a good thing?).

The minimum length for drum



Roland's GM proposals would not allow two Sys Ex messages in a file

## Electric dreams

As promised in last month's Music Update section, I've booted up AudioCalc, the Professional Audio Calculator from Hinton Instruments. It's a neat piece of software and although it will have a limited market, it will run on an ST in mono or Falcon as a program or a desk accessory - in which form it will be most useful.

It consists of five "calculators" available from a pop-up menu which cover different fields of audio engineering. These are:

**Sound** - Propagation delay, distance and fundamental frequency (open pipestanding wave) of sound in free air v. temperature. PA applications: Delay line settings for multiple speaker systems.

**Tape** - Varispeed, play time, tape length, pitch change and harmonise ratios. Studio applications: all time variant re-tuning and editing.

**Music** - Tempo, multiple note times, time signature, bar length, time and offset vs time, timecode or feet/frames. Studio applications: all musical timing, delays & echoes and time fitting & adjustment to tape, video or film.

**Analogue** - Decibel conversions for peak to peak and rms levels vs waveform, operating level and impedance. dBu, dBV or dBm. Workshop applications: measurement and headroom in lines, power amplifier and transformer systems.

**Digital** - Storage size and snr vs Sample rate, format, word size and time. Studio & Workshop applications: media capacity, audio & bit clock bandwidth.

Some of this stuff is rather heavy but much will be very useful to the average musician, too. For example, the ability to calculate settings to produce echoes synced to a particular tempo and to fit it to tape is useful.



AudioCalc has five calculators, selected from a pop-up menu

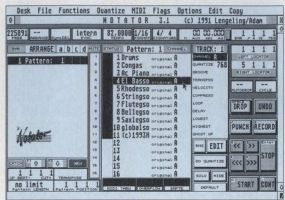
The tape timings will help anyone who uses analogue tape and if you are involved with dBs and the like, the Analogue calculator will help you out.

AudioCalc is one of those applications ideally suited to a computer. It's actually part of a forthcoming A440 Audio Engineering Toolkit for the Falcon.

A demo version of AudioCalc has been placed in the public domain, or contact Hinton in case of difficulty. The full version costs £39.95. More from Hinton Instruments, Oldford, nr Frome BA11 2NN. Tel: 0373 451927.



# on the way?



The proposals would also put the melody line on Channel 4, not a bass line

notes seems reasonable, too. Most drum sounds are "one-shot" sounds in that they play for a fixed length of time regardless of how long a key is held down for.

However, some older drum

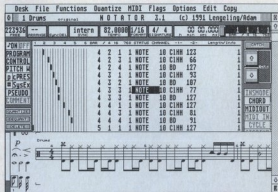
machines, do not react kindly if the Note On messages are too short. But then they aren't GM instruments. However, this would prevent users of such devices from using them with GM files without

modification. And why channel four for vocal lines? If you are using a GM instrument to play a GM file – which, presumably, uses Program Changes – does it really matter?

Whatever the outcome of the

proposals, more standardisation must be a good thing – with the proviso that they do not restrict the programmer or limit the way the files are produced. It'll be interesting to see how this develops.

Many programmers already use a minimum length of 1 for drum sounds



## ARPing on

I simply have to mention this – it's the latest version of one of my all-time favourite books and an essential reference guide to anyone interested in hi-tech instruments. It was written by Julian Colbeck who has probably played and reviewed more instruments than anyone else in the music business.

The Keyfax series has had a somewhat chequered printing history. I don't have Keyfax 1 but Keyfax 2 was published in 1986, Keyfax 3 in 1988 and we've had to wait until now for Keyfax 4. Each book has had a different publisher which might make you think that they "passed" when an update came along. Very strange, as the books are absolutely excellent.

Keyfax 4 has a slightly different format to the other books, concentrating on synthesizers, samplers and master keyboards. Keyfax 3 included digital pianos, sequencers, computer software and home keyboards which was very useful. However, another version of Keyfax which will concentrate on home instruments is in preparation.

Computer software would now require a full book to itself and it's debatable whether or not a book on the subject would be a good idea as it is bound to be well out of date before it even gets printed.

Keyfax 4 lists virtually all the professional keyboards you are likely to come across although it omits some of the older instruments which are trying to edge back into fashion such as the ARP range. The only Moog to have an entry is the Memory Moog while the Polymoog gets a passing mention.

Each instrument in the book has a short specification list including date of manufacture and a guide to second-hand prices. They are described in Julian's inimitable, pithy fashion and it's amazing that he finds something new and fresh to say about each instrument – and there are almost 300 of them! There is a list of contacts and – odd for a book – a cluster of adverts.

It makes fascinating reading. Real enthusiasts will also obtain the earlier editions of the books which will ensure they have the most comprehensive information detailing the history of the keyboard so far produced.

● Keyfax 4 costs £12.95 from Making Music, 20 Bowling Green Lane, London EC1R 0BD. Tel: 071-251 1900.

## Music Update

● Regular readers will recall that Dr.T's music software emporium transferred its UK distribution to Key Audio, ooh, ages ago. Well, the good Doctor has been rummaging through his shelves and decided to top a few quid off his software.

The reductions in many cases are considerable so if you're thinking of buying a new piece of software, check these out: KCS Omega II (£175) for the ST/E and Falcon which features sequencing plus scorewriting and printing. It was previously £275.

Tiger Cub (£59.95) offers 12-track sequencing with score printout. Copyist 1.7 DTP (£69.95) is a scorewriting and printing program and was previously £225.

More from Key Audio Systems on 0245 344001.

● MEMS, better known as the Midi Music Show although its full title is the Midi, Electronic Music and Recording Show, is heading your way again from April 22-24.

At least it will be if you live near the Wembley Conference and Exhibition Centre in London. Over the past couple of years, MEMS has proved itself to be the premier exhibition for hi tech musical equipment and computer software.

There will be advice centres and seminars, free to all visitors. Admission is £8 or £5 if you book in advance. More from Westminster Exhibitions on 0222 51128.

● Got a Yamaha QY20? Want to get more out of it? Then check out the 90 minute QY20 video manual. It's presented by Tom Robinson (of 2, 4, 6, 8 Motorway fame) and was produced by Labyrinth in conjunction with Yamaha. It costs a very nominal £14.95. More from Labyrinth on 0254 662096 or Yamaha on 0908 366700.

● Cubase users might want to check out Intrinsic Technology's Cubase Power Users' Guidebook, written by IT's director, Peter Buick. The book is aimed primarily at ST/Falcon users and it has been written to supplement rather than replace the manual.

It costs £10 but you can save £2 on the cost of IT's Cubase Hotkey Chart (normally £4) if you buy them both together. More from Intrinsic Technology on 081-761 0178.

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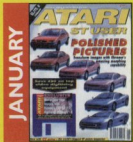
**FEATURES:** Ray-tracing for Atari computers, music on the Thames, printer round-up and DTP guide p2  
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**B**ulletin boards and modems, as André Willey keeps telling us a few pages from this one, are wonderful things. But the very ease with which files can be disseminated down the phone wires also opens up all kinds of possibilities for abuse, above all the pirating of commercial software.

The trouble is that sysops running these boards can be as honest as you like, it is just very difficult for them to keep tabs on all the programs passing through their file download areas.

On occasions, I have myself downloaded software which I thought looked interesting and assumed was public domain or shareware, only to find somewhere hidden inside a commercial copyright message.

One such program I found only a couple of weeks ago on a foreign bulletin board. Advertised as a "software only" PC emulator for the Falcon and TT, I naturally found it totally irresistible.

It was a huge download but included no documentation; always a bad sign, and not much help with installation problems either. SoftPC, the name of this program, proved rather tricky to install, but a few days of experimentation eventually sorted it out.

During those days of endless crashes and fiddling around with installation options, it also became increasingly clear to me that this was indeed a piece of commercial software – although still at Alpha test version stage – and I eventually tracked it down to a British software house by the name of Insignia.

SoftPC is apparently the Atari version of a DOS emulator for Unix machines, and was originally commissioned by Atari in preparation for the launch of the TT, then Atari's great white hope of success

The software PC emulator that never was is Günter Minnerup's unexpected discovery of the month – here today, gone tomorrow

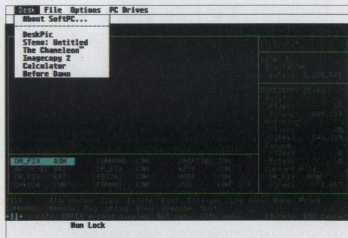
# The forgotten emulator

in the business world with its fast 32MHz, 68030 processor. Insignia no longer support Atari SoftPC and it was never released to the general public.

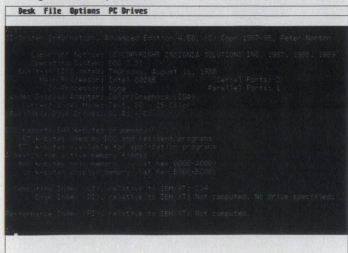
My source at Insignia was very reluctant to go into details; all I could establish was that the program had been the subject of a legal dispute between Atari and Insignia and that they had no intention of marketing it themselves.

They seemed to be vaguely aware that SoftPC was floating around foreign bulletin boards but were definitely not encouraging its further distribution. So why mention it at all on this page?

The answer is that, early test



A neat trick indeed: The GEM menu bar, and especially the desktop accessories, are available from within DOS



Norton Utilities reports a 286 chip and a speed equivalent 2.4 times that of a PC-XT. Hardly state-of-the-art, but quite usable

version or not, SoftPC shows what might have been and what could still be done if someone took up the baton of software-only PC emulation on fast 68030 Atari.

SoftPC emulates an Intel 286 processor but has a limit of 600k usable RAM under DOS. Further development would, I am sure, have not only squeezed a bit more performance out of the code but also made any additional RAM available as extended memory.

I have tested it with several DOS versions including DR-DOS 5 as supplied with Compo's AT-Speed emulator, and have had no problems except with the configuration of the hard disk. SoftPC's boot drive C: is actually a file located on a GEM partition, and it is a bit nerve-wrecking to let FDISK loose on your precious Atari hard drive.

FDISK installed the DOS partition without complaint, but I had to resort to Norton's Professional Utilities to format it as an auto-booting system drive. Drive E can actually be an ordinary GEM partition, so data exchange with TOS presents no difficulties.

The really impressive aspect of SoftPC, however, is its clever integration with the Atari hardware. It will only run in 640 x 480 resolution, but appears in glorious colour on the TT VGA monitor, albeit only in CGA mode. Same on the Falcon, provided it's in the right screen resolution.

The DOS screen appears in a

sort of window underneath a GEM menu bar, from which you have full – although somewhat crash-prone – access to desk accessories and various configuration options: the screenshots on this page were captured with Imagecopy 2 from the ST Club. The Atari mouse can emulate a PC mouse, the parallel and two serial ports are supported, and even sound.

I must confess to a soft spot for such software-only emulators, and not just out of respect for the considerable feats achieved by the programmers in working around the enormous difficulties of providing a stable DOS environment on a Motorola platform.

For hobbyists interested in playing around with the huge amount of cheap DOS software, or for those wishing to take some WordPerfect job home from work, a cheap software emulator may be all they need.

Who knows, a measure of PC compatibility might well have made a big difference to the indifferent reception received by the TT in Britain, and might still do wonders for the Falcon.

Ah well, I suppose I'd better wipe this thing off my hard disk before I get myself into trouble – it was nice while it lasted. And in case you wondered, the review of RAMdisks for the PC and Mac promised for this month has not been forgotten in all this excitement: watch this space in four weeks!



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# Carrier Detect conundrums

André Willey investigates the thorny problem of modems which think they're on-line when they're not

Several comms users have contacted me recently saying that their comms software thinks it is online when it isn't.

This appears to be a common problem, and assuming your modem cable is wired correctly, it is often caused by the unusual way that some modems are set up at the factory.

The Carrier Detect feature should allow comms software to use a special pin on the RS232 port to check whether a modem is currently online to another modem.

Unfortunately, some older computers would check this line before sending any text to the modem. This was fine when modems were manually controlled by front-panel switches, but the modern AT command system requires that software should be able to send commands to the modem when it is offline. To avoid these problems,

some modem manufacturers force the Carrier Detect line to be active whenever the unit is switched on.

This is great for older machines, but what happens if your comms software uses the Carrier Detect line for the purpose intended, determining whether the modem is currently connected to the outside world? Your comms software will always be informed that the modem is online, and thus will never be able to dial out.

So, how can you tell if your modem is set up this way, and if so how do you rectify the problem? First, take a look at the modem's

front panel. If there is a light marked CD or Carrier, it should only be illuminated when the modem is actually online to another modem.

If the light is on whenever the power is switched on, you'll need to change the modem's configuration.

If there isn't a CD light, you can still check the current CD status by using a little Basic program. On a standard ST or STE, you need to test the second bit of memory location \$FFFA01. A bit-value of 0 indicates that the modem thinks it is online, while a 1 indicates that the modem is offline. To test this

for yourself, type the following line into most versions of Basic:

```
PRINT PEEK(16775681) AND 2
```

If the result is zero then the Carrier Detect line is active, which means that the computer will think the modem is online. If the result is two, the modem is telling you that it is currently offline.

If the Carrier Detect line is always switched on, you will need to adjust the modem. This task is very simple, and the details should be in your modem's instruction manual. Most Hayes-compatible units use the following command:

```
AT &C1
```

Once you've done this, write the new information into the modem's non-volatile RAM so the setting doesn't get changed back again when you turn the modem off. See your modem manual for details.

## Protecting your password

Whenever you log on to a new bulletin board, the chances are that you will be asked to specify the nickname by which you wish to be known, and a unique password.

Many comms users quickly get into the habit of using the same nickname across various BBSs, which is useful so that other people can recognise you wherever you go - assuming you want them to, of course.

However, it is also rather tempting to use the same password, which makes life much simpler than trying to remember a different password for each new BBS account.

The simple rule is: don't! Passwords are your only protection against other people abusing your account. If you use the same password across all the systems that you use then you are opening yourself up to potential hassles.

Even though most BBS sysops are honourable with respect to their users' privacy, it only takes one dishonest operator to check

your password and then use it to hack into your other accounts.

This is obviously a major problem if you happen to use any commercial services where such hacking could cost you money, but even on free a BBS a hacker could cause no end of trouble

by sending abusive messages under your identity. So remember to invent a new password for every new system you join. Try to avoid anything too obvious, such as a close relative's name or your date of birth or telephone number. Random characters are by far the best solution, but since these might also be difficult for you to remember you could try choosing a sports personality, a term related to your favourite computer game or TV show, or some other word that you can remember easily, but which no one else will discover by accident.

Your password is your guarantee of security - don't let it fall into the wrong hands.

```

^M File Edit Settings Options Dial BackTALK™ Help
0 | S|Talker™: CIX 08:20
CONNECT 9600/REL-LAPM-COMP

Annex Command Line Interpreter * Copyright 1991 Xylogics, Inc.
Type 'cix' at the 'login' prompt to get started.
Port 24, Goofey.

login: cix
UNIX System V Release 3.2.0 1386
gonzales
Copyright (c) 1984 AT&T
All Rights Reserved
Last login successfully completed at Fri Dec 17 13:38:33 1993

CIX Version 2.9 27/09/93
Copyright (c) CoSy Conferencing System, University of Guelph, 1984
Portions copyright (c) Compulink Information exchange Ltd, 1985-1993
You are on line: AG/ABGA
NickName( Enter 'new' for new user) stuser
Password: █
    
```

# ATARI ST

**REVIEW**

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# Top of the charts

**S**ooner or later you'll find yourself needing to present some facts or figures to someone, whether it's a plan for your new business or the results of your scientific dabbings at school or at college.

Deciding on how to present that information, particularly figures, is an art form in itself, but however you approach it, you want it to look as neat and tidy as possible and that will inevitably mean turning to your favourite DTP program for help.

If you are presenting to a large audience, you may need to create transparencies for an overhead projector but more likely you'll simply be turning the charts and graphs into graphics for inclusion in a DTP document. There are three main ways of creating charts and graphs.

Firstly you can use a dedicated package like Atari's Hyperchart (currently on special offer from Silica Systems for £24) or DA's Vector.

Secondly you can opt for a simpler dedicated program that cre-

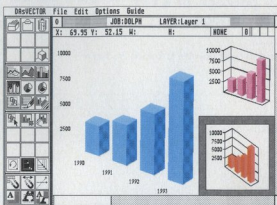
## Andrew Wright looks at different ways of creating graphs and charts

ates graphs and charts as bitmap images. Most will either save in bitmap format, usually IMG, or require you to use a screen grabber once the graph has been drawn on the screen.

There are a number of useful public domain programs libraries like BSTAT and Topchart which cost very little to experiment with.

The third option is to try and use your DTP program's built-in graphics tools to design your own charts and graphs. With a little practice and a bit of imagination, you'll find that most of them are easily up to the job, particularly PageStream and Didot Professional.

Draw up your chart in rough first



DA Vector's built-in charting is quite handy despite its limitations. Calamus format CVG output is a big bonus

and ensure you know how you want to present the figures. If your objective is to show a trend, the best option is probably a bar or line graph while if you need to show distribution consider a bar or pie chart.

Don't use too much data, either. Pie charts should have four or five categories and bar charts a maximum of six bars for the greatest impact.

If you're using colour, too many different colours should be avoided, particularly for overhead projections. It is quite possible to create an interesting chart with just one colour in addition to black. Two contrasting colours works well - yellow text on a dark blue background for example.

Keep the number of embellishments down, too. By this I mean the number of words on and around the chart. Some people say that if you feel the need to put a lengthy caption underneath, explaining what the chart says, you should redesign the chart as it has failed to do its job. Think up a sim-

ple title and explanation in about six to ten words - no more. Don't label each axis automatically, or add grid lines or a complicated legend unless absolutely necessary. If there is too much to say, perhaps a series of two or three charts would be better. Keep it simple.

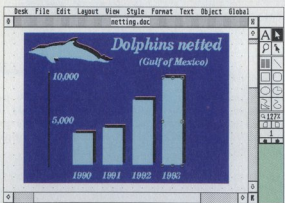
There are four components to think about when designing a simple chart like a bar chart. The background is important and while it will be blank most of the time, consider inserting a solid neutral colour or even a scanned image. The latter opens up all sorts of possibilities, particularly if you use a relevant image with lowered contrast.

### SOLID FILLS

Next comes the chart itself and invariably the biggest problem will be with fills. If you create a bar or pie chart with standard GEM fills and then resize it in another program, the patterns will be somewhat messy. Stick to solid fills where possible or use thick perimeter lines and no fill at all.

Grids are another component that cause trouble, especially when resizing. If you've followed my guidelines and produced a simple easy-to-read chart, background grids on either axis should be pretty well superfluous. Use them sparingly.

Last but not least is the text, and the best advice I can offer here is to use your DTP program's text facilities rather than those in the charting program. Not only will the quality be higher but you can resize the text and move it to make the layout more flexible.



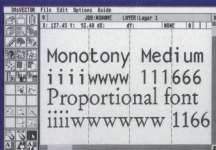
This chart was prepared entirely in PageStream using its graphics toolbox

## FONT THE MONTH

This month's font is one that you'll often find useful when preparing the text-only alternative to charts - tables.

In most tables you will probably be happy to use a sans serif font, perhaps in both normal and bold weights but occasionally you will want to balance columns precisely and the only way to do it is to use a monospaced font.

This one is called Monotony Medium and as it's freely available on CIX and in many PD libraries - it is well worth adding to your collection.



Monotony medium - notice the difference between this and the proportional font?

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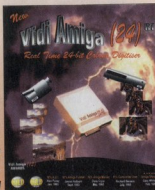
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To order either of these great products send this order form to HiSoft, The Old School, Greenfield, Bedford MK45 5DE. This offer ends on March 31

# Laying down the law

Richard Williams gives you more of the legal low-down in the second part the series

**A**lthough there is plenty of scope, you cannot use any name you think of for your business. For instance, it must not be misleading or offensive, and should only include the word Limited if the company is incorporated.

You may require permission to use certain other words like English, Welsh, Scottish, Irish, British, National, Royal, International and Bank in your business name.

Contact the appropriate Companies Registration Office for full details. You can do this by writing to Companies House, Crown Way, Cardiff CF4 3UJ, tel 0222 388588, or by visiting Companies House, 55-71 City Road, London EC1, tel 071-253 9393.

For companies registered in Scotland, details can be obtained by post or by calling at Companies House, 100-102 George Street, Edinburgh EH2 3DJ, tel 031-225 5774.

For details of companies registered in Northern Ireland, contact Companies Registry, IDB House, 64 Chichester Street, Belfast BT1 4JX, tel 0232 234488.

No two limited companies are allowed to have the same name. However, as far as sole traders and partnerships are concerned, there is no registration of business names, and someone may (unintentionally or otherwise) use the same name.

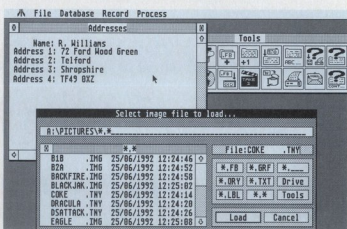
Your business stationery – letterheads, orders, invoices, statements, receipts and so on – must include the names of all the owners of the business and the British address where documents could be served (this is usually the business address) in addition to the name of business.

Upon request, the names of all owners of the business must be provided to any customer, supplier, or other person the

any doubt as to whether you have met all legal requirements. To do so means you run the risk of having your business closed down, with the consequent waste of all the time, money and effort that has gone into it.

Businesses involved in selling food are subject to many regulations. Before starting this kind of business, it is absolutely essential that you contact your local council's environmental health department. Food and hygiene regulations can have a profound effect on the kind of equipment and premises you need, and therefore on your business' start-up costs and cashflow.

If you plan to provide or arrange credit or hire purchase, you will probably need to register under the Consumer Credit Act. There is no need to register on account of providing normal trade credit (for instance, if you allow a month after issue of an invoice for your trade customers to pay their bills), or on account of allowing customers to pay by recognised credit card.



If your business involves keeping records on people in a database, contact the Registrar's Enquiry Service to make sure what you are doing is legal

business has dealings with.

At your business premises, a sign, giving the name of business, full names of owners and British addresses where documents relating to the business could be served on each, should be prominently displayed.

Most businesses can start up without the need for licences or registration of any kind. However,

there are certain kinds of business where matters are not so straightforward. They include driving tuition, selling liquor, running an employment agency and providing credit services.

On no account should you begin to operate a business if you are in

Your local Inland Revenue and Customs & Excise offices can provide you with forms and information which explain all you need to know about income tax, VAT and National Insurance Contributions

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## LICENCE

However, if you hire out equipment for more than three months, then you will probably require a licence.

If there is any doubt about whether you need a licence under the Act, get in touch with your local Trading Standards Department, which will be able to advise on every aspect.

If your business is involved in providing financial advice, you may be required to register under the Financial Services Act. Again, contact your local Trading Standards Department if you are in any doubt.

Keeping information about your customers and business contacts on your ST may seem an innocent enough procedure but to avoid possible abuse, the law sanctions the holding of such electronic data only if you are registered to do so.

For information and a form, call the Registrar's Enquiry Service in Wilmslow, Cheshire, on 0625 535777.



# THE 1994 Newcastle & Glasgow ATARI SHOW

Sponsored by

**ATARI**  
ST USER

**ATARI ST**  
REVIEW

## More information on the Atari shows coming your way

Last month we promised to give you some more information on two forthcoming shows. We can now confirm that they will be in Newcastle and Glasgow on April 16 and 17 respectively. You'll find all the details in the boxes.

### The leading ST publishers and dealers attending include:

16/32 PDL  
Atari ST User  
Atari ST Review  
Best Electronics  
Compo Software CGS  
Furst Ltd  
System Solutions/Atari Workshop  
Titan Designs  
Warzone PDL

We'll be there, with our technical experts ready to answer your computing queries. You'll also find a whole host of back issues at bargain prices, so you can catch up on any features or CoverDisks you may have missed. There'll be a special show subscription offer available as well.

### Newcastle show venue details

Eldon Leisure Exhibition Centre,  
Eldon Square Shopping Complex,  
Newcastle Upon Tyne.

Saturday April 16

10am to 5pm

Tickets £5, £3 for entry after 2pm

Nearest train station: Newcastle Central Station

By Metro: Monument stop, Eldon Square Centre

Nearest car park: Newgate Street, NCP Car Park

### Glasgow show venue details

Central Hotel,  
Logie Baird Suite,  
Gordon Street,  
Glasgow.

Sunday April 17

10am to 5pm

Tickets £5, £3 for entry after 2pm

Nearest train station: Glasgow Central Station

By road: M8 exit 19, left into Argyle Street and left into Hope Street

Nearest car park: Oswald Street, NCP Car Park

Organised by David Encill, Neal O'niions and Ray Cross



**FOR MORE INFORMATION  
PHONE 0487 3582**

# Come together!

There's little doubt that Falcons aren't yet selling in big numbers. Whether it is due to competition from the PC or a general lack of confidence in Atari, I couldn't say, though I'm still convinced that the Falcon will prove to be the next generation ST once the uncertainties are out of the way.

If you do happen to be a Falcon owner, though, life can sometimes seem a little lonely. Even the PD libraries aren't that much help and very few are bothering to promote Falcon sections in a really effective way. The latter is particularly strange as the amount of top quality Falcon software coming out is quite mind-boggling. One solution

## John Hetherington investigates the Falcon equivalent of a lonely hearts' club and tries out yet more new software

may be at hand though, in the form of the Falcon Fact File. Set up by two Falcon-owning enthusiasts, Colin Fisher-McAllum and Kevin Beardsworth, the Falcon Fact File was launched at the Atari Show in Birmingham last December and is essentially a user database.

The idea is that when you join you receive a special version of Roger Derry's superb NameNet address manager which lets you browse through the names,

addresses and telephone numbers of other members. It also contains information on their hardware and software set-ups so you can look for people in similar positions if you need help with a problem.

To join, you send a stamped self-addressed envelope to the Falcon Fact File, 11 Pound Meadow, The Green, Whitchurch RG28 7LG and get a simple questionnaire by return. You then complete it and return it with a high density disk

and another stamped self-addressed envelope or Jiffy bag. When your disk is returned it will contain the latest list of members, including yourself. The file will be updated monthly and there will also be Falcon-related PD and shareware on the disk. If you're feeling lonely, FFF might be just the thing.

## Falcon PD of the month

I've had my Falcon for the best part of a year now but it has only recently dawned on me that copying high density disks is a bit of a problem, mainly because Fastcopy Pro, on which I depend, doesn't work. It formats and reads disks quite happily but doesn't actually copy disks and crashes with two bombs.

As so little software comes on HD disks, it hasn't been a particularly high priority but having invested in a good number of HD disks for backup and formatted them with far more tracks and sectors than the desktop is capable of, it came as a shock when I realised I couldn't copy them!

## NON-EXISTENT

However, after some indecent scurrying around, a Falcon-friendly disk copier has come to light. It is called Copy and while its documentation appears to be non-existent, the interface is in English.

It needs a resolution with at least 16 colours, only formats to 82 tracks and ten sectors (nothing less) and won't read 11 sector disks but it will copy most other high densities you're likely to come across or use.



Copy, a simple tool that does the job well

## The Show for the Pro

Back in the Christmas issue we looked at Photo Show, a new Falcon-only PhotoCD slide show from System Solutions.

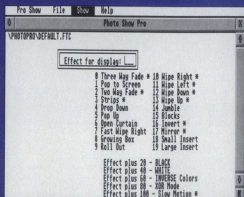
It reads images in Kodak's proprietary PCD format from a SCSI-compatible CD-ROM drive and displays it full screen (384 x 240 or 384 x 256 resolution) on any Falcon monitor including a TV.

It also supports sampled music or sound effects in AVR format and a simple-to-use scripting language with which to make custom slide shows.

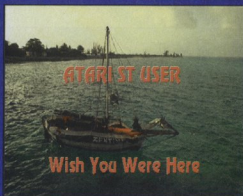
## EFFECTS

The Pro version has just been announced which features an extra 16 slide change effects ranging from curtain opening to roll out and small insert where a small block of the new image is overlaid on the old.

There are also some added colour changes which can be combined with each of the other slide change effects for almost unlimited creativity. With the Falcon's innate ability to record direct to a home video



Effects galore...



Mix PhotoCD and text for happy holiday memories!

recorder just as the ST could do, it opens up all kinds of exciting possibilities. You can also display text over images to create some really classy demos for shop window or exhibition advertising or simply to caption your own holiday snapshots. Fonts supported include the system screen font or any installed GDOS or SpeedGDOS font.

## MANY FEATURES

The Photo Show Pro disk contains a MultiTOS-compatible CD-ROM driver, a PhotoCD export utility that converts to RAW, TIF and EPS formats, some sampled sounds in AVR format and the program itself.

Other features include a Corel mode to take advantage of the cheap 100 image PhotoCDs being distributed for users of the PC/Mac program CorelDRAW! and the ability to use Windows BMP files. This has to be the best reason yet for getting a CD ROM drive - telephone System Solutions for availability and pricing on 081-693 3355.

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TOS 2.06	EPOA
Double Sided Drive	£47.00
Power Supply	£39.95
Power Supply (Replaces)	£25.00
Fitting for the above from	£15.00

# ATARI ST USER

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## COLOUR KITS for MONO PRINTERS

Ever wished you'd bought a colour printer instead of a mono one? Wouldn't it be nice to print out pictures in colour? Now you can with Atari FlexiKolor Kit. Each Atari FlexiKolor kit comes complete with everything you need to print in colour, including superb software. The colour kit is simple to use, the ribbons fit exactly the same way as your black ribbons so it will not affect your guarantee. Also on all models listed below

paper alignment is automatic, you do not have to manually align. PRINTS AS GOOD AS COLOUR PRINTER. If your printer is not listed below please phone. Atari FlexiKolor kits for Star LC210, LC211, all Star 24 Pin, Panasonic 1080/81/1123/1124, Epson LX80, LQ100, LQ400, LQ800 etc. COMPLETE KIT £29.95, Seikosha 1900+. Please note colour kits come complete with coloured ribbons.

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4 Colour Star LC200 24 Pin	£29.95
4 Colour Star 24 Pin (Reload)	£14.95
4 Colour Seikosha SL95	£29.95
4 Colour Seikosha SL95 (Reload)	£14.95
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1 Colour all Star 24 Pin	£11.95
1 Colour Epson FX80/LQ400/MX80	£11.95
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### PRINTER RIBBONS

Don't throw away your plastic printer ribbon cases when the ribbon wears out. Just take the top off, take out the old ribbon and reload it with a new one. It's simple. Full instructions supplied. Black ribbons from as little as 99p each.

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Citizen Swift 4 Colour (Normal Ink)	1 Reload - £6.99 ..... 5 Reloads - £29.95
Panasonic KXP2180/2123 4 Colour (Normal Ink)	1 Reload - £6.99 ..... 5 Reloads - £29.95
Seikosha SL95 4 Colour (Normal Ink)	1 Reload - £6.99 ..... 5 Reloads - £29.95
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**series 900**

The Series 900 HD features a buffered through port, optional battery backed clock, high speed 0ms seek rate, write protect switch, power supply and ICD interface and utility disk.

- Series 900 52QMB .....£299
- Series 900 120MB .....£349

**icdlink**

The 'Link' from ICD includes an external SCSI adaptor, allowing the Atari ST to connect to external SCSI devices e.g external hard disks, optical drives and CD-ROM drives which were originally designed for the Apple Mac, IBM PC etc. Just plug-in and no power supply is needed.

- CD 'Link' .....£89
- HD SCSI Plus .....£89
- HD SCSI ST .....£79
- CD Pro Utilities .....£39.95

**power scanner**



The award winning scanner from Power Computing allows you to scan up to 400DPI in real-time greyscale, with an autoscanner area detect. The scanning software included allows you to edit and manipulate any image you scan.

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**floptical drive**

The Floptical stores 20MB of data on a 3.5" disk. CD 'Link' is required.

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A large range of printers available, Star, Citizen, Hewlett Packard and Epson. Please telephone for prices and your requirements.

**miscellaneous products**

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**powerdrive**



The award winning external disk drive which includes a virus blocker, built-in Blitz Turbo and is able to boot from drive B. This is the ultimate in external disk drives for the Atari ST computer.

£60

**powerdrives**

Power Computing manufacture many disk drives for the Atari ST, all of which are made from high quality components.

- PC720P (Inc. PSU) .....£55
- PC720I (Internal) .....£39.95  
(360K upgrade drive, needs case modification)
- PC720 OI (Official internal) ..£45  
(720K replacement drive)

**drive-b cable**

If you have an internal drive that is not compatible with 'boot from drive B', this cable will solve your problem.

- Drive-B Cable .....£9.95

**blitzturbo**

Back-up disks at lightning speeds, Blitz copies from the internal to the external drive and cleverly by-passes your ST's controller chip. In around 40 seconds you can back-up an ST disk, what's more you can now switch between your disk drive and Blitz Turbo without disconnecting your Blitz interface. Probably the best Atari disk copier on the market. (1988 Copyright act applies)

- Blitz Turbo .....£25

**supramodems**

Supra Modems come complete with English phone cable, RS232 serial cable, heavy duty PSU and comms software, send and receive fax's, 100% compatible with industry standard 'AT' command codes, free trial offer to various services and V42 bis data compression.

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Use with Ultimate Ripper or SuperMon. Stop games or programs in their tracks, search for infinite lives and hack with the code. A press of a key and the program is restarted.

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SuperMon comes with all the features of the 'Ultimate Cartridge' and more. Some of the features included with SuperMon are: Program Switcher - allows two programs to be in the memory simultaneously and switched between at the touch of a key. Printer Spooler - allows files to be printed at the same time as other tasks, Comprehensive Debugger - disassemble programs and step through them, intercept OS calls, search memory or find where a routine is called from automatically, Diagnostics Function - check the internal functioning of your ST disk analyser, custom format disks, read/write sectors, hide files, Utilities - the SuperMon also has many utility functions available, including reset proof RAM disk, mouse trap function, time display, screen snapshot and 50/60Hz display toggle.

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**2mb ram board**



The Atari RAM Board requires no soldering and plugs directly inside the ST using the latest capacity RAM chips. Full fitting instructions are supplied. The ST RAM Board is available either as a 2MB or 4MB RAM expansion.

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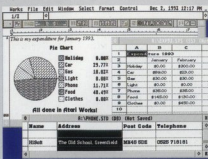
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# New Software for a New Year

## Business Applications



## Atari Works

The comprehensive, up-to-date, integrated business package for any Atari 680x0 computer with 2Mb of memory and a hard disk. Atari Works contains a word processor, a spreadsheet and a database in one program, so that swapping between the applications is a piece of cake!

The word processor contains all the normal editing functions plus the drawing of lines & boxes, graphic import, spell checker and thesaurus, mail merge etc.

The spreadsheet is as powerful as many people will ever need - organise your data clearly and simply as text, percentage, fixed or floating-point or currency and then, using the 53 built-in functions, create interdependencies between your information. Then display the results graphically with pie charts, line graphs etc. and cut/paste these into the word processor!

The database is a joy to use; create as many fields as you need and position them on your form using the mouse. Once the data has been entered you can sort it, match records, find specific entries and produce reports, all quickly and simply. It is easy to import data from other databases and export data for use with the mail merge facility of the word processor.

All modules support the new SpeedGDOS and are fully integrated - Atari Works is probably the most powerful integrated package yet seen on the Atari computers.

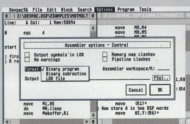


## Papyrus

If you need a high-end word processor with many desktop publishing features then Papyrus is the new package for you.

The application is ideal for producing all types of professional-looking output, from one-page flyers to complete manuals. With extensive SpeedGDOS support, paragraph styles, headers, footers, footnotes, reliable undo, automatic table of contents, flexible zoom, index creation, full margin control, freely adjustable paper format, letter micro-spacing, GEM vector import, text flow around objects, master pages, RTF support and more, Papyrus is the premier choice for all serious writers and designers.

## Programming



## DevpacDSP

Another new programming package joins the HiSoft family of languages for the Atari 680x0 computers. DevpacDSP is a complete development system for the Motorola 56001 digital signal processor used in the Falcon030.

Remember that we've also updated our other programming languages for the Falcon. Devpac 3.10, Lattice C 5.60 and HiSoft BASIC 2.10 all contain extra libraries/include files for the Falcon, an extended debugger that works in all Falcon resolutions and much more. The *Modern Atari System Software* book (free with Lattice C 5.60) gives full Falcon developer documentation.

DevpacDSP consists of a fast 56001 assembler, fully integrated with our friendly GEM editor, which supports macros, conditional assembly, include files and direct production of .LOD files or Falcon binary plus an easy-to-use GEM-based debugger for disassembling and stepping through your code, modifying registers, setting breakpoints etc.

## Video/Music



## VIDEOMASTER

The best-value real-time video digitiser you can buy. Videomaster is available for the ST/STE and, in a special enhanced true colour version, for the Falcon. Videomaster RGB includes our new colour splitter. ColourMaster and produces amazing quality colour stills.



## CLARITY

Clarity is our latest sound sampling system for the Falcon. Featuring an extensive sample editor, a complete drum sequencer and a powerful MIDI controller, Clarity is an ideal companion for all musicians. Includes extra hardware for CD (44.1KHz) and DAT (48KHz).

## Utilities



## HARLEKIN 3

This popular collection of utilities for all Atari computers gets another facelift. Harlekin 3 contains a multitude of enhancements including a multi-file editor, a new communications module with a scripting language, support for high density disks, a new Alarms module,

key with the Manager, separate keyboard and font editors and much more. The whole package has a new look, with all modules in a window or a flying dialog so that they can be moved and the memory configuration is now even simpler. Upgrades from Harlekin 2 cost only £19.95.

All products on this page are either available now or by the end of January '94 - please call to confirm availability and pricing.

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