

ST Free
ACTION supplement

December 1993 • Issue 94 • £3.99 Overseas £4.95 incl. P&H

EUROPRESS
ENTERTAINMENT

ATARI ST USER

2 GREAT DISKS

December 1993
ATARI
ST USER

Protext 6

Try the very latest version of
Arnor's top ST wordprocessor

PLUS A selection of essential utilities to make
life easy for floppy and hard drive users

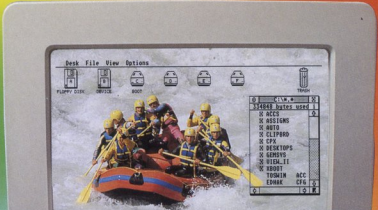


December 1993
ATARI
ST USER

Exclusive DOGFIGHT

Take to the sky in
MicroProse's
latest air
battle

PLUS CONQUEST - Link STs and battle in this tactical war game
MIDI MAZE 2 - An addictive multi-player maze shoot-'em-up



GENLOCK GENIUS

Add computer
graphics to
your home
videos

PLUS
ST
ACTION

32
page
supplement

PLUS: Jargon busting guide and life beyond games



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Computing**

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Preston, Lancs
PR1 2QP

**Hard
Drives**

Data Pulse Plus



The Data Pulse Plus range of drives features a custom designed case with integral PSU. The metal case is ideal for use as a monitor stand.

All Data Pulse Plus Drives now come configured with industry standard 50 way SCSI Centronics plugs which allows connection of the ICD LINK for use on the ST or a SCSI II cable for use on the Falcon etc.

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

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

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

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

Floptical drives are a reliable, high density, replacement media drive for the ST or Falcon. Due to an optical positioning system the Floptical drive is capable of storing 21Mb of data on one 3.5" Floptical disk. The drive can also read/write 720K and 1.44Mb HD disks.

Re-Writeable Optical drives are a

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

new addition to the Datapulse range, offering staggering density with hard drive speed. Each 3.5" optical disk stores 128Mb with access time of 30ms and a data transfer rate of 600K per second.

Data Pulse +85Mb	£240.00
Data Pulse +170Mb	£300.00
Data Pulse +240Mb	£360.00
Data Pulse +1Gb	£1080.00
D/P +21Mb Floptical	£310.00
170Mb with Floptical	£590.00
D/P +128Mb Optical	£710.00
<i>Please note all prices quoted are for main drive unit only. Add ICD LINK for use with ST or SCSI cable for use with FALCON</i>	
ICD LINK (ST)	£89.99
SCSI Cable (Falcon)	£39.99
128Mb Optical Disk	£35.00
21Mb Floptical Disk	£22.00

**Monitors &
Scart TV's**



Dataview Mono ST £139.99

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

Philips 8833 MkII £199.99

The 8833MkII is a colour stereo monitor compatible with the ST. Includes 12 months on-site warranty, green screen, CVBS input displays low/medium resolution.

Multisync Monitor

Microvitec 1440 £399.99

ST Switch Box £29.99

Falcon VGA adaptor £9.99

The Microvitec 1440 is a multisync monitor compatible with both the Atari ST and the Falcon. Utilising the ST switch box it is possible to display all three ST resolutions on the same monitor. Also compatible with screen blaster for the Falcon.

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

Dataview .28 SVGA £239.99

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

8833 MkII STE cable £9.99

8833 MkII STFM cable £9.99

SCART STE cable £9.99

SCART STFM cable £9.99

Scart TV's

Samsung C15030AN £249.99

The Samsung C15030AN is a 20" NICAM digital stereo TV with SCART input for high quality display of computer output. It also features remote control, on screen displays, Auto tuning system and Fastext access to Teletext (requires SCART lead).

Samsung C13352X £179.99

The Samsung C13352X is a 14" SCART input TV with remote control and on-screen displays (requires SCART lead).



Printers



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Star LC100 Colour £165.00

LC100 Colour Ribbon £7.00

LC100 Mono Ribbon £5.00

Star LC20 £124.00

LC20 Ribbon £5.00

Star LC24/100 Mono £179.00

LC24/100 Ribbon £8.00

Starjet SJ48 Bubblejet £210.00

SJ48 Sheet Feeder £55.00

SJ48 Ink Cartridge £19.00

Phone for extended warranties on Star printers. Add £3 for cable.

Add £7 for next working day delivery.

Citizen

Citizen Swift 240 Colour £270.00

Citizen Swift 90 Colour £175.00

Swift 9 Black Ribbon £5.00

Swift 24 Black Ribbon £8.00

Swift 24 Colour Ribbon £14.00

Hewlett Packard

HP Deskjet 510 £299.00

HP Deskjet 550 Colour £599.00

HP DJ Double Cap. Ink Cart. £25.00

Lasers

Seikosha OP104 £549.00

● 512K RAM (Exp to 2.5Mb)

● HP Laserjet IIP emulation

● 14 resident fonts

● Centronics/RS232C/RS422

● 12 months on site warranty

Seikosha 512K RAM upgrade £69.00

Seikosha Toner (2 units) £19.00

Seikosha Drum Unit £129.00

Ricoh LP1200 £699.00

Add £3 for Centronics cable and £7 for next working day courier delivery

Star

Star SJ144 £569.99

The Star SJ144 is a Colour/Mono thermal wax transfer printer which gives glossy colour output on normal paper.

- 144 element print head
- Mono 3 pages per minute
- Colour 1.4 pages per minute
- 360 dpi resolution
- Emulates Epson LQ 860, IBM Proprinter & NEC graphics

Colour Ribbon £12.00

Mono Ribbon £10.00



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(0772) 203166

Fax:
(0772) 561071



Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
 - 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
 - 8 Channel 16 bit, high quality. Stereo sound sampling
- FALCON 1Mb RAM No HD £499.00
 FALCON 4Mb No HD £699.00
 FALCON 4Mb 64Mb HD £799.00
 FALCON 4Mb 127Mb HD £899.00
 FALCON 4Mb 205Mb HD £999.00

New Low Prices

STE Packs

1Mb 520 STE	£199.99
2Mb STE	£269.99
4Mb STE	£339.99

3.5" External Drive

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

£54.99

Speed Mouse

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

£11.99

Marpet Upgrades

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

Unpopulated Marpet Board £28.00

See SIMM prices below
 Forget Me Clock II £17.99

Aries Upgrades



- Will fit any ST(F)(M) or Mega ST
- Extremely compact in house designed Multi-layer circuit board smaller than a credit card
- Upgradeable in stages from the base 512K to 2Mb then 4Mb
- Solder in design for greater reliability (requires some technical knowledge)
- Fully tested prior to despatch
- All Aries RAM upgrade boards come packaged in a 10 capacity disk box, complete with full fitting instructions/test disk.

512K Board	£39.99
2Mb Board	£89.99
4Mb Board	£169.99
512K SIMM's STE	£6.99
2Mb SIMM's STE	£69.99
4Mb SIMM's STE	£139.99
2 x SIPP to SIMM adaptors	£3.00

Software

Scanlite Accessory	£20.00
Silhouette 1.4	£39.99
1st WordPlus	£36.99
Timeworks 2	£39.99
Calamus 1.09N	£39.99
CalAssistant	£16.99
Cleanup ST	£24.99
Diamond Back II	£34.99
Diamond Edge	£44.99
Script WP	£69.99

We keep a full range of ST software in stock including Educational, Utilities and Games. Phone for prices and availability

Midistudio Master

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

£19.99

Repair Services

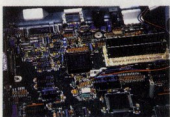
The Only ATARI Authorised Repair Centre in the UK

Our Atari trained technicians can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure 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 can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

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.



Quotation	£15.00
Minimum repair charge	£35.25
Same day service	£15.00
STFM(E) PSU	£39.99
1Mb internal drive	£39.99
A/B Boot switch	£4.99
TOS 2.06 + Switch STFM	£65.00
TOS 2.06 + Switch STE	£65.00
Courier Pickup	£11.00
Courier Return	£7.00

Phone for price and availability of ST spares

Modems

Supra 2400 Baud Modem	£74.99
2400 Baud, Auto answer, Auto dial, Hayes compatible. Budget introduction to the world of communications.	
Supra 2400 Plus	£119.99
2400 Baud, Auto answer, Auto dial, Hayes compatible. MNP error correction, MNP 5 compression. All Supra modems include 5 years warranty.	

Accessories

10 3.5" Bulk Disks	£4.99
50 3.5" Bulk Disks	£19.99
100 3.5" Bulk Disks	£37.99
All disks come complete with labels. Phone for carriage charges.	
100 3.5" Disk Box	£7.99
Mouse/Joystick Switch	£11.99
Roboshift Autoswitch	£19.99
Monitor Switch Box	£19.99
Mouse Mat	£2.00
Mouse/Joystick extension	£4.99
PRO 5000 Joystick	£7.00
Zipstick Joystick	£11.99
Cheetah Bug Joystick	£14.99

DataNet Network



Datanet Network Hardware

- Cartridge based high speed network solution
- Compatible with ST (F)(M), Mega ST, STE, Mega STE

Powernet Network Software

- MultiTasking Network software allows applications to run on the server while drive and printer accesses take place in the background
- Full Falcon compatibility using LanNet device

DataNet with PowerNet £69.99
LanNet with PowerNet £59.99
MidNet with PowerNet £49.99

Prices quoted are for 1 Node. Each computer attached to a Network requires 1 Node.

All prices exclude cabling DataNet requires 75 Ohm Coax, LanNet and MidNet require twisted pair.

Hand Scanner

- 100,200,300,400 Dpi Resolution
- 1 letter mode, 3 photo modes
- 105mm scanning head
- Includes Cartridge through port with switch box
- Compatible with Touch Up 1.8
- Supplied with Scanlite Accessory. Compatible with any graphics package which supports accessories. Allows scanning directly into compatible packages, such as Silhouette and Megapaint II

Hand Scanner + Scanlite £99.99

Hand scanner supplied with Silhouette V1.4 Auto tracing vector package (mono monitor only). Scan directly into Silhouette via Scanlite or import IMG, DEGAS, TINY, MacPaint, GEM AND SGF bit image files. Exports IMG, GEM (1,3), SGF, DXF, EPS (Postscript) vector files.

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Ricoh LP1200 Laser Printer
 400 Dpi, 2Mb RAM 6 page per minute
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Hewlett Packard Deskjet 500 Colour
 Now Only £299.99

Ladbroke Computing



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

All prices are correct at copy date 18/10/93 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery.

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

Delivery

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

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Tel: 9.00am-5.30pm (5 Lines)

(0772) 203166

PC Emulators

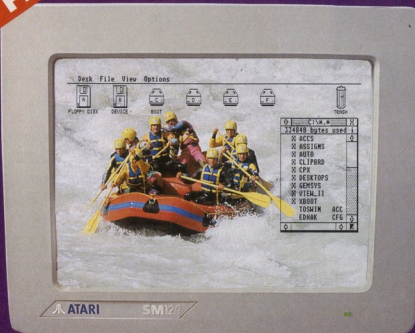


- Run PC Software on your ST
 - Full installation instructions
 - XT or AT Emulation
- PC Speed STFM or STE (XT) £49.99
 AT Speed STFM (8MHz) £139.00
 AT Speed C16 STFM £199.00

Contents

**COVER
FEATURE**

GENLOCK GENIUS



We preview a device that makes it easy to add personalised computer graphics and text to your videos

22

midi and music ♦ emulation ♦ comms ♦ dtp ♦ business ♦ falcon

Aspects of the ST

Midi and music86
A new user group for Falcon musicians, ten years of Midi plus all the latest music news

Emulation89
Some useful Macintosh desk accessories and utilities for owners of Spectre GCR

Communications91
A glossary of common terms you're likely come across in the confusing world of comms

DTP93
Andrew Wright looks at customising typefaces and has some interesting news on upgrades

Business95
The best ways of financing your next computer system are put under scrutiny

Falcon97
A new board that boosts the computer's graphics modes even further

GAMER

DOG FIGHT



Gamer Globe	70	Monkey Island	80
Euro Champions.....	72	Hook	80
Dogfight.....	74	Crazy Cars II	80
World Class Rugby.....	78	WWF Wrestlemania	80
Dreamlands	79	Zool guide.....	84

Page 69

Complete and unrivalled ST games coverage

Next
month
on sale
Nov 25

The CoverDisks

specials

32 Money Matters

How home accounts packages can offer an ideal way of keeping your spending under control

42 The Game Chain

We go behind the scenes and discover how Atari software reaches the shop floor

46 The Game's up

If you've only ever used your ST for playing games, there's a whole new computing world you've been missing

67 Jargon Buster

Understand the latest computer speak by following our bluffer's guide to ST and Falcon jargon

reviews

28 Chagal

This powerful touch-up and editing package for scanner owners is put through its paces

36 Protex 6

Arnor's wordprocessor has just been given many new features including the ability to load graphics

41 Sweet Sixteen

A sequencer suited to those who wish to buy a package at the budget end of the market

61 UVK 5.9

Is this really the ultimate virus killer? We check out the latest version of this respected utility

READER OFFERS

20 Disk offer

An exclusive Atari ST User offer giving readers the chance to buy the latest Protex with big savings

66 Missed an opportunity?

Time's now running out for completing great Atari ST User CoverDisk software giveaways

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DISTRIBUTION COMAG (0895) 444055
SUBSCRIPTIONS 051-357 2961

Published by Europress Enterprise Ltd.
Europe House, Adlington Park,
Maccfield SK10 4NP
Tel: 0625 878888 (all departments)
Fax: 0625 850652

regulars

7 News

Jaguar support grows, new man joins Atari marketing – plus all the latest ST and Falcon stories

10 Euro News

Atari boss speaks on the firm's European plans, GE-Soft launch TT-compatible and much more

14 CoverDisk

This month you've got two spectacular disks to explore. We show how to get them up and running

18 Disk tutorial

Join us as we explore the latest version of Arnor's popular word-processor, Protex 6

39 Write Now!

Company takeovers, Jaguar hopes and porn adverts are just some of the subjects you've written about

52 Public Sector

Games, utilities and demos – and all for little more than the cost of a blank disk

56 Advice Service

Our man in the know offers sound advice on how to solve your computing problems

63 C programming

As we move on to Part B of this C tutorial, our attention is turned to GEM windows

86 Aspects

Page after page of detailed and knowledgeable information on all aspects of the ST world

88 Subscriptions

Guarantee your monthly copy of Atari ST User and pick up a free gift worth up to £25.99

90 Competition

Win up to £300 worth of top games in this magnificent One Step Beyond giveaway

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EUROPRESS
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Printed in the UK by Carlisle Web Offset, Carlisle, Cumbria

December
1992

ATARI
ST USER
PLUS

Protex 6

Try the very latest version of Arnor's top ST wordprocessor

A selection of essential utilities to make life easy for floppy and hard drive users



Seeing double on the front cover this month? Don't book an appointment with the optician – it's an Atari ST User double disk bonanza

Disk One

On this disk we have a working demo of Protex 6 from Arnor, with enhanced features including the useful ability to import graphics

PLUS

A folder full of disk utilities to make file manipulation and organisation much easier for floppy and hard drive users

Disk Two

Games galore, with an exclusive interactive demo of Dogfight, the latest sim from the masters of strategy games, MicroProse

PLUS

World Conquest and Midi Maze II - Two brilliant multi-computer games which allow you to link STs and battle with friends

The DISK starts on page 14



Some Good News for Atari Programmers

There is plenty of good tidings for the Atari programming community this month. Two new books that contain a wealth of up-to-date information and two new versions of our popular languages. Together, these developments breathe new life and hope into Atari (MSX) computers.

Modern Atari System Software

This invaluable book contains all the latest details of Atari's newest system software together with the bindings for Lattice C 5.60, HiSoft BASIC 2.10 and Devpac 3.10 - essential for all serious programmers who want to use these packages. Majoring on the Falcon030, *Modern Atari System Software* contains extensive discussion on programming this exciting new machine ... 256 pages, price £19.95.

New

The Atari Compendium

Finally! This book, from Scott Sanders, provides the most comprehensive collection of information designed for every level of Atari programmer. It covers all Atari 680x0 computers from the 520ST up to the Falcon030 and includes a detailed reference for every function present in TOS 1.0 up to TOS 4, and beyond. This is the book we've all been waiting for ... 840 pages, price £39.95.



Devpac 3.10

We are pleased to announce the immediate availability of Devpac 3.10, our latest release of the acclaimed assembler/debugger package. Version 3.10 contains many improvements and enhancements as well as detailed support for the new Falcon030. Upgrades start from only £3 for our Gold Support customers, RRP remains at £79.95.

- ✓ Extra include files for SpeedoGDOS™, MultiTOS™ and MiNT™
- ✓ Improved debugging and editor facilities including support for all Falcon resolutions
- ✓ Editor now works in low-res on all versions of TOS!
- ✓ Falcon030 AES and XBIOS support (full details given in *Modern Atari System Software*)
- ✓ Falcon030-specific libraries for the DSP/Video/Audio hardware
- ✓ Supplied with handy reference card giving editor and debugger keyboard shortcuts



New

BASIC 2.10

Ideal for both the beginner and the seasoned programmer, HiSoft BASIC 2 combines ease-of-use with exceptional power and flexibility - the only BASIC that is still developed and supported in the UK. 2.10 contains many new features detailed in an extra 32-page manual - upgrades start from £19.95, RRP is £99.95.

- ✓ Extra include files for SpeedoGDOS™, MultiTOS™ and MiNT™
- ✓ Improved debugging and editor facilities including support for all Falcon resolutions
- ✓ Major GEM Toolbox improvements incl dialogs with keyboard shortcuts and pop-ups
- ✓ Named compiler options for simplicity
- ✓ MultiTOS™ friendly dynamic heap option
- ✓ Falcon030 AES and DSP/Audio/Video support (full details given in *Modern Atari System Software*)

New



HiSoft
High Quality Software

For more information on any of our products (which include the AVR music/video titles (e.g. Replay16, VideoMaster) and Microlead software), please call HiSoft on +44 (0) 525 718181, or fax us on +44 (0) 525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DF, UK.



All HiSoft products should be available from your local Atari computer shop. In case of difficulty, you can order directly from HiSoft using your credit/debit card over the phone or by sending us a cheque/postal order. Overseas customers please call, write or fax for information.

Games makers pledge Jaguar support

SUPPORT has been growing this month for Atari's revolutionary Jaguar games console, and the company have announced that some machines could go on sale in Britain before Christmas.

Atari intend to launch the system in the US cities New York and San Francisco during November and originally said it would be early next year before it shipped in Europe.

But according to Atari's European spokesman Peter Walker, a high level of industry support has encouraged the company to attempt to get machines into select retailers much earlier. Walker said the firm were still

by **John Butters**

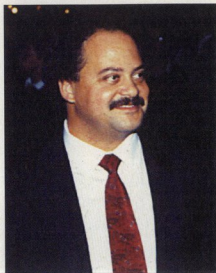
talking to high street stores such as Virgin Megastore and HMV Level One, but no final decision has been taken on who will stock the £199 Jaguar.

Sources in the States, meanwhile, say that the game packed with the console will be either Crescent Galaxy or Cybermorph, though *Atari ST User* believes the latter to be more likely.

Five games will be available for the machine in time for its US launch, and a further ten titles will be introduced by the end of January.

More than 20 firms so far have signed agreements to develop for Jaguar, including Anco Software, Krisalis Software, Loricel, Ocean Software, Titus and US Gold.

"Developer response to Jaguar has been overwhelming - we've accomplished what we set out to do by attracting the industry's top developers," said Atari president Sam Tramiel.



Tramiel: Attracting top developers to Jaguar

Jaguar developers

Anco Software	Ocean Software
Beyond Games Inc	Rebellion Software
Dimension Technologies	Retour 2048
Eurosoft	Silmarils
High Voltage Software	Telegames
Krisalis Software	Tiertex
Loricel	Titus
Maxis Software	Tradewest
Microids	Trimark Interactive
Midnight Software	US Gold

New Atari man in Jaguar push

TERRENCE Valeski, a 22-year veteran in consumer electronics marketing, has joined Atari as director of marketing and advertising for Jaguar.

Valeski's immediate responsibility will be to manage the American roll out for Atari's new gaming system.

Before joining the firm, Valeski was founder and chief executive officer of Intellivision, a leading home video game manufacturer in the 1980s.

"Jaguar has truly leaped ahead of the competition in terms of quality, price and performance," said Valeski.

"My job will be to ensure that we attract the best and the brightest and to market aggressively through the channels of distribution.

"You can expect to see some major shifts in the way Atari markets."



Jaguar: To see major shift in Atari marketing

Playing safe with games fact sheet

A CHARITY funded by the Government to develop and promote the best technology for learning has drawn up a fact sheet aimed at parents of children who play computer and video games.

The National Council for Educational Technology have reported on recent research carried out in the US on the effects of playing computer games. The report comes after media reports earlier this year alleging some games could cause epilepsy and anti-social behaviour, and includes advice from the British Epileptic Association.

According to the NCET, games offer several benefits to help children learn, and providing they are not played too much and are only one of the child's activities, the dangers are limited.

Advice is given to combat the possibility of any health hazards while further research is carried out and a checklist is provided to test whether children are addicted to games.

The report says that children should sit at least two feet from the screen in a well lit room and avoid playing while tired.

Other recommendations are that parents should help their children choose programs with an educational value, ensure games do not contain violence and encourage playing in groups.

They should talk to children about what happens in the software and use games as a starting point for other activities such as painting, drawing, acting or storytelling.

"There has been a lot of controversy around specific cases pointing to the addictive effect these games can have on young people," said NCET spokeswoman Ann Logan.

"Parents ought to be informed of the dangers and the possible benefits to children."

● To receive a free copy of the fact sheet send an *sae* to the National Council for Educational Technology, Milburn Road, Science Park, Coventry CV4 7JL.

Direct sell will cut printer costs

PRINTER prices could soon fall following a decision by manufacturing giant Citizen to set up a division within the company to sell directly to the public.

Citizen Direct will kick off by selling the firm's first laser machine, the six-page per minute ProLaser 6000.

It has a resolution of 600 dots per inch and will be sold by Citizen for £559, instead of its usual recommended retail price of £998.

According to spokesman Tony Byng, savings on distributor and dealer margins will enable the company to sell products at highly competitive prices.

Machines sold by Citizen Direct will be

different from those distributed through third-party dealers and there are no plans to stock dot matrix models - at least for the time being.

"Our decision to offer the Citizen ProLaser 6000 via the direct selling route is a first for the industry," explained Citizen's marketing director Edward Huggins.

"No other printer manufacturer in our sector has taken the initiative to manage the complete sales operation.

"We believe this is the only way to meet the high expectations of customers who have already learned to buy their computers and software from direct suppliers."

News briefs

Brit club takes Omikron range

AN ATARI enthusiasts' club has just taken on British distribution of ST and Falcon software from German company Omikron.

Under the deal, ST Club (0602 410241) will sell a range of programs including multi-function utilities *Martimer* and *Martimer Deluxe*, database *Freeway* and *PixArt*, a paint package.

The Omikron Basic range of programming languages and libraries will be available in German.

Video role for Atari

ATARI'S European managing director Bob Gleadow sees part of the company's future in the video entertainment market as well as games.

He says the two markets are converging and that, when launched, Jaguar's CD player will give the machine appeal to those wanting to play pop videos.

Citizen meet colour demand

THE Swift 200C is the latest 24-pin colour dot matrix from Citizen which has been launched by the firm to meet customer demand for low cost, high quality colour printing.

The £327 machine runs at 180 characters per second in draft mode and 72cps in its six letter quality fonts. It provides Epson LQ500/850 emulation.

Falcon expands its memory

FALCON owners can now expand their computer's memory to either 4Mb or 14Mb using a new RAM expansion from Silica Systems (081-309 1111).

Unpopulated, the Actionsoft board costs £49.95. Memory chip prices are still fluctuating following disasters at production plants so buyers should contact the firm for up to date details.

Emulation power on the way

BOARDS to enable Falcons to emulate 386 and 486 PCs are under development by Compo Software and are expected to go on sale early next year.

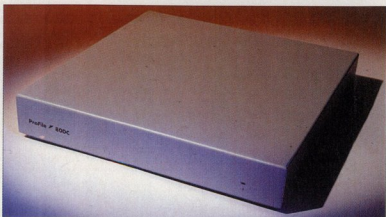
The 386 version will be upgradeable to a 486 should the user need the extra power, and improved colour modes will make it practical to run modern Windows applications.

Protar drives will be back

PROTAR hard drives are set to reappear in Britain following a deal just signed between the German manufacturer and London-based dealer Analogic (081-546 9575). The high quality Profile drives disappeared from the Atari market soon after the closure early this year of Protar's UK office, and it seemed unlikely that they would be seen again.

But Analogic say they have now been given all rights to the drives' software and hardware, and claim the new models will be exactly the same as those previously sold. Many of the parts will be supplied from Germany, and all drives will use Quantum mechanisms. They all feature SCSI and a disk cache.

The entry-level model will come with 85Mb of storage capacity and cost around £300 including delivery. Drives with 127Mb, 170Mb, 240Mb and 525Mb will also be available.



Protar: Drives set to reappear in Britain

Christmas advice and discounts

VISITORS to the Christmas International Computer Show in November will be able to see the latest computer hardware and software and talk to user groups for unbiased buying advice.

The show will focus on key computing applications including business, education, music, entertainment and multimedia, and reflect changes in the home and small business market.

For the less computer literate visitor there will be dedicated feature areas to illustrate the capabilities of the equipment available.

According to the organiser Westminster

Exhibitions, several of the 100 exhibitors will be supplying products - many of them for the ST and Falcon - at competitive prices.

Among the firms lined up to attend are HiSoft, CGS ComputerBild, System Solutions, Gasteiner Technologies, On Line, RC Simulations, Rombo and Silica Systems.

Several other big name Atari supporters are also expected, although they have yet to confirm their attendance.

The show takes place at London's Wembley Exhibition Centre on November 19 to 21. For advance tickets telephone 0222 512128.

Diary dates

11 to 14 November 1993

Future Entertainment Show
(0225 442244)

Venue: Olympia, London
A multi-format computer and console show.

13 November 1993

All Micro Show 7
Organiser: Sharward Service
(0473 272002)

Venue: Bingley Hall, Staffs
Last year's event saw 60 stands, some with ST products.

19 to 21 November 1993

International Computer Show
Organiser: Westminster
Exhibitions
(081-549 3444)

Venue: Wembley, London

Discounted software and hardware plus product releases.

5 December 1993

Atari Show Birmingham
Organiser: Titan Design
(021-414 1630)

Venue: National Motorcycle Museum, Birmingham
Demonstrations of the latest serious software and hardware for Atari computers.

12 December 1993

Atari Show North
Organiser: Compo Software
(0480 891819)

Venue: Haydock Park Racecourse
Major players in the professional Atari market gather at this northern venue.

OVERSEAS

15 to 19 November 1993

Comdex Fall
Venue: Las Vegas, Nevada
A business computing show, sometimes with Atari presence.

16 to 23 March 1994

CeBit
Venue: Hanover, Germany
(010 49 511 890)
Europe's largest information technology show. Often the launch pad for new Atari hardware.

● If your company is organising a show relevant to the ST/Falcon and it's not listed, please let us know so we can include the information in the diary.

System Solutions

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 1st Word Plus took half the time ... Calamus, Calligrapher and Wordflair 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

Hard Drives

"Extremely nice looking..." Professional Quality SCSI Hard Drives Systems, 40 - 2600 Megabytes from £299. "This is the fastest of the drives reviewed and is superbly engineered, not to mention great value for money." ST User, Issue 90, August 1993.



Special Offer:
105Mb Quantum SCSI Drive with ICD Link
£369 inc.VAT

Falcon SCSI Hard Drives

Ideal for hard-disk recording
1000Mb, 10ms, 5 yr warranty - £1199
330Mb plug-in-and-go - £569
For other capacities please phone.

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.

On/Off switch, Volume and Brightness at the front; Vertical Size, Horizontal Phase, Contrast and Focus at the back. The tilt and swivel base and a monitor cable with the correct connector are standard.

An amazing 40% extra workspace can be gained with OverScan ST. The SM14 is a totally plug-in-and-go unit.

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

without audio
SM14 £149.95

with audio
SM14s £169.95

40% Bigger display with OverScan ST.



High Density

elCo doubles Disk space to 1.44Mb!

- ★ Automatic floppy disk detection
- ★ Compatible with your floppy disks
- ★ Software is included. (ACC and CPX)
- ★ Fully supported by TOS 2.06
- ★ PC and Emulator compatible
- ★ A perfect replacement floppy drive!
- ★ Kit price still only £79.95 inc VAT

Kit price still only £79.95 inc VAT

World Record

68000 CPU running at 36MHz

Two new Accelerators are now available for the MegaST and STFM 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 without Blitter, Gembench v3.12 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. To celebrate the release of this exciting new product we will give away a free copy of NVDI with every T28 and T36 sold.

Hurry! Offer is valid only until 30/9/1993.
T28 Accelerator, 28MHz, 64kb Cache £199
T36 Accelerator, 36MHz, 64kb Cache £299

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, London, SE22 8RS

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

Dealer enquiries are welcome

The Falcon Column

Are you planning to purchase a Falcon? How much of our 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:

Karl: 081-693 3355 or El: 0753 832212

Now in Stock

Falcon030 Starter Packs:

1mb, 14" Mono Monitor & BlowUP £689

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 (880x608,

1024x768 53/10Hz)

BlowUP 030 - Hard 2 £69.95

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falconWING - 0mb £59.95

falconWING - 4mb POA

falconWING - 14mb POA

Ask for a trade-in deal on your old memory.

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.

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17" Multiscan .26dp POA

68882 FPU £69.95

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Falcon Speed - PC Emulator £229.00

We are now dealers for **Steinberg**

We will have Cubase Audio for the Falcon up and running in the Showroom as soon as it is available.

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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.

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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 reports Atari's plans
for the future of the company

Germany gears up for Jaguar

THE only remaining Atari magazine in Germany has just published an extensive four-page interview with Bob Gleadow who, in addition to being the head of Atari UK, is also the CEO at Atari Germany.

Here are a few interesting highlights. The total number of Falcons sold until summer in all of Europe is between 13,000 and 14,000 units, 40 per cent of which were sold in Germany alone.

There are several new Falcon specific games in production: Two in France (Ishar II and Transarctica) and one, Llama Zone, in the UK, where another three unnamed games are currently also being developed.

The other new hardware, the Jaguar, will be available in Germany – and presumably the rest of Europe – from January next year. The marketing reorganisation – known in the UK as the “key dealer program” – has been completed in Germany as well resulting in a smaller number of dealers, but these are more committed and get extra support from Atari.

This includes extensive training at Atari-organised seminars.

It was revealed that the centralised distribution from Rotterdam, Holland (as previously reported in EuroNews) was also partially due to a favourable offer from the Dutch government resulting in considerable savings to Atari.

Gleadow showed interest in the TT-clone developed by GE-Soft (see elsewhere in this report) regards possible TOS licensing.

He also said that Atari will be interested in granting a licence to anyone who develops a new 68060 TT or wishes to start production of the Mega ST independently.

Regarding Atari's presence at CeBit in Germany – the biggest computer show in the world – the negotiations are currently underway.

CeBit was apparently reorganised and Atari would have to share a hall with Commodore, Apple and “God knows who” in, what is to be known as the Multimedia Hall.



The consolidation of Atari Germany continues. The head of German support, Norman Kowalewski, has been transferred to Atari headquarters in Sunnyvale, USA. Once again this proves the importance to Atari of Europe in general, and Germany in particular.

As a result of this move all German support has been taken over by the International Support Centre under Wilfred Kilwinger at Atari Benelux.

In addition to Germany and Benelux the International Support Centre is also responsible for supporting Scandinavia, Austria, Switzerland and Eastern Europe.

In another positive move Atari have officially announced the imminent release of the developer CD. It will be available in the last couple of weeks to everyone at a price of \$150. Among others the CD contains all Atari Developer Kit software, MultiTOS, SpeedoGDOS, Atari Works and DSP tools.

The CD will be accompanied by a floppy disk with all necessary CD-ROM drivers (the software needed to read the CD). This is particularly attractive for Falcon owners because a CD-ROM drive connects directly to its SCSI-II port. Other STs require a hardware adaptor.

Last of the classics

MEGAPAIN by Tommy Software is a classic among combined vector/pixel drawing packages. The latest version, Megapaint II ST Convertible, is also the last for the ST.

It comes with a Windows CAD package called CAD/DRAW which can be used to further process vector graphics created on the Atari.

In that sense, Convertible has been conceived by the manufacturer as a transient version. However, with its new features, it is still a very attractive program for users who wish to remain faithful to the ST.

All graphic functions in v6 were rewritten to support new third-party graphic cards. All set-ups now support 600dpi resolution and the

program contains new printer drivers.

Megapaint II ST Convertible, CAD/DRAW for Windows and both manuals are all available in English for DM299 (£120). The orders should be placed directly with Tommy Software, Selchower Str. 32, 12049 Berlin, Germany.



Megapaint... one for the faithful

TT pretender

AS previously reported in Eurotalk (October), a German company called GE-Soft are developing a TT-compatible clone. The design is basically finished with production scheduled to commence in the next few weeks.

The new computer, named Eagle, is marketed as a “smart alternative to the TT”. If its specs are anything to go by the Eagle does indeed fly high: 50MHz 68030 with the board running at 50MHz as well; two VME bus slots; a 68040 slot; a PC case-sized motherboard with matching peripheral slots; DMA out; Mid; ROM ports and ST high, TT medium and TT high screen resolutions.

The manufacturer is hoping for both software and hardware support by independent developers in producing new operating systems, ISDN cards and even high-end graphic cards.

The Eagle will be housed in a stylish black box – similar in appearance to the NeXT case. GE-Soft are currently in negotiations with Atari regarding TOS licensing. Failing that, a TOS-compatible operating system called MAGIX developed in Germany will be used instead.

The price of the Eagle has not been set yet but is expected to be in the DM4,000 to DM5,000 range (£1,600 to £2,000). GE-Soft are at Postfach 1324, 53823 Troisdorf, Germany.

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It's ideal for anyone, but especially for those who would like a second stick ready as a spare for visiting friends. With easy access Fire buttons on both sides of its small case, this model is suitable for left and right-handed players and fits comfortably into the hand.



**ONLY
£2.99**

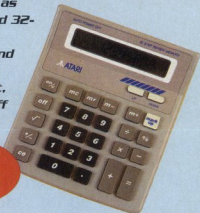
Atari Calculator

This large display desk calculator from Atari will solve all your mathematical problems in no time at all.

Whether you're a programmer, home worker or keeping track of your home accounts, it will make an ideal partner for your ST.

Its features include addition, subtraction, multiplication and division, as well as pi, per cent and 32-step auto recall.

There are memory and mark up facilities and just in case you forget, an automatic power off will save battery life.



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£4.99**

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- Joystick £2.99
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All include postage and packing and are available while stocks last

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Expiry date /

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Address.....

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Tick this box if you do not wish to receive promotional material from other companies

Atari Robotics

Control battery-operated robots such as Lego from your ST with this powerful and easy-to-use package. It contains an interface card and software, both designed for use by people without electronics experience.

The manual takes users from the basics through to building sophisticated models, with the help of clear diagrams and examples.



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NEW STFM/STE Power supplies with ONE YEAR WARRANTY.....£49.95

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- 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



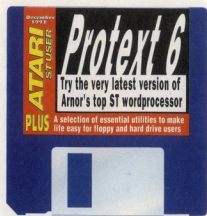
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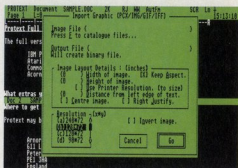
WHILE-U-WAIT!!!

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Two exclusive program demos await you on this month's double CoverDisk bonanza. So what are you waiting for? Slam in the disk and check them out

disks



Prototext now has the ability to import picture files in several formats

Prototext v6

Arnor's top notch wordprocessor just got even more powerful. Load this exclusive demo to see just what it can do

Programmed by: Arnor
Configuration: All STs with 1Mb - medium or high resolution
Filenames: PROTEXT.PRG - executable file, X_DATA.TOS - Self extracting archive

To get Prototext up and running, copy PROTEXT.PRG and X_DATA.TOS to a formatted blank disk. The X_DATA.TOS file is an archived file containing essential data files and has to be extracted before running Prototext.

Simply double click on the X_DATA.TOS file and extraction will commence. Upon completion, you may then delete X_DATA.TOS from the disk as it is no longer required. You can then run PROTEXT.PRG.

In this demo, you are limited to documents not exceeding 2k, and the dictionary and thesaurus have been omitted.

Those of you familiar with the program will no doubt be aware of the outstanding speed with which it processes text. Such speed has made it popular among many people.

This level of performance is achieved, in part, due to Prototext's choice of not using GEM to its full extent. If you are new to Prototext, don't expect to see the familiar GEM windows and menus, Prototext has its own menu system.

Also, don't expect a wysiwyg (what you see is what you get) display in which text styles

(underline, bold and so on) are displayed. Any text styles are placed in the text body as printer control codes.

Some people may wonder how Prototext can stand up to other wordprocessors offering full wysiwyg displays and the familiar GEM environment. Well, it does pretty well, thank you very much.

Its success across a large number of computers, such as Amigas, PC-compatibles, Amstrad PCWs and Acorn Archimedes, is testament to its acceptance by both Joe public and industry professionals.

Another excellent feature which makes Prototext very popular is its extensive range of printer drivers. There's nothing more frustrating than buying a wordprocessor only to find your printer's output is doing strange things because there isn't a dedicated driver for your particular printer model.

Prototext overcomes this by including hundreds of printer drivers which can easily be installed. This demo version however, has a limited selection of the most popular printers only, due to lack of space on the CoverDisk.

Version 6 of Prototext features some powerful additions. The most drastic is its ability to import picture files in either IMG, PCX, GIF and IFF file formats. These can be placed anywhere on a page and can also be scrolled up or down.

However, you cannot see the picture on-screen. Instead, a printer control code is

Prototext reader offer

Turn to page 20 for an unmissable offer!

placed at the specified position which informs the printer to output the picture at that point. Still, it does mean that company logos and artistic letterheads can now be incorporated into Protex documents.

There are many other features available, too many to mention here. Suffice to say that it is ready and waiting on the CoverDisk for you to explore. There is also an extremely good online and interactive Help facility, which you can take advantage of to get more detail on some of the program's features.

Protex 6 features

- Graphics import
- Interactive Help support
- Improved speed
- PostScript
- Many more printer drivers
- Font spacing
- Colour printer support
- And more...

Dogfight

Get airborne and enjoy this fully playable demo of MicroProse's latest flight and fight simulation with various aircraft to choose from

The files within the archived file X_DOG.TOS must all be extracted to the root directory (that is, not in a folder) of a floppy disk with a standard nine sector per track format. Hard drive installation is not possible.

It must be fair comment that if you are playing a good military flight simulator, chances are it is from those talented guys and gals at MicroProse. They just seem to be the most prolific when it comes to ST simulations.

Their latest flight and fight action comes in the form of Dogfight, a game which allows the most hardened pilots to try out their battle skills with other aviators.

A rather neat feature about this game is that there is a What If? scenario which allows you to pitch a Harrier jet against a German Fokker

Programmed by: MicroProse
Configuration: All STs - low resolution
File names: X_DOG.TOS -
Self extracting archive

triplane. Great fun I can tell you.

In this demo version, you only can access the What If? mode and there are three planes to choose from - Spitfire, Sea Harrier and the aforementioned and unfortunate Fokker triplane. Once you choose your plane, you can



In this demo you can select from three planes - Sea Harrier, Spitfire and Fokker triplane

Dogfight key guide

Flight control keys

Cursor keys/ joystick	..... Pitch/Roll plane
<	..... Rudder left
>	..... Rudder right
+	..... Increase engine power
-	..... Decrease engine power
Shift and +	..... Maximum power
Shift and -	..... Engines off
G	..... Raise/lower landing gear
B	..... Airbrake on/off
W	..... Wheelbrake on/off
J	..... Raise/lower flaps
1	..... Set Harrier jet nozzles to 90 degrees
2	..... Set Harrier jet nozzles to 45 degrees
3	..... Set Harrier jet nozzles to vertical
Alt and S	..... Set control sensitivity to normal/fine
Alt and B	..... Auto intercept on/off
Ctrl and E	..... Eject

Weapons controls

Return	..... Select weapon
Space or Joystick button	..... Fire weapon
T	..... Select next target
Y	..... Select nearest enemy aircraft
R	..... Change radar range
F	..... Launch flare

View controls

F1	..... Cockpit view
F2	..... Console view
S	..... Move console in F2 view
F3	..... Tactical view (to current target)
F4	..... Inverse tactical view (from current target)
F10	..... External view of current target
Shift and T	..... Set current target to your aircraft
T	..... Select next target
Y	..... Select nearest enemy aircraft

Camera controls for F3, F4 and F10 views

Use numeric keypad for following controls	
+	..... Zoom in
-	..... Zoom out
9	..... Pan up
3	..... Pan down
0	..... Pan left
[point]	..... Pan right

General controls

P	..... Pause
Shift and Z	..... Set time advance (X2, X4 or X8)
Shift and X	..... Cancel time advance
Alt and C	..... Set shape complexity
Alt and V	..... Sound on/off



I didn't even have time to bail out. Oh the shame of it. I'll never live it down

select from five other planes to battle against, with the option of starting from seven different positions. You may then select either the Middle East or Vietnam for the locale to do your dogfighting over.

Before leaving you to it, I'll give you some playing tips. If you are low on fuel or ammo, you can land at a friendly airbase to refuel and re-arm. Just make sure it's an allied base!

Novice pilots may use the Auto Intercept feature (Alt and B) to quickly engage any nearby enemy planes.

Using the Inverse Tactical View (F4) can give you a clear view of the enemy's actions. Use this to plan your strategic response.

Don't attack into the sun - you will be dazzled, and never, never fly into the ground!

The full game features many more planes, missions and various locations to fly over. The hallowed and illustrious pages of Gamer, written by the ever present Biffa and Simon, contain a complete review of Dogfight, so turn to page 75 to see what the guys think of it.

Experiencing a problem with the October CoverDisk?

Due to a slight error in mass production of the October CoverDisk at our duplicators TIB, a small batch were damaged.

Readers having difficulties with a "Data in drive may be damaged" error message while trying to copy files should send their original disk to: TIB, 11 Edwards Street, Bradford BD4 7BH, from where they will receive a replacement disk free of charge.

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:

TIB, 11 Edwards St, Bradford BD4 7BH

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

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.



World Conquest

A strategic game of war in which you can fight against either the computer or a friend

In this challenging game of strategy and warfare, you must use all your wits to out-think your opponent.

The game is played in turns. During each turn you must produce and move your military units in order to conquer other cities. This allows you access to further resources for building more military units. You can either play against an (admittedly stupid) computer opponent, or, using a modem or a null modem

cable against a friend. The latter method is infinitely more challenging as there is nothing more devious and unpredictable than another human being...

The game is controlled by mouse and utilises the GEM operating system to the full. This makes it very easy to use and as long as you are familiar with menus and windows, you will soon get the hang of controlling things.

Midi Maze II

A brilliant 3D shoot-'em-up maze game in which up to 16 players can connect their STs via Midi leads and battle it out

Due to popular demand from people who missed this excellent game on a previous issue, here it is again.

Midi Maze II is the best multi-computer game available on the ST at the moment. It has you controlling a smiley-type character through different mazes in pursuit of enemy smileys, which you should immediately shoot upon sight.

The most exciting feature of Midi Maze, though, is that you can have up to 15 other players' STs connected via their Midi ports, with all of you chasing each other in an attempt to become the top gun.

It is also possible to form colour-coded teams and seek out opposing teams. This allows for some pretty exciting strategic gameplay. Do remember that each player will need to bring a set of Midi leads (available at most

Useful utilities

Four programs to make life a little easier for those of you with floppy and hard disks

In this folder you will find four useful disk utilities which will make your life easier, especially for those of you with a one drive system. Goodies include Fcopy 3, probably the



Superboot can be configured to your personal tastes with ease using the Superboot Construction Set program

Configuration: All STs - colour or mono resolutions
Filenames: DISK - Folder containing utilities

best copier for the ST which can also double as a disk formatter including ten sector formats, Autosort, ideal for managing the execution order of programs in the AUTO folder, RDE RAM disk, which makes file copying operations much faster and Superboot 8.1, a boot manager with masses of features for the hard drive owner.

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 on-screen 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 size.
4. Once complete, delete 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 reposition it by moving the mouse to the required position (highlighting 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.

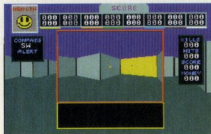
Formatting a disk

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.

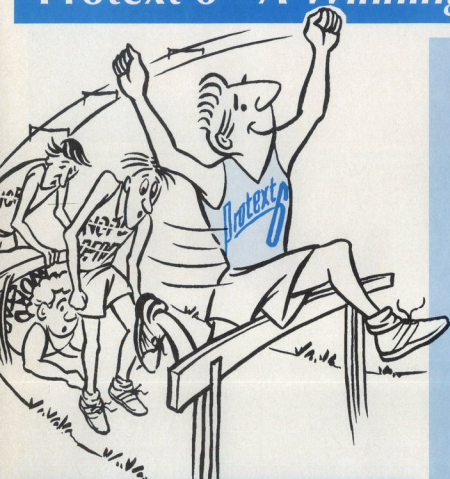
Copying files to another disk

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.

Some mazes have yellow doors which those players who have bought keys can escape from those players who haven't



Protex 6 - A Winning Performance



Some highlights of Protex 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 Protex document. Supports IMG, PCX, GIF and IFF. You can select any resolution and scale the image. Dot matrix, inkjet and laser printers.

Printers

Protex's unrivalled understanding of printers gives you the highest quality printing at the highest possible speed. Using a printer's built in fonts enables Protex to print pages in seconds rather than the minutes taken by some programs.

Protex is still the fastest

- Fastest at editing.
- Fastest at spell checking.
- Fastest at printing.

Protex still has the best printer support

- Hundreds of printers supported
- PostScript driver included **NEW**
 - Scalable font support **NEW**
 - Colour printing **NEW**
 - Automatic line spacing **NEW**

Protex 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

Protex is now easier than ever to use

- Menus and dialogue boxes
 - Interactive Help **NEW**
 - Macro editor **NEW**
 - Dictionary editor **NEW**

The list price of Protex 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.

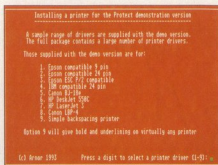


ARNOR

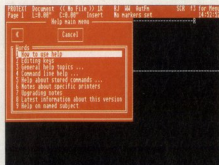
The first thing you will see when you run the program is a welcome screen. At this point, you can either press the Esc Key to abort the program or any other key to begin.

Protex will first ask for information on what type of printer you may have attached to your ST.

There is a choice of nine popular printer drivers in this version; however, the full version has hundreds to choose from. To select an appropriate driver for your printer, press the corresponding number key. The next screen will then inform you of the limitations which apply to the demo. It



First, you need to tell Protex what kind of printer you have attached to your ST



With its comprehensive on line help facility, learning the ins and outs of Protex will be much easier

Wise words

should also be noted at this point that, besides a 2k document limit, the dictionary and thesaurus are unavailable.

To get Protex up and running, press 1. You should now be faced with the main menu screen. Protex is extremely versatile when it comes to accessing its features.

The user can use the menus by pressing F3, or by clicking on the right mouse button to toggle the menu bar on and off. For those who are more experienced, there are comprehensive keyboard commands for all functions.

The mouse and menu system is ideal for beginners in that they will be immediately familiar with it, due to its similarity to the ST's menu system.

Using the keyboard commands is more efficient in that the user need not remove their hands from the keyboard in order to manipulate the mouse. However, there are many keyboard commands to remember which will require practice in order to attain familiarity.

The first important feature to know about is the online help facility. To activate this, either press the Help key, or activate Protex's menu by clicking the right mouse button once, and then moving the mouse pointer to the File menu item and selecting Help from the list.

The Help system is very versatile and easy to use. Simply click on the required subject, or press the appropriate number key. For quick selection of a specific topic, select Help on Named Subject from the main menu of the Help facility.

This will allow you to type in a specific topic, after which Protex will attempt to find any information relating to it. For example, if you want information on the menu system, enter the word "menu" at the subject prompt and press Return. Protex will then try and find any information on that subject.

At the top of the screen, you will see two status lines of text. If you can see the menu items (File, Swap, Edit and so on), you have activated the menu bar. To clear the menu bar, press F3 or click the right mouse button once.

The status bar contains information relating to the document being edited and also

shows certain current settings for Protex's various features. Below the status lines, you will also see the ruler. This shows information relating to tab settings and left and right margin positions.

As with most wordprocessors, you can move the text cursor around the document using the cursor keys, and others such as Backspace and Delete function as expected.

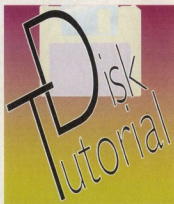
There are two modes of text entry: Insert and Overwrite. In Insert mode, typing text between words will move the text to the right of the cursor to accommodate the new word.

In Overwrite mode, any text to the right of the cursor will be overwritten. Choosing between the two modes is achieved using the Insert key located just under the Help key.

At this point, we will load in a sample document to experiment with. Bring up the menu bar by pressing F3 or by clicking the right mouse button once. Move the mouse pointer up to the File menu item and select the Load function by clicking on it with the left mouse button.

A box should appear with a list of file names and file sizes - this is Protex's file selector. At the top of the list, you will see the word Parent. Clicking on this allows you to get out of the current folder to the previous one. While the file selector is displayed,

Besides the quick keyboard short-cuts of all of Protex's functions, there is also a menu system available



Have you extracted the Protex demo? Then check out this quick guide to some of the features it contains

bring up the menu bar using the F3 key or right mouse button. You will see that the menu bar has changed over the one used for editing.

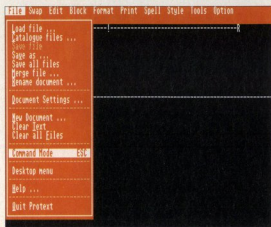
This file selector menu provides some useful file manipulation functions such as erase, rename and copy, as well as functions for changing drives, creating directories and sorting files.

You can also press the Tab key to switch between various file display modes. To load the sample file, simply double click on the SAMPLE.DOC file.

Some of the most useful features in a wordprocessor are the block editing functions. They are an example of the features which make the computer infinitely more powerful than the bog standard typewriter.

With these block functions, you can mark a section of text and then manipulate it at will. You can copy it from one place to another, even from one currently loaded document to another. To get a better idea of this, move the mouse pointer to the beginning of the list of computers (IBM PC XT).

If you press the left mouse button, you should notice the cursor jumps to the current



Perfect Protext

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price
available

Upgrade your Protext CoverDisk to the latest package for only £95!

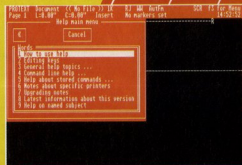
This month's *Atari ST User* CoverDisk lets you test the very latest version of Protext for free – and once you've seen how good it is you can pick it up for an incredible £95.

Yes, £95 for this outstanding product which should retail at over £150!

Arnor's well-known wordprocessor has just got better! The latest version – six – can import graphics among many other new features. When it comes to power Protext leaves its competitors standing. Also this almost infinitely flexible program supports just about every printer that can be hooked up to a computer.

Significant improvements since version 5.5 include

- Ascii save – three options built-in
- Calculate expression dialogue
- Colour printer support
- Copy line at cursor
- Document settings dialogue
- Exclusion dictionary
- Faster editing of larger files
- Font sensitive underlining
- Font spacing
- Glossary
- Graphics import
- Landscape printing support
- Macro editor
- Page break key
- Variable line spacing
- Proper single and double quotes



PRODATA ORDER FORM

Fill in this form and send it to Protext Offer, Arnor Ltd, 611 Lincoln Road, Peterborough, PE1 3HA, or telephone 0733 68909.

**ATARI
ST USER**

Please send me

Protext version 6 for £95 (incl p&p)

I wish to pay by...

- Cheque/postal order payable to Arnor Ltd
 Credit card

Expiry date ___/___

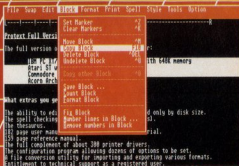
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Tick this box if you do not wish to receive promotional material from other companies



FOOTBALL MASTERS 4

Quite simply the best Football management game for your computer. We have served thousands of satisfied customers during our 4 years of trading. Over 10,000 man hours (during 5 years) has been dedicated to the production of this games constant improvement and it must be one of the most realistic and accurate representations of a professional football managers job. Main features below:

Managers: 1 to 4 Human players, Ratings, Performance statistics, sack and offers. 3 Difficulty levels, Manager of the month and season awarded. Pools. Pick any team in any division to begin with.

League & Cup: Premier 22 teams, Division 1, 2 & 3 have 24 teams, Play-offs, Tables. 7 Cup competitions with precise rules (2 legs, extra time, away goal rule, seeded draws, European Cup tables, 5 subs, non-domey player restrictions etc.). Finalist route to glory.

Games: Yearly fixture/previous list. Week fixtures/results. Results from previous meeting with opponent (goes back up to 6 seasons).

Players: Real life statistics reflecting the start of 93/94 season with real positions, height, age. Live transfer market. Contract & wage negotiations. Preferred foot (left/right/both). Loans, Injuries, Training, Special talents, Trainers, Goalkeepers (separate skill categories), Defenders, Midfielders, Attackers & Utility, Retirements, Foreign transfers, Unhappy players. Top 10 Hot shots.

Team: Training, Tactics (15 different styles), Aggression, Formation allows specific player field settings (Left winger, Sweeper etc.).

Club: Sponsorship, Ground improvements, View opponent, Finances

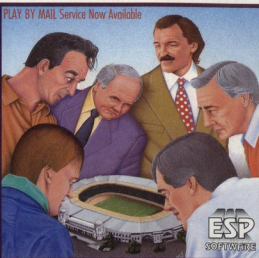
The Match: Real time scoreboard reporting goals & injuries yellow/red cards, Sound effects, Interventions permitted at any time to change tactics, formations and make subs. Physical graphical penalty participation (optional). Over 80 different referees.

Other: Fast load/save. Printer access. 20 Options to set various game preferences, Instruction book, Easy to play, Technical support.

Plus: Over 100 other meticulous refinements impossible to list here.

Editor: Allows you to amend various items in saved games. £12 Extra

ⓧ Scottish: To ordered version details available upon request.



CRICKET MASTERS

This is a purely managerial cricket manager game that concentrates on strategy and includes plenty of relevant statistics. The game has been designed and developed by a true fan of the sport. It replicates everything that a real manager has to contend with and it's a totally unique production that anyone with an interest in Cricket should experience. A summary of the main features is shown below:

- AXA EQUITY & LAW 18 league county teams, 50 overs per game.
- 4 Cup competitions including Benson & Hedges, Nat West.
- 20 different match umpires with accurate names and strictness.
- Accurate player details Surname, height and age.
- 27 different player attributes, most have a direct impact on the effectiveness of each individuals actions during a simulated match.
- Easy player selection. All game text is clearly presented.
- Batting and bowling averages. Top batting and bowling tables.
- 3 Different training intensities to boost batting, bowling or fielding.

- Weather, pitch and light often make an impact on ground condition.
- Full match highlights let you watch the action ball by ball with full graphics and/or realistic sampled sound effects for significant events (Fours, Umpire decisions, etc.). Interventions are permitted at any time to change batting tactics or fielding placings.
- 3 Batting/Bowling classifications (Normal, Attack and Defend).
- Choice of 15 different field placings, Manager rating.
- Full scorecard results with best batting and bowling figures.
- Other staff (Physio, Groundkeeper, Scout) can be hired and fired.
- Annual league fixtures listing. Current week and last league results.
- View current cup competition draws and historic records.
- Real time transfer market. Player contract and wage negotiations.
- Sponsors, Printer access, Finances, Poor ground fines.
- 15 Options to alter game preferences, Load/Save game.
- Instruction book with plenty of examples.
- Plus many more fine details that we are unable to list here.

ESSEX VS SUSSEX
MATCH: TEAMS: ESSEX

INNINGS: 1 2 3
OVERS: 34
WICKETS: 0

FOUR

A. HILLIS TO
G. GIBSON

FIELD SETTINGS FIELD: 43%

NORMAL
2 3 4 5

ATTACK
1 2 3 4 5

DEFEND
1 2 3 4 5

STABLE MASTERS V2

RACECOURSE

BATH DRAM: GOOD TO SOFT
Low (L) up to 8f

ST. LOREDOVON

PL: 5180 (25 APR)
RACE: 1

HILBROKES NO BET

BOOKMAKERS

VIEW NOT VIEW

RACE

This game has been designed to be as close to real racing as possible. Five years of development by a clever racing expert has led to the second revision of this Flat Horse Racing Simulation. Up to 4 players can participate as Owner Trainers with the primary objective of becoming the top rated trainer, in respect of prize money won, at the end of each racing season (March to November). There are up to 35 other intelligently controlled computer trainers to compete against and compare your personal performance.

To achieve this aim you must discover a potential champion and train them so that they become capable of competing well and winning any of the 47 big prize money races (Handicap and Group). eg. The Derby

To give you an idea of the tools provided in this game to assist you reaching your objective we have listed the main features below:

- 250 horses each with over 60 independent variables that affect performance.
- 26 different race courses (2 all weather), real life characteristics mirroring the diversity and uniqueness of racecourses in the UK, descriptions of each are accessible in the game.
- 20 Jockeys who vary in ability and booking fees. Give orders and Receive feedback.
- Formbook and Win Summary Cards cover the previous 200 races.
- Animated race display or just the result. View Declaration List of other horse entries for races.
- Very informative report by Head stable lad. Tipsters. Bookmakers.
- Racecards similar to racing press. Real life. Handicaps & Race Types.
- Viruses, Injuries & Vets. Load/Save game. Many other items included.

Version 1 is available upon request (Simple training & betting) © £15.

ORACLE Horse Tipster

Open National Tipping Competition 1991 - Organised by Racecall, regulated by the Tote, this program achieved joint second. This led to a serious approach from a well known national book maker. Rejected in favour of supporting the public.

Winnings Statistics: 104 wins out of 166, as from 2/6/93 to 1/9/93.

Formula: This program tells you exactly what to do. You can NOT amend our system unlike so many other similar programs. How confident can you be in something that invites amendments!

Research & Development: Three years full time race analysis and experimentation to refine and test the prediction system.

Inside Knowledge: Plenty of unique hints from contacts in the know.

User Friendly: No racing knowledge required, easy to use, tutorial book.

Restricted Sales: As soon as our programs predictions have a prolific impact on the betting odds we will stop accepting new buyers.

Monthly Updates: Highly recommended option. If any update fails to break even we'll send the next one free of charge. From £25.

Price Increase: Highly likely. Buy now before success forces increase.

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All the programs detailed in this advert are only available by direct mail

DESCRIPTION	S U	PRICE	TOTAL
Professional Football Masters V4		24.95	
P.F.M. Editor V4		12.00	
Stable Masters V2		24.95	
Oracle Horse Tipster (RRP £99.95)		75.00	
Cricket Masters		24.95	
Professional Football Masters V3		19.95	
Stable Masters V1		15.00	

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ADDRESS: _____ POSTCODE: _____

Computer graphics in the film, TV and music industries are commonplace nowadays. This technology is most evident in programmes such as ITV's weekend music hour *The Chart Show*, which features a selection of music videos.

Extensive use is made of computer imagery on *The Chart Show's* opening sequence, and also during the showing of music videos, where a computer-generated image of a menu system is displayed, with information on the actual music track and artist.

With such programmes appealing mainly to the younger generation, it is not surprising that – due to high computer literacy and interest among youngsters – programmes featuring such technology are very popular.

Computer images have also been a major feature in some of the most successful films ever made. Remember *Terminator 2* with Arnold Schwarzenegger?

There is a scene where Arnie walks into a bar, with the camera view looking through his eyes as he scans the people inside trying to find someone of similar size and build in order to swipe their clothes.

Computer graphics, superimposed over the view, created the illusion that what we were really looking at was the Terminator's computerised eyesight, complete with animated graphics.

So just how is this video technology achieved on a humble ST or Falcon, you may ask? Well, it's not just a case of plugging your ST's video output into the video recorder.

Although it's possible to record the video output of your ST onto videotape to create title screens, this method will not allow you to mix both ST graphics and video footage together.

To achieve video mixing, a special piece of hardware – known as a genlock – connects between your ST and the video source.

The device consists of some nifty electronics which take the video signal coming from your ST's monitor port and mix it with the signal coming from the video source, such as a camera or VCR.

Digital

images



Want to add computer graphics or text to your home videos? Darren Evans previews Titan Designs' Graffiti genlock which allows you to do just that

These mixed images can then be recorded onto videotape.

Strictly speaking, there is no such thing as a genlock. Genlocking is actually the name given to a process whereby two pieces of video equipment are made compatible with each other, but with regards to genlocking using computers and video sources, the term

refers to the hardware which mixes the computers video signal to the VCR or camera signal, to provide a stable display.

Such complex hardware is required in order to get both the ST's video signal and the video source signal exactly synchronised to each other. Without this synchronisation, the images would be extremely unstable.

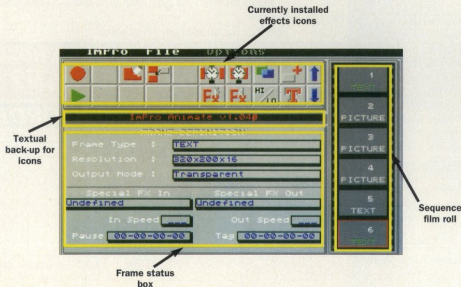
With all this complex video manipulation available through special genlocking hardware, you would be forgiven for thinking it would be a very expensive piece of kit.

Thankfully, Titan Designs have come up with a low-cost entry level genlock device, along with some pretty powerful software for creating graphics effects thrown in.

The Graffiti video genlock is the hardware part of the package with the graphics manipulation and imagery effects being provided by the ImPro Animate graphics software.

Although the Graffiti hardware is complex and powerful, it essentially just sits there keeping your ST in synchronisation with the video source. All the exciting work is done through the ImPro software which comes supplied with it.

ImPro has been designed in such a way that it is very extensible. This essentially means that its features and range



of video effects consist of program modules which can be installed at any time.

The advantages of this are that, should extra features become available, there will be no need to send off for a complete upgrade to the ImPro program.

Instead, any new features will be written as modules, allowing the user who may require the features offered by modules to simply buy them from Titan Designs and install them into ImPro.

This modularity even extends to the ImPro manual included in the package. Ring-bound, it means that the instructions which come with new modules can simply be appended into it.

The number of additional video effects which these extra modules can provide is staggering. Theoretically you can have 2,654,208 effects resident at once. Of course their are practical limits to this theory, in that each effect will consume some memory in your ST, and will also take up disk space.

AUDIO MODULE

Future modules under consideration look extremely interesting. An audio module will allow the incorporation of sampled sounds, which – for those who have a Falcon – could also mean some very sophisticated processing features using the DSP chip.

A morphing feature will bring effects as seen in *Terminator 2* or, less glamorously, the Mel Smith and Griff Rhys Jones advert extolling the BBC's service, where Mel Smith "dissolves" into different celebrities. The possibility of turning your ST into a fully-fledged desktop video system is very real!

Upon loading ImPro, you are presented with a colourful array of icons representing the various modules available, along with a film roll-type display to the far right. As well as the standard menu bar at the top of the

Setting it all up

Those of you with a Falcon or STE will have no problem setting up the hardware. All that is required is to connect the ST's 13-pin monitor output to the 9-pin Computer In port on the back of the Graffiti hardware.

Next, you connect the Video Out part of the video source (VCR or video camera) to the Video In socket on the Graffiti hardware (which by the way is a standard phono-type socket). Lastly, you may connect a monitor or VCR to the 13-pin monitor/VCR socket on the Graffiti hardware.

Owners of STM or STFM machines will require an adaptor board, to be fitted inside the machine case, in order to use Graffiti. This is because these machines do not contain the hardware to accept an external synchronisation signal. Titan Designs offer a fitting service for those who require the adaptor.

When recording the images onto video, the Graffiti genlock outputs a signal from its 13-pin socket, hence your video will need a Video In socket. Most videos should have such a facility but, if you intend to buy a video for use with Graffiti, check to make sure.

The most common use to which Graffiti will probably be put by the average user will be in creating titles for home videos. This will require that the user has two video sources – one for playing the source video image, and the other for recording the mixed images.

A number of video-specific leads will need to be bought. When buying leads to connect videos together as well as video cameras, you should ask for leads with an impedance of 75 ohms. Such a rating is essential for good quality images.

screen, there is a bank of icons just below. These represent the currently installed modules which provide the graphic effects.

Below the icon bank is a black text line. This acts as a textual backup to the icons which are displayed. When the mouse is moved over various icons, the text display shows a textual description of what the icon does.

Below the text line is the frame definition box. As a different frame in the film roll is selected, it is outlined in red. The frame definition box displays various information on that particular frame, such as whether it is text or graphics, and any information regarding special effects defined for that frame.

The film roll is where image sequences are specified. Each frame can be either a text frame or graphic frame. Within each window, there is a frame number and a text description of the frame type (empty, text or graphic).

The text description for each frame is also colour coded.

If the words are white, that particular frame is empty (although its type is defined). For example, specifying a frame as text will cause the word TEXT to appear in white within the frame display.

This means that, although the frame type is defined as a text frame, no text has been entered and no effects have been specified. Once text has been entered the words will change to green.

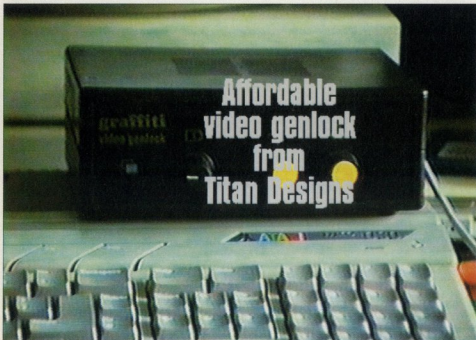
Creating text will probably ImPro's main application. Many enthusiasts will use it to create text for video titling. ImPro's built-in text editor allows you to enter text as well as specify its colour and size. Fonts supported will include the Calamus range.

The steps for creating a sequence are very simple. Essentially, you first plan the sequence, deciding on the text and pictures that are to appear. Also, you write down just how you want the pictures to appear. Will they be instantly displayed on-screen? Or will they appear using some of the many special effects which ImPro offers?

Next, you create the required number of frame types within ImPro using the Append frame icon. Having created the graphics for the picture frames within your sequence using a good art package, you can load these images into the respective frames. For the text frames, you enter the text using ImPro's built-in text editor.

ImPro supports various picture file formats, including Degas, Neochrome, IFF and others. Support is also going to be available for the Cyber series of 3D programs, meaning 3D animations can be incorporated onto your videos.

Once the frames have been filled with their respective data, the next step is to decide how the image or text is to appear. For each frame, you must specify the In effects and the Out effects. The In effects describe the way the image for the frame will appear on-screen. Out effects determine the way the frame image will disappear, or fade out.



Video titling is the most common use to which Graffiti will be put

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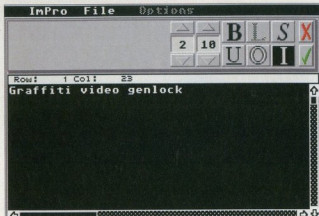
ImPro will offer an extensive array of special effects for image display. Effects such as fade, diagonal scan and many other methods will be available in the final version.

Each effect will also have many parameters which can be edited, thereby providing even more variance to the visuals on offer.

Timing is important when creating sequences. Ensuring the graphic images appear at the right time during a video sequence is sometimes essential.

To this end, ImPro allows you to specify a frame delay and a tag delay. A frame delay is the pause between the In effect and the Out effect for each frame. For example, it determines the amount of time a picture is displayed until it is removed. The tag delay determines the time delay between the different frames which comprise the entire sequence. A

Creating text for titling is extremely easy with the built-in text editor



key feature of any genlock is the colours chosen for the computer graphic overlays. Graffiti has a front-mounted switch allowing the user to select Overlay or Transparent mode.

This allows certain colours to obscure the video image, while leaving others transparent, which makes some interesting effects possible.

For example, you could have the entire screen filled with a colour which the video image does not show through. Then, you can select an effect which consists of a box, that expands to the size of the screen. If the colour of the box is a transparent colour, then the video image will be seen through it as it expands, creating the illusion that the video image is expanding onto the screen.

ImPro Animate will also take full advantage of the Falcon's extra features. It will work in the extended colour

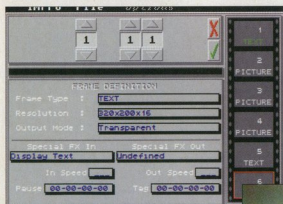
modes, such as TrueColour and 256 colours, making for some pretty awesome graphics.

If you want a low-cost genlock package to put some life into your home videos, then Graffiti video genlock, along with the powerful ImPro animate software, is the ideal choice.

Product: Graffiti video genlock

Price: £179.95

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Here, you can specify how many times an effect will repeat, as well as set the tag delay between different frames and the pause delay between frame effects

Graffiti update

Last minute news from Titan Designs is that the panel face colours have been changed to black with metallic gold lettering, as opposed to the predominantly yellow of that shown in this preview.

Also, an additional phono video output port will be available on the finished Graffiti hardware. The prototype shown here only has the 13-pin monitor/VCR output which gives an RGB signal.

The final product, will have an extra composite video port.



The final product will have an extra composite video port to enable it to be connected to most video recorders

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...No COMPROMISE

A famous painter is an obvious choice of name for a paint program – remember the classics Degas and Degas Elite? – so it comes as no surprise to find a new package named Chagall. A little far-fetched in this case, perhaps, since it is highly unlikely that Marc Chagall ever used a scanner, but certainly inspiring.

Chagall, another German import by DTP specialists CGS ComputerBild, does have some painting tools but its real purpose is to touch up and edit images scanned into the computer.

Once ridiculously expensive, scanners are now standard equipment even for modest desktop publishing setups and basically fall into three categories – mono, greyscale and colour. Mono scanners are the most limited since they only handle black-and-white line art well – greyscale and colour images are converted into black-and-white dot patterns by a process called "dithering".

Enlarging or reducing them will probably cause irritating patterns to emerge, and editing them is a painful process as you have to work pixel-by-pixel.

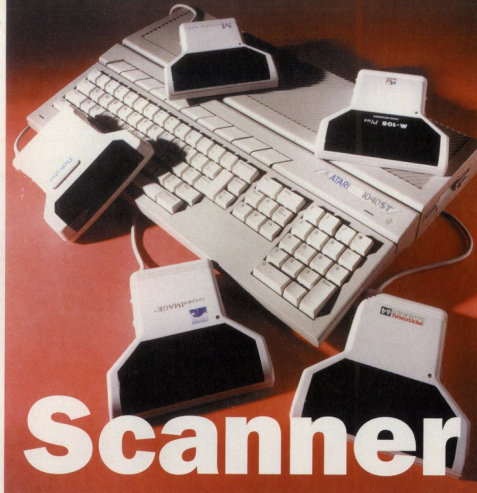
DATA OVERKILL

Greyscale and colour scanners are far superior as the pixels are not simply black or white but either one of 256 shades of grey or one of 16.7 million colours! Since this is really data overkill for most printers, there is plenty of room for scaling and editing without any noticeable loss in image quality.

Although they are deceptively simple to use – rather like photocopiers, in fact – it takes some skill and experience to get the most out of scanners. If the original image was poor to start with, it will be even poorer after scanning, for example.

Perhaps the picture is too dark or has weak contrasts. Or maybe the picture would look better with that ugly background removed. Perhaps a photomontage is what you really want rather than a straightforward reproduction of the scan. In all these cases, you need a program like Chagall.

Ideally, you should be able to control your scanner from within Chagall so that you do not have to save the image file to disk, swap programs and then reload the file before editing it. Chagall allows this provided you have a GDPS driver for your scanner – I don't so I



Scanner appeal

A picture says more than a thousand words, so it is worth expending some effort on getting it right. Günter Minnerup looks at Chagall, a new package for scanner owners

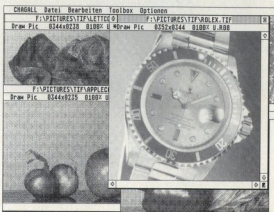
could not test this but CGS ComputerBild may well be able to supply you with one.

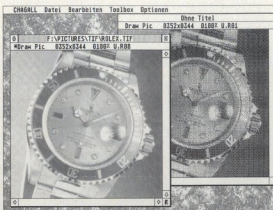
If you have MultiTOS (and plenty of free RAM) GDPS drivers are not really needed as you can have Chagall and your scanner software running in parallel. If you have neither, don't worry too

much because of the strong points of Chagall is its extreme flexibility in the image types and file formats it will handle: TIFF, GIF and IMG between them cover just about everything you are likely to get from whatever scanner you use, in either mono, greyscale or colour. As a special bonus, Chagall can



Not only can Chagall have up to 40 (with WINX installed) windows open, but these windows can also contain images of different kinds, such as True Colour and greyscale, at the same time. The display mode depends upon the currently open window; here, a colour picture is the top window so the greyscale Rolex looks a bit weird. When a greyscale image is "on top", the colour ones are displayed in a mono screen raster





It is possible to load one-bit mono scans into Chagall and have a go at editing them, but this comparison with a true greyscale scan at the same size illustrates the near-pointlessness of doing so; you simply can't see what you are doing.

Since the pixels are all either black or white, the program has nothing to work on either. But you may still wish to use mono pictures for montage purposes or to use simple line art, and Chagall offers special filters to clean up, invert, outline and otherwise manipulate one-bit graphics

convert between all these formats, even turn a dithered mono into a greyscale – the drawback, of course, is that the image is very much reduced in size as the conversion works by assigning a grey value to a dot matrix (16 x 16 for best results).

As the passing reference to MultiTOS above will have indicated, Chagall is very much a GEM program, all menus, icons and windows. Not only the actual images, but also the toolboxes and dialogues appear in their own windows, so you may expect to run into early trouble given GEM's system limit of seven windows at a time.

To get around this, a rather useful shareware hack called WINX is bundled with Chagall: Drop this into your AUTO folder, and the limit is miraculously increased to 40, and there are other benefits too like accelerated screen redraws.

There is no doubt that the strict adherence to GEM has advantages in terms of compatibility. Chagall runs in every conceivable resolution on every conceivable computer in the Atari ST/Falcon series, and works with every graphics card with a VDI driver.

But you also pay a certain price for this in terms of speed as screen redraws can be a bit sluggish, especially with the slowly disappearing dialogue boxes.

At this point I have to introduce a comparison with Retouche Professional, the (Atari) industry standard for scanned image editing, a tried and trusted tool which I personally think beats all the Mac and PC competitors for power, speed and ease-of-use.

The comparison is inevitable since Retouche and Chagall are both marketed by CGS ComputerBild and it is not, at first sight, very clear why they should want to compete with themselves.

Retouche Professional is a bit deviant from the GEM point of view – it does not run in a window, cannot display more than one image on-screen simultaneously, and does not like MultiTOS.

But it is a hell of a lot faster and altogether more powerful so that for high-end, professional DTP and illustration work its supremacy is not really threat-

ened by Chagall, not even Chagall 4C (see below).

But Retouche, because of its dedicated user interface, takes a lot more time to master, and does not integrate with other software as well.

Chagall is therefore an attractive option if you do not need to edit scanned images often enough to justify the effort required to get the most out of Retouche Professional. It is the easier program to learn as it closely resembles other GEM software and can actually do most things that Retouche can do, albeit not quite as well, accurately and fast.

There are even some points where it is superior to Retouche; the ability to have more than one image in view simultaneously, for example, which makes it much easier to check the effect of an editing operation.

Or the fact that Chagall masks are halftones rather than Retouche's monos so that effects can be finely graduated rather than just excluded from masked areas.

Chagall's main shortcoming, when compared to Retouche and other than speed, lies in the areas of output and fine control. Chagall is principally aimed at the home user with one of a range of standard laser, inkjet and dot

matrix printers. Various output resolutions and raster screens are supported, but nothing like the quality and versatility of the hand-optimised output screens offered by Retouche, and no imagesetter or PostScript support.

The tools and filters cannot be controlled as subtly as by Retouche, and many of Retouche's advanced features – such as vector projections and the histogram functions – are absent altogether.

The competition between the two products from the same distributors is therefore only an apparent one. According to Ray Cross of CGS, Retouche Professional remains their flagship product for the professional market, and is in fact only sold now in a bundle with Didot Professional, their top-end vector illustration and page layout package that shares many file formats with Retouche.

MASS MARKET

Chagall is sold in two versions, of which Chagall Light, with its very reasonable price of £149, is expected to be the mass market product, while Chagall 4C – which, as the name suggests, supports four-colour separation output – will cost a rather hefty £499.

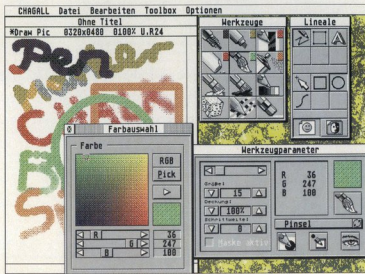
Since Chagall Light can do virtually everything that the more expensive version can do, except the colour separations and a few other, minor differences in functionality, it is clearly the version CGS intend to push hard.

Most ST or Falcon owners will have little use for colour separation anyway, since DTP output tends to be on mono lasers which, in turn, are much too inaccurate to supply camera-ready copy for professional process colour work.

Using colour printers and colour photocopiers, low-cost colour output is now beginning to become feasible for short print runs, but for anything above a few dozen or, at most, a few hundred copies the standard procedure is still to produce mono laser artwork and pass this on to a commercial printer for plate making and mass production.

Proper work with colour also requires

“Chagall Light can do virtually everything that the more expensive version can...”



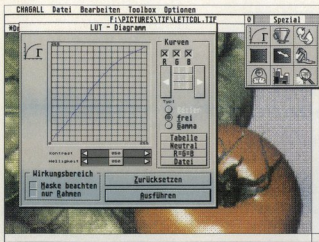
The painting tools are designed to imitate traditional illustrators' tools, and their precise effect will depend on the background as well as the intensity and other settings selected.

Using the Stamp function in combination with the mask, it is possible to "sample" a picture block and define it as the tool's shape. One of the most useful is the restorer, which works as a "magic pen" Undo function

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Beethoven's 1942										



The gamma curve is a powerful tool to modify the brightness, contrast and colour values of either the entire picture or a defined block within it. Another important application for this is the calibration of output devices and once you have found the best settings for your screen and printer you can save them to disk for repeated use. Unfortunately Chagall offers no histogram analysis and therefore no means of altering the distribution of grey/colour values in the image

a lot of additional hardware: A 24-bit graphics card and appropriate monitor so you can see what you are doing, and a large hard disk – preferably a Syquest drive – with its removable cartridges for sending files to an output bureau.

Again, few home or small business owners are likely to own these, so greyscale work is the practical limit of most users' ambitions.

Even without colour, the editing of greyscale scans is not really feasible on a mono monitor in ST high resolution because the dithered screen representation does not allow enough visual control over the effect of your actions.

DITHERING

The general principle governing the quality of the screen display is simple: If the image contains more information per pixel than the monitor can handle, the picture will be "dithered" into dot patterns.

The greater the bit depth of your display, the better the results – my IT in medium resolution gives a good-enough rendering of black-and-white photographs, and the same should apply to a Falcon with a VGA monitor.

This is all the resolution you need if your work is intended for laser output, which cannot really handle more than 16 or, at a push, 32 greys anyway. For much the same reason, it is rarely necessary to scan images at more than 150dpi or even 75dpi; the additional data mass will only occupy unnecessary RAM and be wasted unless you plan to enlarge the image significantly.

Economy with RAM is an important consideration with Chagall as it does not support virtual RAM like Retouche does; in other words, it cannot swap chunks of data between disk and RAM if you run out of available memory.

This can happen more quickly than you think because Chagall – in common with other software of this type – effectively keeps two versions of each image in memory: The one you see on the screen, and that in the Undo buffer.

Every time you carry out a modification of your image, you can either confirm the change by pressing the spacebar, in which case the new version will be copied to the Undo buffer, or you can choose to leave the Undo buffer unchanged in case you decide later to go back to an earlier version. You can even toggle between the two, to check the effect of an operation and decide if you want to keep what you have just done.

Then there are the masks, which are halftone images and will take a corresponding amount of memory too. Masks are essential for most work because they enable you to restrict effects to certain area of the picture.

To apply the sharpening filter only to the foreground, for example, you will cover the background with a mask. To change the texture of a particular object, you can apply a mask to the range of colours contained in that object, invert the mask so that everything else is masked, and apply any of the painting tools.

Using halftone images as masks is a very clever feature indeed – with the

usual binary (mono) masks a particular pixel is either masked or not, but here you have 256 graduations between on or off and therefore "grayscale masks" to avoid sharp edges and other unnatural effects. Masks can be edited like any other pictures, and you can even have "masks within masks".

As usual, a review can only scrape the surface of the enormous power and versatility of such a program. Chagall would be somewhat under-employed if it was only used to fiddle about with brightness and contrast controls and cutting out backgrounds.

Photomontage is an art form in its own right, a favourite device of magazine illustrators and book designers, and this type of software is so much easier and cleaner to use than the traditional manual cut-and-paste approach.

There will be additional modules for Chagall to further expand its capabilities, among them a text mode which, presumably, will take advantage of Atari's new Speedo scalable GDOS font standard. For further information on this, contact the UK distributors.

TRI-LINGUAL

As you can see from the screenshots, the version reviewed here is the German one. There is an option in the configuration menu to switch between English, German and French messages but it was not implemented in the review copy.

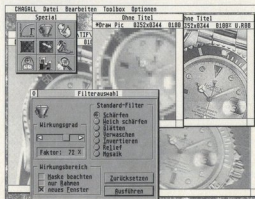
CGS assure me that the English version, complete with documentation, will be available by the time you read this. The German manual is very well structured and includes a well-illustrated tutorial, but I felt that sometimes the explanations given were rather on the superficial side and that a novice to this type of work would face a rather steep learning curve.

Chagall is copy-protected, asking for the master copy to be inserted when launched from the hard disk, but upon registration you will be issued with a new version that will only do this very occasionally, according to the handbook – it hasn't happened to me at all so far.

The filters are powerful tools to apply certain standard transformations to the image data. The filters applied here were, in clockwise direction, mosaic, sharpen and relief – the latter with a mask applied to the face of the watch to keep it unaffected.

Some of the filters will have very drastic consequences – which is where the Undo buffer comes in handy – but you will soon learn to use the slider in the dialogue box to restrict the range of the filters.

The result can also be sent to a new window so you can compare the filtered and unfiltered versions side-by-side



BOTTOM LINE

FEATURES	Excellent
More than you discover at first glance. Powerful and versatile.	Average
	Bad
	Appalling
EASE OF USE	Excellent
Standard GEM interface makes it easy but slows it down. too.	Good
	Average
	Bad
	Appalling
VALUE FOR MONEY	Excellent
Chagall Light is a very good buy, period. But at hundreds of pounds more, Chagall 4C appears to be grossly overpriced.	Good
	Average
	Bad
	Appalling

Product: Chagall Lite/Chagall 4C
 Supplier: CGS Computer-Bild, 231 Northborough Road, Norbury, London SW16 4TU
 Telephone: 081-879 7307
 Prices: £149 (Light), £499 (4C)
 Configuration: All STxTT/Falcon

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12/04/79	Car		57.31	
12/04/79	Savings		200.00	
12/04/79	Home contents insurance		12.00	
12/04/79	Shopping	47.25		
12/04/79	Gift		125.00	
12/04/79	Shopping	56.15		
12/04/79	Access payment	240.15		
12/04/79	Christmas		240.15	

PFM - a long-standing favourite

With an ST and one of half a dozen home accounts packages, you can really keep your spending under control.

Andrew Wright looks at the benefits

Money matters

Money management is one of the most popular uses for a home computer like the ST. With a good, solid home accounts package, you can keep track of everything from your bank, savings and credit card accounts to stocks and shares, equities and loans.

Just computerising your accounts might not stop you squandering your hard-earned cash and going overdrawn occasionally but if you use a reliable program properly, setting up monthly budgets and standing orders to pay your bills, you'll have a better than average chance of staying ahead in the long term.

The biggest obstacle is undoubtedly taking the first step - home accounts aren't the most glamorous of ST applications and there are probably half a dozen things more interesting to do, even on a wet Sunday afternoon, than type in the information from your cheque book stubs.

However, the newest versions of the ST's most popular programs make light work of what was once a heavyweight chore. Entering details of income and spending couldn't be simpler, and with the prospect of full colour charts and customised reports to tempt you along, the end result is well worth working towards.

Once you've done the hardest part - setting up your accounts, organising a budget and entering regular payments like standing orders - it only requires a few minutes maintenance every day or two to keep the program's information up to date.

The key thing about home accounts software is that it is just that - accounts for the home. If you're not VAT registered, you don't have a clue about double entry book-keeping and you've never used a spreadsheet in your life, you've absolutely nothing to fear. Most

programs are easy to understand terms that are far removed from accountants' jargon and the interfaces are designed to resemble your bank statement as closely as possible with line by line transaction reporting and a running balance at the end of the line.

There is far more to most of them than that, however. Most include options for printed output, charting of budgets, balance and expenditure, automatic balancing when statements arrive, password protection and recurring transactions such as monthly loan and bill payments.

So what are the advantages of having computerised accounts at your fingertips? By and large the full range of benefits depends on which program you choose though all of them will save a certain amount of time, paper and

ink. Consider the manual methods of tracking your spending. This requires some paper for notes and a probably a calculator to make sure you get the balance right. You'll need to jot down all transactions, add them all together to get your total expenditure for the period in question and subtract the total from the starting balance.

Make a mistake and you'll probably have to start all over again. With a home accounts program, you enter all the transactions once and let the computer decide what to do with them.

Of course, your computer keeps a permanent record of the transactions which you can refer back to quickly and easily many months later.

For example, ordinary bank statements show only cheque numbers and amounts, not the payee, so if you need to check how many cheques you wrote to a particular company or shop, you simply search through the transaction database specifying the name of the payee. Most of the better programs have such basic search facilities. Perhaps more important is the fact that

you can tag transactions as cleared or uncleared. A transaction is only cleared when it appears on your bank statement but this can take some time.

For instance, normal cheques take three working days to clear but with amounts over £1,500, it can take as long as seven working days.

This means there are two balances for every account - the actual balance on your statement and the uncleared balance that includes all the cheques and other transactions that haven't cleared.

Your bank will only ever be able to provide the first but the second is the most reliable guide to how much money you really have available to spend.

Having computerised records means it is a lot quicker and easier to cross-check your bank statements for errors too. Banks can make cock-ups like anyone else but unless you spot them, you'll probably never know.

It's always a good idea to check statements for phantom withdrawals or even fraudulent ones - perhaps someone else has gained access to your PIN number without you knowing?

The real value of home accounting is to enable you to look ahead. To help you, home accounts packages track regular payments and add them automatically.

Keeping accurate records is vital if you want to know how much spare cash you'll have the following month. You won't know exactly what you'll spend in advance but as the regular payments are fixed, you'll be able to

Description	Debit	Credit	Balance	Confirmed
✓ Payment - brochure	50.00	650.00	241.62	241.62
✓ Cash	129.84		111.78	151.62
✓ Morrisons	22.00		89.78	
✓ Shoes etc	20.00		69.78	
✓ Gas payment	21.00		48.78	162.62
✓ Electric payment	250.00		-201.22	130.62
✓ Loan repayment	27.00		-228.22	-119.17
✓ Rail to London	27.00		-255.22	-156.17
Payment for booklet		1242.50	987.28	
National Insurance	22.28		965.00	
Cash	40.00		925.00	
Sainsbury's	89.75		835.25	
Repairs to stereo	89.80		745.45	
Cash	100.00		645.45	
Car Insurance	60.00		585.45	
Meal for two	55.00		530.45	
Water rates	27.00		503.45	
Article payment		255.00	248.45	

Here's an example of the difference between cleared and uncleared balances. A visit to the bank would reveal a balance of £156.37 but the real balance - in other words the amount you have to spend - is nearly £700 because several transactions have yet to clear. They are somewhere in the system being processed

How to follow your finances

Home accounts programs work in broadly similar ways. The first stage is to set up the accounts you want to work with. In the following examples, we're using PFM Plus



The next stage is to set up budget categories. Budget categories are the means by which you can break down your spending to see just where the money has gone. It is a good, intuitive system that reflects the way we subconsciously think of our finances – so much for food, so much for heating and lighting, so much for travel and so on.

Every time you enter a transaction, you decide which budget category it comes under, whether it is a debit or a credit. The more precisely you allocate budget categories, the more information

you will end up with at the end of the month. For example, if you set up half a dozen categories such as Car, House, Food, Cash, Mortgage and Miscellaneous, you'll have no trouble in deciding into which category to put your expenditure but it's likely that most will go in the Miscellaneous category which tells you nothing.

It is far better to create 20 or more categories. That way each one will be that much more precise and if you start to see a pattern emerging, it is more likely to be a real one.

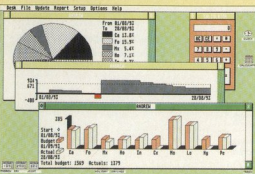
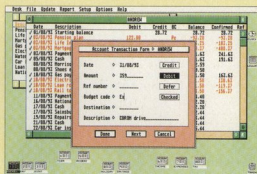


Individual transactions are the real meat of a home accounts program – they include a reference number, usually the cheque number, the date incurred, details of the payee, the amount, the budget code applicable and information as to whether or not the item has been cleared.

If you get into the habit of entering transactions more or less as they occur, your accounts will always be bang up to date. It can be tiresome, of course, but

newer packages have a number of features to help.

PFM Plus lets you set the entry defaults so that the transaction input dialogue can automatically add the last new date, increment the reference number by one and automatically edit duplicated entries in other accounts when the original is modified. Home Accounts 2 has similar user-friendly features.



With all the data in the system, you can start producing reports on your expenditure. In many programs the reports are graphically oriented like the example shown. The pie chart shows the overall budget broken down into its constituent parts – the two biggest single expenditures are Ca and Fo, cash and food.

Information of this nature is useful when planning for the future or deciding where you can cut back. The chart in the centre shows the level of the balance

actually exist but one in which you might want to record a certain type of transaction. For example, you could set up one or more accounts to track part-time income.

While the cheques will probably be physically paid into your bank account, treating them as if they were paid into a separate income account makes it easier to add up your income over the year for tax purposes. You can also set up expense accounts in the same way.

have to remember such payments which is why the program often does it all for you, simply adding the transaction on the required day.

Of course, you could try and keep a paper list of your regular payments but with quite a number of them only running for ten months at a time (water rates and poll tax being good examples) it can get quite complicated.

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think ahead that much more easily. With an idea of what you spent in each budget category over the preceding months, you can often estimate your next month's expenditure quite accurately. The longer you keep accounts, of course, the more accurate predictions are likely to be.

For example if your budget shows you spent between £30 and £40 on online comms charges in each of the last 11 months, there's a good chance that you can bank on say £35 when planning next month's budget.

There are a number of programs available on the ST, priced to suit every pocket. The two most widely used are Digita's Home Accounts and Microdeal's Personal Finance Manager, PFM. Both packages are also available in upgraded forms with integrated graphics and a much wider range of features.

Home Accounts 2

Digita's Home Accounts 2 has an icon-based user interface with excellent charting facilities and allows customised reports to be sent to virtually any printer.

It comes with a 200-page manual and single disk containing the main program, demo files and a program to convert files from the original version to Home Accounts 2 format.

Home Accounts 2 works with all STs, including the STE and TT, but 1Mb is recommended to avoid running out of memory. A single file can hold details of all your accounts, the number of

Jargon busters

accounting.....	recording the movement of money from one place to another
bank statement.....	a list of all transactions over a given period, usually a month
credit.....	money paid into an account
debit.....	money removed from an account
direct debit.....	a regular payment of a variable amount paid from your bank account
double entry book-keeping.....	a complicated method of tracking payments and receipts used by professionals such as accountants
expense.....	money you've spent
income.....	money you've gained
invoice.....	request for payment for services or goods
spreadsheet.....	a program that resembles a large table full of numbers, many of which are inter-related
standing order.....	a regular payments of a fixed amount paid from your bank account
transaction.....	a transaction can be any money movement into or out of any of your accounts

Features comparison

Product	PFM	PFM Plus	Home Accounts	Home Accounts 2
Price	£29.95	£39.95	£29.99	£54.99
Contact	HiSoft (0525 718181)	HiSoft (0525 718181)	Digita (0395 270273)	Digita (0395 270273)
Minimum RAM	520k	520k	520k	1040k
Falcon compatible	n	y	n	y
No of accounts	30	unlimited	13	unlimited
Manual provided	y	y	y	y
Online help	n	y	n	y
Password protection	n	y	n	y
Built-in calculator	n	y	n	y
Icon interface	n	y	n	y
Display uncleared total	y	y	y	n
Display cleared total	n	y	y	y
Transaction codes	y	y	y	y
Split transactions	n	n	n	y
Recurring payments	y	y	y	y
Frequency	MQ	WAMQ	MQ	custom
Auto reconciliation	n	y	n	y
Budget tracking	y	y	y	y
Printed reports	y	y	y	y
Charts & graphs	y	y	y	y
Customisable P/driver	n	y	n	y

which is limited only by available memory (30 or so on a 1Mb machine).

Apart from desktop icons for each account there are icons for the printer, dustbin, help screen and calculator plus buttons on the desktop along the bottom of the screen for adding and amending information.

Home Accounts 2 can display up to seven windows and each one can be resized and repositioned in the normal manner. In addition, the windows remember their positions so that even when closed, they open up in the same place on the next occasion.

Adding an account couldn't really be easier. With a new account created, the types of transaction need to be defined, as in the basic version. Adding transactions is friendly and fast, using a pop-up form as in PFM Plus. There are also some useful form editing commands and the default entries in each field can be defined beforehand.

PFM Plus

Michtron's PFM Plus is an update of the PFM package with an array of new and improved features. PFM Plus supports

up to ten different accounts each with its own entries and standing orders.

Money can also be transferred between accounts automatically and one particularly useful feature is the ability to change the order of the fields for each transaction in the window. For instance, many users would want to see transactions in the order date-type-description-amount-balance but others might want the reference number first (the cheque number perhaps).

It also displays both cleared and uncleared balances, a feature which makes it the better choice when up against Digita's offering.

The GEM interface is easy to use although all the icons are the same for each account and it is less aesthetically pleasing than Home Accounts 2. It also has a good deal less direct printer support, although the manual does explain how to define other printer configuration files.

The graphic clock is a useful feature and the built-in calculator is very easy to use. The graph and chart facilities are very good indeed and extremely useful for seeing at a glance just what state your finances are in.

The screenshot shows the PFM Plus software interface. At the top, there are menu options: Desk, File, Update, Report, Setup, Options, Help. Below this is a table with columns: Date, Description, CURRENT, Debit, Credit, BC. The table contains several entries, including Visa payment, Mortgage, Shopping, Cash, Car repairs, Pay, Savings, Home contents insurance, Bill, and Access payment. A calculator window is open in the foreground, showing the number 124. The calculator has buttons for digits, operations, and a display area.

PFM Plus is another excellent home accounts program

Few programs are as capable of generating controversy among ST owners as Protext, Amnor's well-known and well-established wordprocessor. You either love it or hate it. It is difficult to argue with success, though, and Protext has found a large band of followers not only on Atari computers, but also on PC compatibles, Amstrad PCWs, Amigas and even the Acorn Archimedes.

If that wasn't enough, Amstrad have built Protext into their popular NC100/200 range of portables – and Amstrad are very big business indeed.

Protext's ubiquity is also the source of most of the controversy surrounding it. A program developed for so many different operating systems simultaneously cannot possibly take full advantage of each of them: something just has to give in the interests of cross-platform portability.

In the case of the Protext/ST relationship, it is the GEM graphical user interface. ST owners have come to expect their applications to conform to certain visual and functional standards, including pretty on-screen fonts and graphics, resizeable windows and so on.

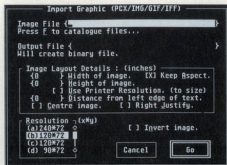
Protext has none of these, and although recent versions have sported menus and file selectors, it remains to a large extent command-line driven and character rather than graphics-based.

It will always grab the whole screen and the system font is all you get. No pictures, no icons – pretty unexciting to the eye really.

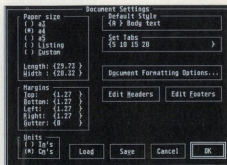
On the other hand, though, it leaves all its competitors standing when it comes to speed and power. Protext whizzes through megabytes of text before you can blink, is almost infinitely flexible and programmable, and supports just about every printer that could ever be hooked up to a computer.

Many professional writers and journalists swear by it and wouldn't touch anything else, not even the heavyweights of the PC and Mac scene like Word Perfect or Microsoft Word.

For all these reasons, a major new version of Protext is bound to attract attention. Has it finally succumbed to the



The graphic import dialogue allows you to size and position the picture but not to view it. It would have been handy to have access to the GEM file selector at this point, but although Protext supports it for general file operations, this and other dialogues will confront you with its own home-brew version



The Document Settings dialogue is a great step forward over previous versions as it simplifies control over all the basic aspects of a job, and is saved with the current document

Picture

charms of a WIMP [windows, icons, mouse pointer] environment or does it remain true to its macho speed and power philosophy?

The newly-released version six leaves no doubt on that score: this is Protext as we have always known it – if anything it's even faster at handling long text files – but with many significant improvements.

The most striking innovation is its new ability to import graphics into documents. Provided they are in one of the popular file formats supported – IMG, PCX, GIF and IFF – pictures can be in any resolution, placed anywhere on a page and freely scaled up or down. There is only one drawback: you cannot see them on-screen, or edit (except invert) them, nor can you flow text around a picture.

All you get is a stored printer command line specifying the image file name and position on the page. The

graphics support is therefore about as rudimentary as it could be and will fail to impress most of Protext's critics, but it is nevertheless a welcome step in the right direction and will be extremely useful for including logos and letterheads in business documents. Desktop publishing it certainly ain't.

If the foray into graphics import and printing is somewhat hesitant and unconvincing, the new features in other areas take Protext a significant step ahead. Document handling and page layout has most improved as you can now enter absolute values in centimetres and inches for page size, margins, tabs and other crucial measurements rather than use column and line counts relative to the font used.

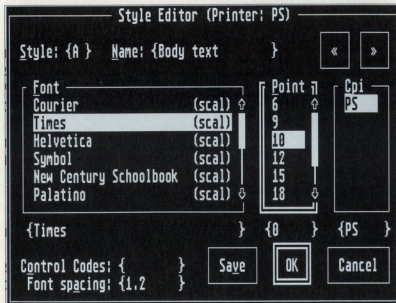
SIMPLER CONTROL

These settings, plus basic formatting options, headers/footers and default styles, can be saved with the current document and copied to other documents. This is much simpler than the old method of achieving the same effect through different configuration and template files.

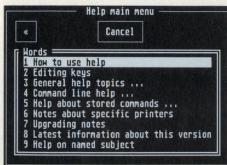
The mention of "default styles" will have alerted experienced Protext users to another significant innovation. Up to now, font changes and font attributes such as bold, italics and underline were all set by printer control codes.

The new styles are essentially macros containing font names, sizes and spacing information. Instead of the cumbersome procedures required by previous versions of Protext, it is now possible to assign a style to a particular paragraph by simply highlighting it using the mouse and pressing F7 plus the style letter.

A new style code will then be inserted at the beginning of the defined text block, and another restoring the previous style at the end of it. The familiar printer control codes are still there, of course,



A touch of desktop publishing... The style editor gives you full access to all fonts supported by your printer – including scalable vector fonts as with the PostScript driver shown here – and the facility to easily make global changes to the appearance of the document when printed



The new, interactive on-line Help function goes a long way towards meeting the objection that Protex is less user-friendly than fully GEMed competitors. Even experienced users will sometimes require help as there are just too many features to memorise



Macros can automate repetitive and complicated procedures, and Protex's macro record mode is a powerful productivity aid. But sometimes you just want to slightly modify an existing macro and this is made much easier by the new macro editor

Protex

The latest version of old word-crunching workhorse Protex has acquired the ability to import graphics, and many other extras. Günter Minnerup reports

and can either be incorporated into the style definitions or used in addition to them.

Since Protex still does not display anything other than the system screen font, the styles are, of course, entirely related to printing and need to be defined specifically for each printer driver used.

Once again, this falls somewhat short of full wysiwyg (what you see is what you get) but enables Protex to make the most of the built-in features of any particular printer (including its proprietary fonts) and to achieve maximum output speeds.

Owners of Atari lasers will again be disappointed that there is such limited support for it – apparently this is due to Atari refusing Arnor the loan of a printer to learn how to program it directly – but if you are fed up with the Epson and Diablo emulators you can always take advantage of another new feature of Protex 6: The PostScript printer driver.

In combination with PostScript emulators such as UltraScript or CompoScript, this gives you excellent print quality and access to the standard range of 35 Adobe printer fonts.

In its present incarnation, the Protex PostScript driver is limited to these fonts and does not allow the installation of additional or alternative ones in your possession, but you can always load the output file back into Protex and replace the font names (provided the character spacings are similar).

There are too many new features to mention here (see right), but those which are designed to make Protex easier to use should be given a special mention. Headers and footers can now be edited

interactively through a dialogue, as can macros and user dictionaries. Help, too, is now reasonably interactive, letting you select topics from a menu and refine your search by double-clicking on keywords in bold.

Many more editing and viewing options are now directly accessible via dialogues rather than indirectly through the configuration program.

For specialist and professional users, v6 adds a number of very sophisticated features that may be of limited use to the majority but put Protex firmly into the category of heavyweight text editing tools.

LIGHTNING-FAST

An editable exclusion dictionary now enables the lightning-fast spell checker to flag words which may be spelled correctly but not in accordance with a house style – use/hizle, for example. Protex can now handle proper typographical single and double quotes, and underlining is sensitive to the font used. Documents can be saved in a variety of

Ascii save – 3 options built-in
Calculate expression dialogue
Colour printer support
Copy line at cursor
Document settings dialogue
Exclusion dictionary
Faster editing of large files
Font sensitive underlining
Font spacing
Glossary

Graphics import
Headers and footers dialogue
Interactive help dialogue
Landscape printing support
Macro editor
Page break key
Page layouts in inches or cm
PostScript
Pre-defined standard pages
Many new printer drivers

Ascii formats, including fully reformatable Ascii (no line breaks, only paragraphs) for easy export to DTP page-layout software.

Version 6 will not convince the partisans of graphics-based "document processing" to switch from something like Calligrapher or That's Write to Protex.

But it will confirm to existing users, and those with similar requirements surveying the market for a suitable wordprocessor, that it remains streets ahead of the competition in terms of sheer power and flexibility.

My only serious grumbles about the new version – apart from the inability to easily install new PostScript fonts already mentioned above – is the unchanged and rather awkward handling of footnotes.

I would prefer to see footnotes in a separate, split-screen window rather than inserted on separate lines in the main text. Also, the loss of the convenient ring binder manual for two bound paperbacks that cannot be left open beside the keyboard is a retrograde step.

Existing users of previous versions can upgrade by phoning Arnor and quoting their registration and credit card numbers. The current introductory upgrade prices are £35.25 from v5.5, £47 from v5.0, and £58.75 from v4.3, but this may change so ring for an up-to-date quote.

BOTTOM LINE

FEATURES

By far the most powerful Atari wordprocessor around.

Excellent
Good
Average
Bad
Appalling

EASE OF USE

Less user-friendly than others, but menus and interactive Help give assistance to the novice.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

You won't find anything comparable in this price range.

Excellent
Good
Average
Bad
Appalling

Product: Protex v.6
Supplier: Arnor Ltd, Peterborough

PE13HA
Telephone: 0733 68909
Price: £152.77

Configuration: ST/STE, TT, with minimum 1Mb RAM. Should also work with Falcon, but check with Arnor for details of any incompatibilities and news of a special Falcon version. Currently incompatible with MultiDOS

New features since v5.5

Proper single and double quotes
Row and column in inches or cm
Save document settings
Save options dialogue
Save styles with printer driver
Scalable font support
Styles – editor and menu
User dictionary editor
Variable line spacing

Family Roots

Family Roots is an invaluable aid to both professional and amateur genealogists. It is designed around an integrated workbench which allows you to create your family tree graphically on the screen by linking directly between the individuals. The powerful database can be viewed instantly at the click of a mouse button. The search function enables fast cross referencing and multiple scanning.

What The Press are saying about Family Roots:-

"I can certainly recommend it if you are working on a family history - Family Roots is going to simplify your record keeping enormously and is a pleasure to use." - **Micro Computer Mart**

"Certainly more than you'll ever need, unless you manage to trace your relatives back to Fred and Wilma Flintstone." - **Atari ST User**

"All in all, the best genealogy program available for the ST and well worth the money if you are considering tracing your family." - **ST Format**

To order your copy of **Family Roots**, send a cheque or postal order for £24.95 to the address below. UK postage free, please add £1.50 for Europe or £3.00 for World.

Stone Cold Sober

Stone Cold Sober is a graphic adventure for the Atari ST, STE, TT and Falcon. It runs on colour or mono displays (without the location graphics in mono) and is ideally suited to the novice adventurer. As the name suggests, you start your quest in a pub. Your journey will take many weeks to complete and will involve a considerable amount of thought and a lot of luck. There's an element of the supernatural in this one so beware! The program is entirely mouse driven and involves almost no keyboard input at all. Stone Cold Sober was written by Simon Brown, one of the best adventure game authors of recent years and it promises to keep you glued to your screen for weeks (months perhaps!) To order your copy of Stone Cold Sober, send a cheque or postal order for £9.95 to the address below. UK postage free, please add £1.00 for Europe or £2 for the rest of the world.

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ADV 09: PORK 2	ADV 28: A Night on the Town
ADV 31: Susan	ADV 32: Christian Adventure
ADV 35: Deena	ADV 38: Darkness is Forever
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Changing market

I have noticed in recent months that many of the smaller ST firms have disappeared into oblivion, often being bought out by larger companies such as HiSoft and Compo.

This sort of thing cannot be good for the Atari market in the long term because it will reduce competition from smaller companies.

The remaining firms will have a monopoly on the market and prices are likely to rise. When your magazine recently ran a feature on the larger companies, I couldn't help but notice that there are only a few of them left.

Nothing seems to be happening in the market any more, and as a devoted ST owner I wouldn't like to see the serious side of the market dry up as the games side has done.

Clive Simmons, Oxford

We should all be thankful that the firms remaining in the ST market are expanding their catalogues by talking over the distribution of products that would otherwise disappear.

Price rises are unlikely. If anything software and hardware costs less now than at any other time in the ST's history.

A couple of years ago you could not have expected CoverDisks to contain top packages such as Harlekin, Prodata, STOS, Quantum Paint and K-Spread.

Incredible Jaguar

Atari have produced another piece of incredible hardware that is a long way ahead of the competition. The Jaguar should leave the opposition standing, providing Atari can get their act together.

Their performance with the Falcon has been typical of the company's attitude towards marketing. They made an impressive piece of kit and then sat back and expected it to sell itself. That's just not the way to go about things, as ST owners have been saying for a long time.

Now Atari seem content to let the Falcon just fade away, concentrating all their efforts on producing as many Jaguars as they can in time for its release.

If they can keep to their word and design an advertising campaign as incredible as the machine, I'm sure the Jaguar will bring Atari back into the public eye as a fine hardware developer.

If they let it die in the same way as the Lynx and Falcon did, then I think we may have seen the last of Atari as a major force in computer design.

Mr T Stenworth, Birmingham

Jaguar is indeed impressive and a long way ahead of other games systems, either on sale

**Got anything to say to the ST community?
Then this is your soapbox**

Write Now

or known to be in the final stages of development.

Atari say they have got around \$35 million in cash to promote the machine in the States this autumn. Once it becomes a success the firm promise to put more money into Falcon.

Repeating C

I have just received October's issue of your magazine and while I was reading the C programming article on page 63 a sense of déjà vu came over me.

To try and understand why I was having this feeling I looked back at the articles in past magazines and there I found the answer.

The article is exactly the same as the one in the August issue - even the files in the disk have been duplicated.

While I am writing, I wish you luck in the future and hope you get the increased sales of your magazine which you deserve. Keep up the good work - not counting the mistake above.

Ian Noble, Banffshire

We still haven't been able to establish how the repetition happened. The correct Part 7 appeared last month.

Porn policy

I have subscribed to Atari ST User for more than three years and apart from the odd CoverDisk problem I have, and still do, enjoy your magazine.

Now for my moan. You published a letter complaining about your double standards - New Age PDL from A Beverage, Edinburgh.

You replied, and I quote: "Atari ST User has a policy of not accepting advertisements which promote material such as that carried by New Age PDL last month." It is very unfortunate that

this one slipped through the net on the very month that our article appeared."

What a load of rubbish! Not only have you included the New Age PDL advert in October's magazine, but also doubled its size.

May I suggest that you buy a new net with a smaller mesh for the editor? It is obvious that this ad has once again slipped through his current one.

If Atari ST User needs the cash and must carry the advert, then this should be modified to drop the section which carries the offending sections.

I look forward to hearing your answer to this. I have no doubt that many other readers have written in about this subject.

I Matthews, Lincolnshire

The New Age PDL advert has increased in size because the library has been getting a high level of orders from Atari ST User's readers.

But our staff first checked the disks to ensure offensive material was removed - namely the sets called Fantasy and Wet Dreams.

We found the remaining titles contained either images from popular films or of partly clothed men and women. The disks promoted in the advert contain nothing worse than the type of picture young children can expect to see in most tabloid newspapers every day.

I believe our advertising restrictions are realistic and among the most sensible in the computer magazine industry.

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

Can Gamer handle the action?

I have read that ST Action is to be incorporated into Atari ST User in the months to come.

I'm rather miffed to say the least. As a loyal reader, I don't want to see the high quality prose of Gamer staff being replaced by the sort of shoddy reviews featured in ST Action.

When a magazine has such a winning formula, why dilute it in a desperate attempt to draw a few extra readers?

I am quite frankly shocked that a magazine such as yours should even contemplate this move.

Philip Edwards, Sussex

**£25
Prize
Letter**

Fear not, the incorporation of ST Action inside this magazine will not mean a lower quality games section - in fact we hope to deliver exactly what you, the reader, wants.

We have spent many hours looking at the content of both magazines to come up with what we consider to be the best format for a games section. It will be written by the team you are familiar with - and in a similar style - but also include the popular ST Action features.

The move is by no means a desperate attempt to pick up a few readers. Several thousand games players regularly bought ST Action and their orders would help this magazine to give even more to our existing readers.

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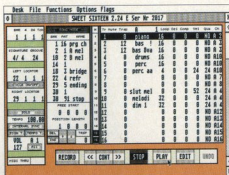
DELIVERY CHARGES

postal delivery for small items £3.00. NEXT DAY courier service for large items £7.00 (fully insured) Courier pick up service for upgrades and repairs £11.00

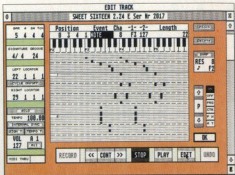
If you're a beginner or simply dabbling with music, you don't want to spend £500 on a sequencer, so it's nice to know that there are a few budget programs around. Sweet Sixteen is the latest.

It comes from Sweden and is based, says the blurb, "on tried and trusted 'Creator' principles". To anyone who has seen Emagic's Notator or Creator, Sweet Sixteen's main screen will invoke a sense of déjà vu. Hmm.

The program is pattern-based. That is, you can create up to 16 patterns and link them together in a song window. Each pattern has 16 tracks and you could simply use one pattern and record a



Sweet Sixteen's main screen shows the 16 tracks in a pattern. The Song Mode window shows the patterns linked



You can edit notes by clicking and dragging in the piano roll edit screen

Sweet Sixteen

Ian Waugh tests an affordable sequencer especially suited to those who wish to use music rather than spend years writing it!

piece from beginning to end in traditional linear fashion. The more ambitious can plug in a device such as ModemMidi or Midi+ (around £30 each) to access another 16 Midi channels.

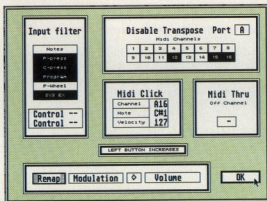
The main screen lists the 16 pattern tracks along with several track parameters which will be familiar to Creator users - Mute, Transpose, Loop, Delay, Compress, Velocity, Quantise and Midi Channel. These parameters are applied on playback only so you don't lose your original recording (although it's still wise to save often!). You can change them on the fly while the sequencer is running.

It is possible to copy, move, merge and delete patterns by clicking and dragging - as in Creator. You can copy patterns and parts of tracks, too.

The quantise function has basic note length settings but you can also set humanise and swing percentage settings. The usefulness of this should not be underestimated if you want to improve the timing of a piece without making it robotic.

There are several interesting edit functions such as Keep and Delete (similar to those functions in Creator). Push (to introduce a positive or negative delay) and there's also a Transform function, albeit somewhat less comprehensive than Creator's, which you can use to globally and selectively alter velocity, pitch, controller data, Midi channels and all sorts of things.

Remap lets you convert one type of data to another - turn modulation data into volume or pan data, for example. There are functions to shorten notes to prevent



them overlapping, to insert missing Note Offs, to merge all tracks in a pattern and to split a track containing data on several Midi channels into separate tracks. In all, rather a nice collection of edit goodies.

There are two editors to let you get closer to your Midi data - and event list and a piano roll editor. The event list looks like a cut down version of Creator's. It has filters so you can hide data you don't want to see (such as Note Offs) and you can insert data here, too (remember to unfilter the data you are inserting!).

The Overall Settings window houses a collection of default settings, edit options and program functions

SNAP FUNCTION

The piano roll editor shows notes as bars on a grid running vertically down the screen. You can edit them by clicking and dragging and a snap function makes sure they fall onto certain divisions of the beat.

There's also a Tempo track which looks similar to the event list where you can edit and make tempo changes.

In the song window up to 32 patterns can be linked. You can set each pattern length, give it a transpose value (even

specifying Midi channels which will not be transposed to preserve drum tracks) and use patterns which start on the upbeat by setting a pre start value.

Sweet Sixteen's filing system supports complete songs, patterns, tracks and Standard Midi Files.

The only major niggle concerns the manual which is a good example of how not to do it. It has a mere 12 pages, no illustrations and is poorly laid out. In spite of the inclusion of a New Features flyer, some functions still aren't fully explained. The UK distributor really ought to rewrite the thing.

But manual apart, Sweet Sixteen is well specified for the price and well worth your consideration if you're looking at the budget end of the sequencer market.

BOTTOM LINE

FEATURES

A pattern-based sequencer with all the basics plus many powerful functions.

EASE OF USE

Easy to use in spite of the manual.

VALUE FOR MONEY

Good VFM at the budget end of the market.

Excellent

Good

Average

Bad

Appalling

Excellent

Good

Average

Bad

Appalling

Excellent

Good

Average

Bad

Appalling

Product: Sweet Sixteen
Supplier: Hands on Midi Software, 3 Bell Road, Cosham, Portsmouth PO8 3NX
Telephone: 0705 221162
Price: £51.45
Configuration: ST/STe, TT, Felcan.



You can edit notes and other Midi data in the event list with great precision

We all know, when we come to stop and think about it, that software is the essential "other half" of our cherished, personalised hardware setups.

It makes no difference whether you own a basic, sub-£200 and ageing STM which has faithfully looked after your home accounts, the odd letter to the powers that be and kept you amused on darker nights with a reasonable simulation of Brand's Hatch; or you have a £900 Mega STE on which you publish your company's newsletter in your spare time for some much needed extra cash.

Indeed as the Atari saga continues, there is currently a growing tribe of musicians worldwide who've shelled out less than £1,000 for a new Falcon, and who are marvelling at their new-found ability to record their music direct to hard disk, with no tape involved, and all the creative possibilities for editing and altering that this entails.

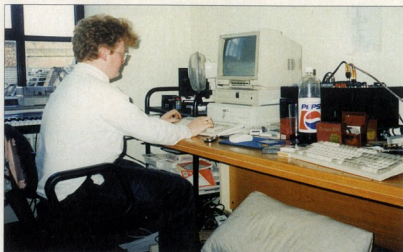
In short, it matters not whether you've got the Lada or the Rolls Royce on the nuts and bolts side; if you've no decent software, you might as well abandon the race, whatever your particular race may be.

Software, taking the broader picture, is a concept which many people find hard to fully assimilate. You buy a monitor, and you can carry it, feel its weight, put some tangible value on it which equates, one would hope, with what you paid for it.

But with software, you are afforded no such luxury. Although the software companies, aware of this problem, have packaged their products in increasingly large, eco-worrying boxes, and have added manuals to rival novels with what appear to be the most simple of products, at the end of the day you find yourself shelling out upwards of £30 to get anything worth having – and whatever it is, it generally consists of simply a couple of 3.5in, blue plastic disks.

The software piracy "ethic" is only further exasperated by this dilemma. Plus it's so simple to pirate software that people find it hard to feel that it's wrong.

But overall, it's the lack of a traditional product that can physically justify its own value which leads to people's fundamental inability to completely grasp the idea of software, and which regularly prompts one of the most familiar questions any of



Dean Evans, one of Ocean's musicians, even sleeps there sometimes! Note the bedding under his desk

THE GAME

us in the computer industry ever hear: Why is software so expensive?

Of course, if we stop and think about it, we come up with answers like "oh it's the development costs" or – as some of our more paranoid/conspiratorial acquaintances will express – "it's money-grabbing software houses". But by and large we tend to know little about how a product reaches the shelves, who's involved, or simply the amount of work that has to go in.

FORWARD-LOOKING

Gone are the days when a whizz-kid in a suburban bedroom was responsible for the game in your floppy drive. Nowadays the industry has got organised, and increasingly forward-looking and expanding young companies are at the forefront of the software revolution.

In a canal-side, regenerating area of inner city Manchester, at a place known as Castlefield, there lies a building which impresses one with its stature while managing to exude an air of enlightenment, modern business. This is partly due to its location in a trendy, northern

Docklands-style development, and partly due to its incredibly wood, metal and glass interior architecture, which at times makes it feel like a barn in which hi-tech, subversive plots are being planned.

This is the home for a year of games house Ocean Software, a great northern success story of a company, and a good example of new ideas, locations and products coming from a firm who simply could not have existed a mere 15 years ago.

However, ten years ago – back in the days when the Sinclair Spectrum proudly ruled the roost and the Commodore 64 was making inroads into the UK – Ocean were setting up in a slightly less salubrious part of town, sowing, like so many other similar firms, the seeds of the success they enjoy today.

I visited them one Friday afternoon recently with the sole aim of discovering how a game gets from the designer's drawing board to your ST's floppy drive.

Right at the start of the chain is the software director. This man decides which game ideas will be carried through, and which won't. He is a filter of ideas, but also an instigator and stimu-

The world is watching

In such a high-profile industry, it pays for a software firm to keep its PR (public relations) effort up to scratch.

In Ocean's case, they've employed the talents of Stephen Hay, a recent PR graduate who has only been at the firm for a couple of months.

Full of fresh ideas, Stephen enthused as to the role of public relations and marketing in a software house such as Ocean, telling me about the value of alternative marketing (advertises in golfing magazines when Ocean bring out a golfing game, for instance) and some of the other different strategies that must

be adopted to market widely varying products successfully.

It is at this level that the question of how the public will perceive the product must be addressed, and so where my observation earlier that the public have a strange concept of software needs some attention.

Not surprisingly, ideas like the bundling of comic novels written by reputable comic artists with relevant games are in the pipeline. As Stephen says: "We try to do something different."

As a PR executive, Stephen's role in a game begins with answering press questions people

such as their very own *ST Action* and *Gamer* staff, who often get rumours of what's being worked on long before the official press release, and are naturally eager to tell their readers all.

Stephen is also charged with the setting up and successful execution of launch parties, and the distribution of press releases – all geared to the size of the product being launched.

It's all very necessary stuff – after all, the best game in the world is no good to anyone unless the potential purchasers are not only aware of it, but persuaded to go and buy a copy.



Dean "bashes out" some "chords"

CHAIN

Are software houses still based in suburban bedrooms? How much work actually went into the creation of that last £30 program you bought? Phil Morse visits top games house Ocean Software and finds out

lator of them. His brief: Get new concepts that will work!

Ideas for games nearly all come from in-house suggestions and brain-storming sessions. Very few come from outside contributions. All the unsolicited game ideas that arrive at Ocean through the post, however, do get looked at by software director Gary Bracey and his department, and some of them get made.

In-house suggestions can come from anyone, even the games testers (who, when you come to think of it, know more about the nuances of gameplay and what will really grip the public better than most).

BRAIN STORMING

But the usual way of coming up with ideas for games, whether given (as in the recent Jurassic Park licence which Ocean are currently in the late stages of work on) or invented from scratch, are "brain-storming sessions".

These are simply all-sit-around-the-table-and-develop-each-others'-ideas kind of affairs, and when successful, they end with a brief for a game which everyone is fully familiar with and able to act upon.

Once Gary has given his all-clear, a game is free to move into production...

When you think about it, you can break a game down into what it looks like, what it sounds like, and how things

move. Hopefully the reason for playing the game has been thrashed out in the brain-storming and development stages, and a solid basis of gameplay now needs meat adding to its skeletal bits.

The "what it sounds like" section is taken care of by one of Ocean's resident musicians. I spoke to 22-year-old Dean Evans, whose brief is to come up with all the music and sound effects for whatever project he's working on.

Dean's starting point is a pile of rough ideas and suggestions from the programmers and artists involved in the game's production. He tries to ascertain the feel of the game - a medieval role-player will require a different set of music and sound effects from a space shoot-'em-up, for instance.

Dean is quick to point out that his job is not about making the catchiest tunes he can: "I attempt to create the best atmosphere for a particular game," he states. "That isn't necessarily the catchiest tune, but something which complements the game itself."

He's keen to get feedback to his efforts from the others involved, purely in order to fulfil his brief to the max.

Working in a small room overlooking decaying factories and a canal, Dean's workplace is a sufficiently sombre setting for some serious creativity to go on. And he's got the equipment to help him, too, with a brace of expensive synthesizer/sampler keyboards and some sophisticated music editing hard-

Ocean Software's plush building in the heart of Manchester's Castletield area



Ocean's modern, spacious reception area

ware and software.

Not surprisingly, Dean has a background in computer music ("I've been interested in computer music since the Commodore 64") and, being one of that increasing number of musicians who have not bound themselves to the comfortable constraints of the three-minute pop song, is interested in doing film scores at some point.

He's certainly enthusiastic: On spotting a quilt and pillow tucked under his desk, I was informed that yes, he has slept the night there on occasions!

Generally assembling tunes by porting samples straight across onto the host machines and "reassembling" them into music thereafter, Dean recounts the nightmare scenario of the ST's sound chip: "Because of memory limits, it's impractical to have too many sampled sounds on the ST, so it's just a few for the effects, maybe, and back to the internal sound chip for the tune."

Which, judging by the disparaging remarks issued thereafter about the quality of said sound chip, explains the perennial mystery - why the ST sound is, erm, of less than CD quality...

As the music is being developed, so the visual side is being taken care of.



A title from the Hit Squad label

The Hit Squad

Lee Cowley is the 25-year-old technical co-ordinator of Ocean's Hit Squad. Not a crack army unit, but a licensing agency for older games, the Hit Squad specialise in releasing top quality, commercial products in the sub-£10 price bracket.

Here's how it works. When a game has passed its sell-by date and is left, quite literally, on the shelf, Lee identifies the product, and tries to get a licence from the company concerned to put the game out on the Hit Squad budget label.

His job is a rather satisfying one, as he gets to choose which games to go for, as well as testing them. He's an amalgam of all of the people involved in the production of a game from scratch, but with previously completed products, and his job even includes writing the blurb for the backs of the boxes.

This is where the ST really shows its face. Not being the youngest of machines, there are plenty of games lining up to be released on budget for it. Budgets are best thought of as paperback releases of hardback books – the quality is the same, it's just come a little later



and in less substantial packaging. With titles like Strike Fleet, Powermanger, Pushover, Risky Woods and Cool World all released or in the pipeline, you know you won't be getting anything less than a £25 game for your sub-£10 shell-out!

Artists will design artwork on paper, drawing such things as helicopters, missiles and the more pastoral, scenic trees and hills, valleys and mountains and other assorted paraphernalia for you to fly your missions and rescue your heroines over, under and through.

Drafted artwork is passed to the animators, who turn static images into smoothly moving on-screen sprites. An average of three will work on any one game, and between them they'll handle all the movement from start to finish.

Dawn Drake is a 28-year-old animator who describes herself as a "socialite" but exudes a general enthusiasm for life high enough to suggest that she extracts satisfaction from work as well as from the north-west's mind-numbingly excellent nightlife.

She's also one of the few females working in the creative side of the set-up. Carefully crafting a helicopter hovering around in a circle when I disturbed her, she explained to me how pictures get from drawing to screen:

"We usually scan them in or draw them straight into the computer," she says, "and between us we'll do the characters, outlines and all of the drawing."

It's very much like a cartoonist's job, but with lots of hi-tech equipment to hand. And although Dawn confesses that working on the same project for 12 months (she worked on Ocean's Hook licence) can get boring, the finished product is invariably anything but.

Fellow socialite Philip Trelford ("I like clubbing, drinking, parties and have been known to go raving," he proudly confesses) works with the music and graphics teams in the guise of game programmer.

A 22-year-old ex-freelance programmer (he's worked for Psygnosis and Microcosm before finding steady

employment at Ocean) he wrote his first game at 13!

His job involves all sorts, from assisting with anything technical that needs doing, to working on his own games, to really getting to grips with the nitty-gritty of computer software, such as transferring games onto CD-ROM for the next generation of consoles – as well as creative stuff like designing game levels.

"There's always something going on that's highly stupid in this office," he admits. "So it's always fun. And I do genuinely enjoy my job. There's a good atmosphere, and we can have a bit of a laugh too."

SAFETY NET

But if Philip has a laugh, then what of the games testers? When a game is nearing completion, these guys and gals provide an invaluable safety net. They test every single aspect of every game given to them – they do the right things to win the game, and deliberately do all the pointless things just to see what happens – and it's no lie to say that they must know a game inside out before they OK it.

Craig Efts is a 20-year-old games tester at Ocean. He tells me: "Games are nearly always bugged. Some are in for a week – that's quick. Others can take as long as a year."

Not surprisingly, the other side to the game testing coin is boredom. "You always get to the point where you hate the game!" confesses Craig.

In recent times, though, Craig's job has become more interesting and fulfilling due to the facility for him (and other games testers) to feed their ideas back to the programmers. The testers suggest changes, recommend that levels be made harder or easier, and get their name on the game credits too.

And as stuff on CD begins to filter through (the CD format is a godsend for software houses – no piracy) Craig says things are getting interesting again. It's the job kids across the country dream about, and Craig's not going to let go of it in too much of a hurry!

So we've followed the game from original seed to tested and finished product. It is manufactured and packaged and sent out from here to all relevant shops and other stockists, and – barring an obligatory word for the administration teams and their mountains of paperwork which keeps the wheels turning – we've seen most of those.

As you will have noticed, almost everything is done in-house – from graphics to music to art to all the boring bits, there's very little on which the firm have to make use of outside help.

An interesting point that came to light during my afternoon of investigation was that software houses gear their operations largely around the Christmas period. Of their 40 or so products released each year, 20 or 30 are released around Christmas, so you can see the cyclical nature of the business.

I started this article by arguing that people find it hard to accept any concept of how much that little blue disk they're holding is worth.

Hopefully, having glanced at the myriad of people involved in the production of a piece of software, and the kind of time-scale we're talking about, I've cast some light upon the costs involved in producing anything from an inconspicuous shoot-em-up to the latest high-profile film licence.

One thing is sure – with better products, new and skilled jobs and proper organisation, the computer games and software industry has grown up quite a bit since those first tentative classified ads for ZX81 Chess appeared in specialist magazines back in the early 80s.

Dawn Drake, animator and doyenne of Manchester's club scene, displays a colleague coercion technique



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18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 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Word processing – out to impress

Word processing is the most popular application among home computer users and it isn't hard to see why. With only a cheap dot matrix printer, you can write and produce anything from simple letters to complex dissertations, CVs and business reports, and all to an impressive standard.

Letters and other communications produced by a wordprocessor are always taken far more seriously by the reader, a fact that has been proven time and time again.

With a simple word processing program such as Firstword Plus or

Wordwriter you can throw away the pot of Tippex and say goodbye to the spelling mistakes and poor letter spacing.

Your ST will do it all for you, ensuring that the line lengths are all more or less equal, using a feature called word wrap which automatically moves the cursor to the start of a new line when it reaches a certain point, and even checking your spelling for you!

There are other advantages too – you can retrieve and amend old documents, juggle sentences and paragraphs without having to start all over again, import names and addresses from a special database and

There's far more to life than blasting monitor's full of little multi-coloured blobs or scrolling jerkily through a green and brown computer-generated terrain looking for threatening white triangles to fire at.

Dungeon Master kept me up 'til three in the morning on several occasions, I'll admit, but by and large the novelty of most games tends to wear off within a matter of weeks and after a month or two the game is at the back of your cupboard.

Productivity software has a far longer life – buy even the most basic wordprocessor today and you'll still be using it in a year's time – unless you decide to upgrade to a better one, of course.

There's also a far wider variety of serious software that promises many more hours of fun than your average game.

Once you've tired of the latest shoot-'em-up or solved the last few infuriating clues to that month-long adventure, there are at least a hundred and one other things you can do with your ST.

You might be a games player looking for something a little more serious or you might have been doing some wordprocessing or accounts, for example, but never considered some of the other options.

Over the next four pages, we'll show you some of the things you can get up to and show examples of the software in action.

When the game is up

Put your ST to work with our comprehensive guide to the serious side of home computing. Andrew Wright is your guide

Desktop publishing – hot off the press

The natural progression from word processing is desktop publishing. As its name implies, DTP is the art of publishing using a desktop computer like the ST and it involves laying out pages on-screen, using a combination of text, images and graphics.

While this is equally possible using a wordprocessor, DTP programs have far more sophisticated control over things like type and tend to use a wysiwyg (What You See Is What You Get) approach to page make-up.

In other words, the screen display closely resembles the printed page, allowing objects to be positioned with great accuracy. DTP programs

support text in multiple columns, often "flowing" around graphics and even scanned images. Text can be rotated and stretched too and many packages are even capable of full colour publishing – you could even produce the pages of this magazine using top end ST DTP programs!

The most widely used ST program is Timeworks, now up to v2.01. It is a simple frame-based design program that has thousands of followers worldwide.

Although lacking sophisticated tools like colour handling, it is a good

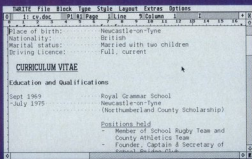
even insert pictures or diagrams in your documents.

Using a facility called mail merge you can send the same letter to hundreds of different people but still keep the personal touch by including each individual's name and address.

The wordprocessor that has become the standard on the ST is Firstword Plus. It has a user-friendly GEM interface, built-in spell checker and scores of other features.

However the quality of its output depends on the quality of the attached printer - it prints using the printer's own internal typeface. Products like Write On and That's Write use their own proportional typefaces that will print on almost any printer. If you really want your documents to have the edge, That's Write is top of the heap.

To give your documents a polished, professional appearance, That's Write is a must



Graphics – roll over Picasso

Graphics are undoubtedly the ST's real forte with custom graphics hardware and the ST's various screen modes on the one hand and some superb software on the other.

But what exactly do we mean by graphics? Do we mean drawing colour pictures using a painting program as the canvas and the mouse as the brush? Or do we mean creating detailed technically accurate illustrations for a book?

There are scores of levels in-between, not to mention other aspects like vector and bitmap graphics, raytracing, animation and rendering.

Vector graphics involves building up objects line by line or curve by curve but they can be edited or resized at any time, making them very flexible for illustrations and diagrams.

Bitmap graphics are much simpler, consisting of thousands of dots (or pixels) which can be painted or "sprayed" on to the screen. Smoother shading is usually possible as colours can be mixed at will, but once drawn it



HiSoft's True Paint – the latest graphics package for the ST/Falcon

is very hard to alter a bitmap other than by rubbing bits out and starting again.

Ray-tracing and rendering are all about adding realism to 3D outline objects using shading generated by the computer.

Programs for fun starts with a program like Prism Paint that can be used to create any picture you like from a semi-naked fantasy warrior to a spaceship from Mars.

Add simple animation features and you can create sequences that appear to move although really the program simply displays screen after screen at high speed.

Programs like DA's Vector can even animate high quality vector graphics, letting the program itself work out how to draw the frames in-between, for even smoother animation.

Emulation – a Mac-in-the-box?

Most people look at you oddly when you try and tell them about emulation but the fact remains that a good number of STs are often run either as PCs or Macs with the aid of some clever added hardware and even cleverer software.

Adding a hardware emulator lets you use different software and provides greater compatibility with the computers you might use at work.

Most famous of the emulators is the Spectre GCR cartridge from Gadgets By Small. It consists of a small plastic case

Finance – money makes the world go round

Sounds like an instant turn off, doesn't it? Fortunately money management doesn't have to be boring, as you can see from this month's feature showing you how to get the most from home accounting packages.

The main financial applications, of course, are spreadsheets which are essentially programs to manage large tables full of figures. Individual cells, rows and columns can be related to each other, making it very complicated to use but for financial or mathematical modelling they can't be beaten.

A number of different programs revolve round the basic spreadsheet, from statistical programs used in science and educational establishments to graphing and charting programs for the final presentation of data in a more easily digestible form.

These range from simple programs producing pie charts and line graphs to those with 3D capabilities that can import data from spreadsheets and databases.

Most such programs will print a range of output devices but others will save the graphs and charts as files that can then be exported for use with DTP programs or wordprocessors.



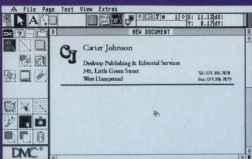
One of the ST's best known spreadsheets, K-Spread 4

place to start and it is capable of producing almost any type of document from newsletters, invoices and receipts to menus, membership cards, invitations, tickets, calendars, birthday cards and even your own headed stationery.

Top of the DTP shopping list is undoubtedly Calamus SL. With a price tag of over £500, you'd expect it to be good and it is. It can be used to produce literally anything, from a full colour advert in a magazine to a simple leaflet or poster, and there are professional users dotted around the country doing just that.

The good news for home users on a limited budget is that the original basic version, Calamus 1.09n, is available at a much more reasonable cost and offers similar quality of output and ease of use.

Calamus – a real heavy-weight at an excellent price. Headed stationery anyone?



Communications – talking to the world

We're always being told we live in the communications age but despite the images put about by the media of relaxed looking workers sitting at home in front of computers linked to the office by telephone line, there's not much substance in it yet.

The truth is that there is no substitute for face to face conversation and the most a modem, a fax and a telephone can do is ensure you stay ahead of your messages.

If you need to get involved, though, we have the technology, so to

speak. With some comms software and a modem, you can dial up bulletin boards or conferencing systems and exchange views with other users, upload or download software (including the latest programs from around the world) and access online databases on almost any subject you care to name.

If you want to know what the weather's like in Timbuctoo, a service like CompuServe will probably be able to tell you. You can send and receive faxes too, using software like Tele Office, which is especially

Education – please sir!

Educational software only just deserves a classification of its own, mainly because the bulk of it is actually games software written at a lower level and based on sound educational principles.

The rest comes under other categories – there are basic graphics, wordprocessor and DTP packages that teach children to write and spell, databases to teach information retrieval and various multimedia style programs that entertain while getting across important facts about subjects as varied as the solar system, Queen Elizabeth I and butterfly behaviour.

While younger primary school children get on better with games based on learning, older ones at the top end of primary school and the lower secondary school are often better off trying to tackle the harder tasks like loading their own programs, drawing with the mouse, typing sentences and stories and perhaps getting to grips with quizzes and similar puzzles. This kind of activity is aimed more at making them familiar with the technology than simply enjoying an amusing pastime with an educational flavour.



This graphic is courtesy of my eight year old and was done with Prism Paint



Spectre – an amazing bit of software

containing genuine Apple Mac ROMs and plugs into the ST's cartridge port with a secondary lead through to the floppy port at the back.

This enables it to read and write Apple Mac disks and while it does have problems with some makes of drive, it works extremely well. It is best in conjunction with a 2Mb plus machine and a hard disk when it really flies along – significantly faster than the Mac Plus it is emulating, thanks to better design and a much faster hard disk operation.

To cap it all, the SM124 and SM144 monitors provide a 30 per cent bigger screen than the standard Mac Plus and Classic. Who needs to buy from Apple?

With a Spectre and a 2Mb ST or better, you can work happily in professional DTP programs like PageMaker or Quark Xpress and even swap text and graphics files between the ST and Mac environments.

The other side of emulation is the IBM world where Compa's PC Speed reigns supreme. It is available in three versions, one with the old 8088-compatible chip and the others with 8 and 16MHz versions of the 80286.

While even the 286 is approaching

the end of the road, it will still run DOS applications with a good turn of speed in most video modes.

If you want to run Windows then forget it, but for DOS programs like databases and wordprocessors, PC Speed is an excellent way of getting real IBM compatibility – at a fraction of the price.

Programming – making it happen

None of us would be anywhere without the programmers who make it all happen. At a basic level, everything the computer knows was programmed into it by someone, including many things we take for granted like the way to format a disk and display an icon on the desktop.

The ST, like most other computers, supports a wide range of programming languages and development environments, from the straightforward Basic interpreter supplied with every ST to complex implementations of C such as



DevPac is a popular development environment now upgraded to v3

Music – rock 'n' roll on the ST

Music and Midi are often seen as black arts, best avoided by all but those in on the secret but while it's true that it takes some investment in extra hardware, there's a whole world of sound just waiting to be discovered.

At the cheap end there are basic PD programs that will let you arrange various sampled sounds to make up your own music. Some come complete with sampled sounds on the disk so you can get straight to work and try it out. If you want to move on, sampling cartridges like

AVR's ST Replay let you record your own sounds such as speech or recorded music and instrumental sounds.

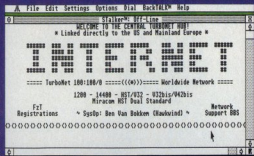
The essence of making real music on the ST is the power provided by the built-in Midi interface. Using the interface you can plug in a Midi-compatible keyboard (or even a Midi guitar if you want to) which lets you play, record and replay your own tunes, with one track superimposed on another to make it sound like a band or even a full orchestra. Synths, little boxes that contains hundreds of different sounds

useful in dealing with people abroad.

Most fun of all are the online games that let you enter strange worlds populated not only with monsters and traps but other online users with their own characters! You need to watch your telephone bills if you get involved in these games so a local BBS will probably be the best bet.

If you simply want to stay up with the news, both CompuServe (an international organisation which can often be dialled up using a local number) and CDX, a dedicated UK online service, can be accessed using special offline reader software such as QUICKCIS.

These will log on automatically, check for mail and new file uploads, and log off, without causing your phone bill to go through the roof.



Comms software STalker logging onto a bulletin board

the Prospero and HiSoft versions. C is an object-oriented language which makes it relatively easy to learn, though for the real eggheads there are always other options such as assembler and Pascal.

Perhaps most popular of all is the games programming language called STOS. This works very much like an enhanced Basic with a number of commands designed specifically for games players.

As you would expect, there are lots of commands for creating and moving sprites (small pictures that can be treated as complete objects) and different sounds. Several STOS games are included and a lot of ST users have created their own games quickly and easily using STOS. In fact, many of our best CoverDisk games have been written in STOS!

Databases – cold storage

The first computers were developed with two main objectives in mind, namely to perform difficult calculations that humans couldn't manage and to store and retrieve masses of data.

While things have moved on since then, data storage is still one of the main applications of computers. Using the simplest software, home users can store all sorts from Christmas card lists to catalogues of their CD and album collections, lists of club and society members or a complete record of all the fish you've ever caught or train numbers



Superbase – the top end of the ST market

you've spotted. The advantages are two-fold – they can be readily updated as things change and the information can be retrieved quickly and efficiently in several different ways using the specially designed reporting facilities included in database software.

On the ST you get a choice of powerful, fully programmable relational databases like Superbase Professional down to custom address managers like NameNet.

Superbase Professional can be configured to do almost anything using the immensely powerful programming language DML. It even supports text and graphic files so there's almost no limit at all to the type and amount of information you can store – provided your disk drive has enough room.

NameNet is an immensely powerful address manager with some sophisticated ways of linking data. It is also fast enough to work from a single disk drive and is highly recommended.

Names and other data fields can be linked for easy access so, for instance, when you are looking at the record for Atari, with one click of the button you could get a list Atari dealers, Atari repair services or even Atari software.

Image and video processing – Photo fun

Image processing deserves a mention of its own, particularly in conjunction with scanners. Hand scanners are available for around £100 and they can turn a colour or black and white image into a graphics file for you to play with or enhance using image processing software.

You can carry out all sorts of effects with the latest image processors like Retouche, True Image and Studio Photo or use a free program called AIM, available from PD libraries.

You can use the altered images on your own pictures by cutting and pasting or you can import them into DTP programs or wordprocessors to print them out in your documents.

In the same vein, colour or black and white video digitisers are available that will grab a sequence of frames directly from a video cassette recorder for you to edit, add or remove colours and replay at your leisure. You can even add an audio soundtrack!

With programs like Video Supreme you can also create stunning intros for your own home videos which can actually be recorded from your ST onto the videotape itself without any extra hardware.



Special effects in image processing are great fun as well as useful tools for designers and artists

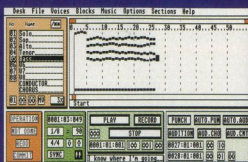


from cow bells to castanets, come next but these are really for semi-professional use and can be expensive.

The hardware is controlled by software called a sequencer which remembers the notes you've played and puts the sounds in the right order. It also lets you edit your work track by track until it sounds just right when played back through the hardware again.

Perhaps more important are the features which make creating music quite easy – you can record a sequence, perhaps a drum sequence several bars long and then play it over and over again while another track plays the tune, another the base and so on.

Accompanist, a shareware sequencer that introduces the world of Mid



And just to prove it we've got some crazy Christmas giveaways and prizes. A totally frivolous gift with every order over £5. Orders over £10 automatically enter you in our Xmas draw. Prizes to be won include commercial software, joysticks, sundries etc, with a main prize of PC-Speed Hardware, PC Emulator or the new Scanning tray with Merge-it software. Winners will be announced on these pages in February/March cover issues

BUSINESS

- BUS-02 **ST Writer Easy** (Good Word Pro) This is still one of the very best WP's around written and released into the Public Domain by ATARI's America. This version is a true EZ-Text (Working DTP demo) Working demo of excellent DTP program (Full Version Available on all for £22.50)
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- GEN-02 **ST-Tour** (Specially for beginners)
- GEN-04 **Your 2nd ST Manual** (A MUST)
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- MIDI-18 **D&C** & MIDI editor & instrument
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AUTHORS

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After my first steps into the public domain last month, I've become a drooling addict when it comes to getting my hands on the latest home-grown gear.

Whether it be raining, snowing, flooding or avalanching, I'm first at the Atari ST User letter-box waiting for that sound of a heavy thud as an envelope crammed with goodies drops onto the floor, and this month is even better than last...

Shockwave

Programmed by: State of Mind
Available from: New Age PDL Disk No C.I. 94

As soon as the title screen comes on accompanied by the beat of the sampled soundtrack, you know instantly that State of Mind, the company behind this great game, have taken a lot of time over the product.

Fortunately for the player, instead of the programmers chucking the gameplay out of the window and slapping each other on the back for an intro well done, the game gets even better.

Shockwave is basically Asteroids the 1993 version with extremely large knobs on where the gamer's objective is to amass as much of the mineral known as Tulon 359 as possible.

To do this, one has to make a short shopping trip to the centre of the galaxy and blast the asteroids that contain this precious substance.

Of course, there's no possible chance of doing this without competition from other equally determined shoppers - a bunch of money-grabbing illegal aliens.

The action is presented in a series of screens with your spaceship beginning in the middle. Like the old classic, asteroids lazily float through space and when shot develop a sudden split personality disorder and break up into small chunks of high-speed rock.

On destroying these, a mineral token is left behind that can be picked up and spent later at the local space DIY store on improvements for your ship.

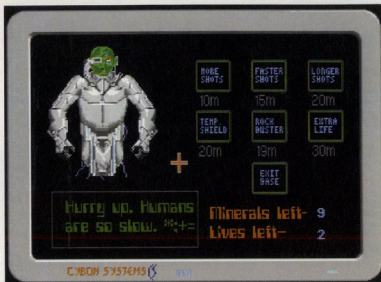
This reputable place is run by an ugly, green slob who has what some people might call an attitude which translates into English as being a git.

The power-ups available include more shots, faster fire rate, increasing the distance of travel, bombs to blow up all the small rocks on-screen, very temporary shields and extra lives.

Littered throughout many of the screens are the hostile forces bent on your destruction and their gain. They appear in various guises, from nuclear missiles to miniature death stars, all of which are equally destroyable and deadly. Unlike Asteroids, there is fortunately no

PUBLIC

As the evenings begin their irretrievable slip into darkness, Adam Phillips takes a long hard look at what'll keep you entertained over the following month



High quality and sound to match in Shockwave

inertia which in the original caused the player to jet straight into the side of a waiting super nova without as much as a "see ya later".

If it had been included, it would have been virtually impossible to get off the first level of Shockwave. Instead, the ship follows the direction in which the joystick is pushed, allows for split second manoeuvring. The quality is high, with sound effects to match. The only gripe is that the sprite of your ship is a little dull compared to the other graphics on offer.

Shockwave is the most addictive and best arcade game I've played in the public domain so far and State of Mind are obviously a team to keep an eye on in the future.

Walls of Illusion

Programmed by: Motelsoft and Software
Available from: L.A.P.D. Disk No G308

Dungeon Master has a lot to answer for - when it raised its head what seems to be years ago now, it introduced a new genre that spawned dozens of imitators across every machine on the market.

It was also responsible for becoming the ST's equivalent of Sonic and by shifting more Atari just so that the general public could get their hands on that game.

The flood of similar games pouring slowly



Shockwave - Asteroids with knobs on

Tip Top Horse

Programmed by: John Riley
Available from: L.A.P.D. Disk No. M150

Horse racing - what a bizarre sport. Not so much the actual event itself but all the trimmings that surround it. Middle-aged women sporting ridiculous hats trying to outdo each other for higher social standing and to be noticed by David Coleman; little men waving their arms around flapping pieces of paper or, in one particular case, a complete lack of a little man waving a flag about whatsoever.

Then there are the gamblers who bet on a sure thing only to lose the money which was supposed to be spent on the Sunday roast.

If you're one of those people who's frustrated with your present system involving word of mouth or simply closing your eyes and making the choice by wherever your finger rests then Tip Top Horse is the cheapest predictor money can buy.

While there's no definitive way to win, here is a system designed to increase your odds of success. Tip Top is presented through a selection of screens asking for various pieces of informa-

sector



Tackle Walls of Illusion – and polish up your German



into the marketplace seemed to fit into two distinct categories – clones or masterpieces which pushed back the barriers even further and broke new ground.

Walls of Illusion is more than just a clone – it's a carbon copy. What's more, it plays like a dream and appears to be better than most commercial game but is available on shareware. If you don't believe me, take a look at the screenshots and see for yourself.

So what's the catch? Unfortunately, the whole game is written in German which includes the instructions and all the signs scattered throughout the dungeons. The basic oper-

ation is very similar to DM and you're an experienced dungeoneer, you'll feel like you've come home. Magic, fighting, keys, treasure, throwing weapons, auto-mapping and many other elements all add up to what could be an excellent game.

These are all simple to work out and use but as far as the actual mission and clue gathering goes, unless you're literate in the German tongue or

don't mind looking in a dictionary all the time while playing, you may as well wait and hope the programmers will decide to get it translated into good old English.

I managed to progress a little way into the game and it appears to be set in some kind of tower where the object is to get to the top for whatever reason.

The title is devilishly hard; I still haven't managed to kill any of the foe who mercilessly hack the adventurers to death. They consist of skeletons dressed in military robes wielding swords among others.

Walls of Illusion is a great looking and excellent playing game which is in desperate need of translating so that everyone can enjoy it.

Kozmic4

Programmed by: Dave Henniker
Available from: L.A.P.D. Disk No. A36

Since the early days of Jeff Minter's psychedelic programs, computers have been seen as ideal tools for creating images for raves, parties, pop promos and album covers.

The results are normally described in two different ways – one school of dreadfully conservative thought feels that it's all rather pointless and a waste of anybody's time, while the other just sits there, nodding its head know-

ingly, hypnotised by the screen as the images unfold.

Kozmic 4 is a psychedelic pattern generator with impressive credentials to its name; it has been used on MTV and helped make the CD cover for techno-rock group Tranceport.

The actual program is laid out in a series of icons. Down the left-hand side are the different pattern making tools which range from spirals and loops to multi-layered squares and all manner of shapes accessible at a single touch.

All these are definable by simply pressing on the right-hand mouse button which brings up a series of pull-down menus where each attribute



Psychedelic patterns galore come easily with Kozmic 4

of a pattern can be changed to the desired effect. Once happy with the result, press the left-hand button and the image will be built up continuously until you've got the picture you want. The remaining icons make up a multitude of other image bending options.

Thirty preset colour palettes are available which are changeable and these can be cycled through individually or all together. As well as all this, you distort, mirror, zoom, size and break up any solid lined patterns with line editor.

All results can be saved and Neochrome piccies can be loaded to serve as backgrounds. If you're not satisfied with a particular texture you're using then there are another 65 or so on offer which can be laid on top of the pattern.

Kozmic 4 is easy to use and flexible. Satisfying results can be achieved in a short amount of time without having to plough through a mountain of instructions.

It is actually quite addictive and I found myself becoming a little hypnotised by the constant barrage of pulsating shapes and colours... perhaps I should go for a lie down for a little while, I feel a good time coming on...

tion on the race the user is intending to gamble on. The names, previous race positions, amount of courses completed, ground conditions and distance to be travelled are among the many questions asked about each horse.

Once all the data has been fed in, you're presented with a menu giving the odds of which horse the computer thinks will win.

The only negative points are the program's capacity to only be able to enter up to six horses and even that will take a lot of painstaking time at first. The process is supposed to become quicker with practice but, even so, get ready to be patient – it may well be worth it.

For all those budding gamblers among us, the author has even gone to the trouble of suggesting how one should go about sensibly betting and not blowing all your money away in the first session.

It's a simple and easy program to use; even though I haven't seen how accurate it is in reality, it does seem from the mass of questions asked that it could help the decision-making process. As always though, nature's unpredictability will probably throw a spanner in the works so don't expect any miracles.



Spiral circles? No problem.



Fight your way to the top in demon

Demon

Programmed by: Howard and Carl Tilley
Available from: L.A.P.D. Disk No. L50

Demon is the second in the line-up of Dungeon Master clones out this month. One of the package's strongest selling points is that it's actual written in English so if we're all going to have to wait for Walls of Illusion then this will keep the status quo ticking over for a while.

The game puts the player in a dungeon where the object is to escape and work your way up the career ladder from vagabond to those heady heights of success.

Along the way, monsters are fought, gold hoarded, many false walls walked through and floor pads stepped on that teleport the player to a treasure room – or alternatively, you may choose to fall down a bottomless pit and die horribly.

Up to the point I've played to, Demon doesn't appear to have the same complexity of puzzles found in similar titles – it has a much more straightforward approach and is surprisingly addictive.

Why surprising? Well, when the program has loaded in for the first time, you'll start to hunt round the screen to try and find where the actual action takes place.

On realising that it is in fact that tiny little window up at the top, your jaw will most likely drop and you'll wonder why you should bother at all.

Don't worry if you're a DM junkie, the game is worth playing despite the size – the graphics even though small, are clearly defined on the whole and some of the enemy sprites are very well drawn.

The control system is constructed to be easy to use from the word go. Everything is point and click and clearly laid out to cause the least

Attention all PD libraries

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amount of fuss in combat situations.

Magic lovers are amply catered for with the program offering the usual system of rune selecting to create the desired spell.

A special mention must go to the sound which consists of moaning, sheep baaing and what sounds like a chainsaw being revved up – don't ask me, I only review these games.

Demon is an above average stab at the Dungeon Master genre and with patience flourishes into quite an addictive game.

Atari Text v1.4

Programmed by: Steven Pemberton
Available from: Emerald City PD Disk No. SM37

The two most annoying features of television's teletext are having to wait for the page to change or flicking to a screen only to have a split second to read it before you have time to reach for the hold button.

Subsequently, if it's a cinema listing, a 15-minute wait ensues while it flicks slowly through 20 sheets advertising just one multiplex.

Atari Text – a database for your own text – on the other hand is much less of a hassle because it's not connected to a mainframe in London and has been well designed.

The set up is very similar to its big brother – by typing in a number on the main menu and a page of text comes up for your perusal. Even the blocky graphics have been incorporated as an added touch of authenticity but there will be proper graphics interface in a forthcoming version.

To enter your text, a separate wordprocessor or a working knowledge of ST Basic is required. The First Word package is still available in the PD library which incidentally is the software that the author used for the preset pages that come with the title.

By saving your document as Ascii into the pages directory it is possible to create a TV magazine in a relatively short period of time with satisfactory results. It is a bit of a fiddle trying to underline, lighten or place text in italics because a modicum of programming is required but perseverance pays off.

The program is ideal for network use and information



Competing against the clock in Snott 93 is exciting but ends in frustration

storage which can then be distributed into the PD library which in turn can use it as a disk cataloguing system.

Originally only a med-res utility, it now has a low resolution facility as well. Overall, Atari Text is a great idea that has been well implemented and is well worth checking out.

Snott 93

Programmed by: Powerlist Productions
Available from: Electric PDL Disk No. 11

The delightfully named Snott 93 tells the story of a race of humans not dissimilar to ourselves who are invaded by the Orbs. They spray the land with radiation and in man's darkest hour, scientists genetically build the ultimate fighting machine – a lump of bogey called Snott.

This incredible piece of mobile phlegm is able to walk and fly for short periods of time in the irradiated atmosphere. The mission on each of the several flick screen levels is to eat a certain amount of the Orbs which appear as red faces.

On its travels, Snott encounters the devastation of the enemies dealings – all wildlife is lethal to the touch because of the nuclear poisoning.

The game is amusing if a little rough around the edges. Competing against the clock can be quite exciting but usually ends in frustration as you just miss reaching the end of a level or die because the Snott's feet – I guess that's what you'd call them – just miss the edge of a platform. I'm a little unsure whether the collision detection is 100 per cent accurate but it doesn't affect the game too much.

While not up to the standard of Powerlist's other release Power Cut, reviewed last month, this is still a slice of relatively addictive fun.

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Two-piece ST

I have had my 1040STE for two years now and I have always envied those Mega ST/STE owners who have a PC-style case with separate keyboard.

Is there some sort of conversion kit which will allow me to put my 1040STE's innards into a PC-style casing, with the ability to have the keyboard separate too, or will I have to sell my current STE and buy a Mega machine?

A Strickland, Newcastle

Unfortunately, the Mega ST and Mega STEs are no longer manufactured, but I would guess you could pick one up second-hand. With regards to a conversion kit, System Solutions have such a product which will transform your STE into a sleek tower system, complete with separate keyboard.

The tower system is ideal in that it takes up very little space on your desk and there is lots of internal space inside the case for add-ons such as hard drives, extra floppy drives and other juicy upgrades.

The system, called The Lighthouse Tower by the way, costs £219.90. It is fairly easy to fit for someone with a basic knowledge of electronics, but System Solutions do offer a fitting service for those who don't relish stripping their beloved computer down to the bare bones.

For more information, System Solutions can be contacted on 0753 832212, or, for those with a modem, you can connect to System Solutions' Blackwater BBS, where you can get the latest product information and news. The BBS supports speeds up to 14,400 i/b MNPS. Set your terminal software to eight bits, no parity and one stop bit.

Playing PC games

With the Falcon's ability to use 256 colours and its internal ability to simply slot in a PC emulator, will it be possible to play PC games which use 256 colours once an emulator has been fitted?

R Smith, Sussex

I'm afraid that the reasons PC games do not run on PC emulators is not just because they have 256 colours. A PC computer screen is addressed completely differently than that of a Falcon.

Also, the sound effects in a PC game look for dedicated hardware boards such as the Roland Soundblaster and ADLib sound cards.

Anyway, it shouldn't be long before games specifically for the Falcon starts to appear, and when they do, they will be just as good, if not better, than the games available for the PC.

Newcomer questions

As a newcomer to the Atari ST world, I was hoping you can answer a couple of questions. I am very interested in art on computers and I would like to get either Deluxe Paint or Degas Elite - are they a good choice?

Is it worth getting a second disk drive and if so, which one is best? Also, is it possible to use a mono program on a colour TV, or will I need two monitors?

I hope you can help me. Keep up the excel-

lent work on the best ST magazine in the market.

L Blood, Fife, Scotland

Deluxe Paint and Degas Elite are both excellent packages. However, if you intend to create animations as opposed to static images, Deluxe Paint has a much more powerful collection of features for the animator to use.

Unfortunately, Deluxe Paint only uses low resolution, whereas Degas Elite works in all resolutions. Therefore, if you wish to create mono artwork, for use in desktop publishing for instance, Degas Elite will do the job.

Buying a second disk drive will certainly make life much easier if you find yourself having to swap disks frequently, or if you find yourself copying files from one disk to another. If you can afford to buy one, do it!

With regards to which drive to buy, it is a pretty difficult question to answer. The majority of drives sold by reputable manufacturers these days do not vary much. The points to watch out for are: How quiet a drive is it? Can it handle formats up to 82 tracks? And how much space does it occupy on a desk? All of

Changing port

I have recently built an input/output port for my ST which is plugged into the joystick port for the input side of things. Ideally, I would like to change this situation so that I can use the printer port, which can be used for both input and output.

However, I need to know how to change the data direction register which allows this but I do not know which one to alter [ST technical books are hard to find for some reason]. I would therefore be obliged if you could tell me the location of this register and how to change it from within GFA Basic 3? I have an ageing Mega ST2 by the way.

D Ford, Plymouth, Devon

I can't say I'm thoroughly familiar with low level programming, I referred this one to a friend who came up with the following explanation.

Bit 7 of register 7 in the programmable

technical letters • problems • suggestions

ADVICE

the major advertisers in this month's magazine stock good quality external drives, so phone around for the best deal.

As for using mono programs on colour monitors, yes it is possible. There is a specific type of utility available from many PD libraries, which, when run, emulates a mono screen on a colour monitor.

Unfortunately, there is a price to pay. Because the utilities emulate a mono screen,

programs running under them will seem very sluggish in performance. Also, the image quality will suffer, so using it for artistic purposes seems pointless.

It is possible to buy a monitor which can handle all resolutions the ST has to offer. Such monitors are generally called multisync or multiscan. This means they can handle the different frequencies of the ST's colour and mono modes (70Hz for mono, 50 or 60Hz for colour).

These monitors are obviously more expensive than a normal monitor but as the saying goes, "you get what you pay for". Ladbroke Computing on 0772 203166 have recently started stocking a multiscan monitor so check with them for current price and availability.

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

ST technical books

Is it just my local bookstore, or is there a very disturbing lack of technical books for the ST? After many months getting to grips with programming the ST in Basic, I have now decided to make a leap towards programming in assembler.

To this end, I eagerly snapped up the June '93 issue of Atari ST User with its excellent Devpac ST 2 CoverDisk giveaway (well done chaps).

Unfortunately, due to the very low level of programming which is inherent with assembly, the programmer needs to know about all the

know how to write for the machine, the greater the popularity of the ST will be due to new and existing software support available.

N Meyers, London

I sympathise with your predicament Mr Meyers. When I first set out to learn about assembly about two years ago, I had the same problem.

With the attention to detail and precise nature of assembly language programs, a comprehensive knowledge of the innards of the ST is essential for getting maximum power and portability from your programs.

I don't know why there has been a decline in ST technical reference material. The only publications available at present are somewhat outdated due to the new TOS versions available, as well as the new hardware in the Falcon.

Thankfully, this will soon change due to a American company based in Sunny Long Beach - Software Development Systems (aka SDS), 996 Redondo Avenue, #404, Long Beach, CA 90804 - are to release what is bound to be the most comprehensive Atari

price yet but it retails for \$49.95 in the good ol' US. As and when I can get a copy, I will be sure to tell you all about it in a future issue.

Mad-Dog dilemma

I have a Atari 520STFM, which I believe has TOS v1.2 in it. I was recently given the game Mad Dog Williams but no instructions (it's an original copy, honest. I even have the box).

However, when I try to load Chapter 2, The introduction, or Chapter 1, it fails and just hangs up. Is there something wrong with my computer or will I have to write off to the company for a replacement manual?

G McDermot, Suffolk

I checked with our resident Gamer gurus (Biffa and Simon) and they say the game requires 1Mb of memory. You will therefore need to buy a memory upgrade in order to play it.

Falcon controller

I have recently bought a Falcon and have had it for about two months now. There is a fair amount of software, both games and serious, available from numerous PD libraries, which is a good sign of support.

However, my main interest is in games and programming. I intend to do my own PD/shareware game and I also want to take advantage of the Falcon's analogue game ports as well as the normal joystick port.

Are there any analogue game controllers available for the Falcon, and if so, where can I get hold of one?

A Baxter, Rhyll

Yes, there is quite a good flow of games and utilities arriving for the Falcon from the PD and shareware authors out there. One particularly good game is the Falcon version of Oxyd, a great Marble Madness-type puzzle game.

With regards to availability of analogue game controllers, they are available directly from Atari (tel 0753 533344) for £29.99. They are also compatible with the ports found on the STE.

SERVICE

Darren Evans, Advice Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

major chips, such as the 68000, MFP, Shifter and ASCIA, as well as the actual operating system software which resides in all the STs.

What I require is a technical reference, ideally covering differences between operating systems and also incorporating Falcon details too.

Is there such a reference manual, and if so, where is it and why is it hard to find? Please, please help as I am finding it rather difficult to learn how to program the ST in assembly.

Surely the more programmers out here who

reference manual ever. The Atari Compendium (ISBN: 0-9638331-0-3) may well be finding its way over here soon. By the time you read this, it will have made its first appearance at the Southern California Atari Computer Faire (I did try my utmost to convince my editor to send me on this chore to cover it).

The mammoth tome has 860 pages bristling with information for programmers using C, C++, Assembler, Pascal and Basic, includes chapters covering all aspects of all Atari computers including the Falcon. There's no UK

Monitor or TV - that's the question

I have been using my 1040STE connected to a poxy little portable TV, which doesn't give the clearest of images and is practically on its last legs, for a year now. With my birthday about two months away, my parents are treating me to a new TV (yipee).

However, considering the fairly poor image quality compared to my friend's SC1224 colour monitor, I am tempted to buy his spare SC1224.

My problem will then be that if (or should that be when?) my old portable gives out, I won't have a TV in my bedroom to watch cultured programs like Home and Away.

If I do opt for my friend's offer, is there some device that can allow me to receive TV signals when I'm not using the monitor for my computer?

E Shackley, Tewkesbury

There is no way to receive TV signals on the SC1224 so you will be

without a TV should you buy it. However, there is an alternative.

If you want to improve the image quality for your computer and at the same time receive TV signals, you should look for TV models which feature a Scart socket - usually at the back.

A Scart socket is a 21-pin port, which you can plug your ST into via ready made ST-to-Scart cables, which are available from most good computer stores.

Although image quality is still slightly inferior to that of a dedicated monitor, I'm sure you will find it far superior to that offered by a normal TV connection.

When shopping around, ask the salesperson whether a specific model has Scart capability. It is also worthwhile ensuring the monitor has a FST (Flatter Squarer Tube).

This means the actual tube is not curved but is flat, which is ideal for computer work. The most popular Scart FST TVs seem to be the Sony Trinitron range.

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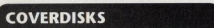
SOFTWARE - CDROM. The sample editor is a highly flexible "300" style program which allows compression or editing between any MIDI format (12/14/16, Mono or Stereo samples. Sampling rates of up to 44100 can be used, but the program can synthesise samples to practically any other speed.

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The system runs on any ST or STE with 512K (1MB min is recommended, and comes complete with hardware, software and comprehensive manual.

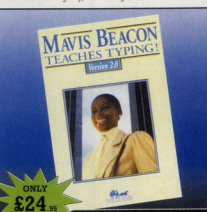


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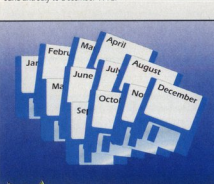


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Computer DomesTOS

Adam Phillips on the utility that kills all known germs... dead

No one knows exactly where or how computer viruses came into existence. Rumours range from the commonsensical (that they were pranks which misfired) to slightly paranoid conspiracy theories (a company locked in fierce financial battle decided to drop a bombshell into the competitor's disk drive...).

No matter what triggered it all off, the resultant reaction in the computer industry was one of sheer panic. To combat the fear of a complete nervous breakdown in consumer faith, developers turned their hand to making virus killers - programs that would hunt out the diseased devices and stamp on their heads until they ceased to breathe.

Subsequently, the problem appears to have been brought back under control with various programs covering all machines. The ST itself has over 65 known viruses which are split into two types.

The first is the boot virus that infects the system when you reset or turn the computer on with a diseased disk in the drive. It corrupts the boot sector which is located in track 0 of the floppy.

With each consecutive load, the virus copies itself into the RAM during start up. From there, it multiplies and once activated, begins to carry out its programming.

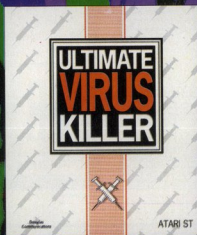
Link viruses are far rarer but more dangerous because they usually infect the hard disk drive which stores large amounts of information. They attach themselves to a particular file within a program and then multiply each time it's loaded.

In some cases, they are able to infect other files situated in the same directory and also embedded in the software, it is virtually impossible to destroy them.

The Ultimate Virus Killer from Douglas Communications is, in many respects, the most comprehensive virus detection, destruction and protection utility on the ST market.

Version 5.9 is the latest to be released due to the discovery of the Beilstein virus, a nasty piece of work which is one of the next generation of computer viruses.

It throws 12 destruction routines in the works by disguising itself as a MS-DOS boot sector such as one formatted



by TOS 1.04 and higher.

Apparently, only UVK 5.9 is able to recognise and destroy this latest disease at the moment. The link virus checker is now twice as fast and has capabilities for checking the Atari's Extended Control Panel.

When UVK is booted in, the user is presented with the system status screen. It documents memory configuration and also a list of system variables which, if suspicious, are highlighted signifying that a closer inspection is required.

It also identifies how many floppy, hard or RAM drives are attached. Clicking twice brings up a menu with five options - Search 'n' Destroy Viruses, Repair Disks, UVK 5.9 Info, System Status and Quit to Desktop.

The search and destroy device is the hub of the utility which scans through the disks hunting for boot and link viruses and is able kill boot sector viruses without harming other data or programs.

Simply select the drive to be checked and choose which of the two types to look for. If Boot is selected, there is a short pause after which a disk diagnosis is displayed telling the user if they have anything to worry about.

By using Link check, it is possible either to select a whole partition or individual files folders. To prevent the link virus from sinking its teeth in at all, the software offers an immunisation treatment which can be used on any file. It is important to note that once immunised,

it is not possible to edit or delete the files. UVK also allows the user to repair a corrupted BIOS Parameter block on any disk. Without it, the computer will not be able to understand the floppy's configuration and will therefore not be able to read it.

By clicking on the Repair button, the virus-ridden boot sector of a commercial piece of software can be replaced with the original from Ultimate Virus Killer's huge library of titles which range from Batman to Wizkid.

So if your favourite game has been destroyed by disease, there's a good chance that UVK is what you need.

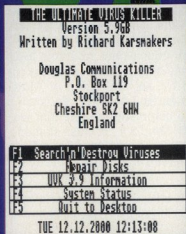
What impresses me the most about the utility is the user friendliness of the package. A help option can be switched on which explains each function clearly and concisely as it is selected.

The only negative is that if you don't own a printer, it's going to be a real pain having to access the instructions which are supplied as text on the disk, not as a separate manual.

Every three months or so, the user is able to upgrade to the latest version of UVK for £4.99.

Alternatively, you can subscribe for one year and receive 4 upgrades starting with v5.9 for £17.50. The new versions will be automatically sent out to subscribers as soon as they are available.

While not dismissing some of the excellent virus killer software available in the public domain, Ultimate Virus Killer offers a diversity matched by no other for the time being and is an excellent buy for a secure computing future.



The main menu - select Search and Destroy and let UVK do the rest...

BOTTOM LINE

FEATURES	Excellent Good Average Bad Appalling
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EASE OF USE User friendly and simple but a separate manual would have been good.	Excellent Good Average Bad Appalling
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We've got a lot to cover this month, so we'll start talking about GEM windows. The first thing to know about is a structure called a GRECT. When making use of GEM, you will need to #include two header files - OBDEFS.H and GEMDEFS.H - into your program.

You will also need to declare a specific set of global (extern) arrays of ints - but that list of arrays can be found declared in the MAIN.C file on the CoverDisk, so there's no need to go into it here.

Back to that GRECT. The name stands for Graphical RECTangle, and it is a structure which is defined in the standard header files.

It consists of four fields, each of which is an int, named g_x, g_y, g_w and g_h, and which hold, respectively, the x- and y-co-ordinates of the top-left hand corner of a rectangle and the rectangle's width and height.

I mention this now because GEM is split into two separate segments: The AES or Applications Environment System, and the VDI, the Virtual Device Interface. Confusingly, the AES and the VDI each has a different way of describing a rectangle.

The AES uses a GRECT, while the VDI describes rectangles using four ints which hold the co-ordinates of the top-left and bottom-right corners. Since the windows handlers are all part of the AES, we use GRECTs throughout in describing them.

With that little digression disposed of, let us now turn to the windows themselves, and the first stage is to create a window with a function call like this (all variables are ints):

```
wh = wind_create ( parts, loc_g_x,
loc_g_y, loc_g_w, loc_g_h );
```

The value returned by wind_create() is known as the window handle, and refers uniquely to the newly-created window. You must be sure always to check the window handle, however, since a negative value indicates that GEM cannot create a new window, usually because too many windows are open. The window handle, then, is only valid if it is greater than zero.

The final four parameters are the four fields, in order, of a GRECT describing the window's maximum possible size. It is usually advisable to use a GRECT which describes the size of the entire GEM desktop for this - and I'll mention in a moment how you can find out what that is.

Incidentally, most C compilers will be willing to accept:

```
wh = wind_create ( parts, loc );
```

Roy Stead turns his attention to GEM windows as we continue our definitive C tutorial



window), the MOVER (the striped bar across the top, used to move the window), the NAME bar (the text displayed inside the mover), the INFO line (a line of text immediately below the name bar), the FULLER (the box at the top right-hand corner, used to toggle the window size to full size or back again), the SIZER (the box at the bottom right-hand corner, used to resize the window), the horizontal slider bar (HSLIDE, at the base of the window), vertical slider bar (VSLIDE, at the right side of the window) and the various arrows at the ends of the sliders (UPARROW, DNARROW, LFARROW and RTARROW).

Now, wind_create() will create a GEM window for you, but will not display it on the screen. To do that, you need another function.

```
wind_open ( wh, windrect );
```

This will open the window whose handle is given by (int)wh - the value returned from wind_create(), remember? - at a position and size on the screen described by [GRECT]windrect. To close your window, use:

```
wind_close ( wh );
```

and when you've finished with the window, a simple wind_delete (wh); call will delete the window and free the window handle for future use. If you delete a window before closing it then

Through the square window

as identical to the earlier one, automatically expanding [GRECT]loc into its four fields before passing their values to wind_create().

One which does not allow this is the HiSoft C Interpreter, but since that program uses its own simplified GEM bindings and has problems working with standard GEM functions in any case, we will - from now on - be ignoring that package.

The interesting parameter in wind_create() is the (int)parts variable, since that tells GEM how you want your new window to look and behave.

As you will have noticed from the desktop, a window can have several different parts, such as slider bars and a name bar. All of this type of information must be contained in that (int)parts value, by bitwise ORing together the symbolic names of the parts you wish your window to possess.

The various parts of a window - with their symbolic names in block capitals - are called the CLOSER (the box at the top left-hand corner, used to close the

there is no reasonable way of removing the "dead" piece of window-related graphics from the screen. Even more serious, failing to delete a window will cause serious problems for any other programs which need windows, since GEM can only support a very limited number of windows at any one time.

It is, then, vitally important to make sure that your program closes and then deletes all windows before it terminates.

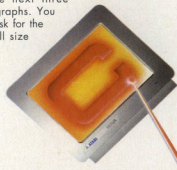
There remain only four window-related functions for us to look at. The first is an immensely useful function called wind_get(), which looks like this:

```
wind_get ( wh, info, &foo_g_x, &foo_g_y, &foo_g_w, &foo_g_h );
```

wind_get() will obtain some specific information about the window whose window handle is given in (int)wh, with the information being "returned" in the fields of [GRECT]foo. Note, incidentally, that it is not possible to use "&foo" as

shorthand here. Can you see why? If not, think about the size and numbers of points.

The interesting bit is the `{int}info` value, which tells `wind_get()` what information you wish to be given about the window, by passing one of the symbolic names given in block capitals in the next three paragraphs. You can ask for the overall size of the



window (`WF_CURRXYWH`), including the "borders" such as slider bars, and so on. Alternatively, you may obtain the size of the working area of the window (`WF_WORXKYWH`), which refers just to the central section, or the window's maximum size (`WF_FULLXYWH`) or the previous size of the window (`WF_PREVXYWH`).

In all of these cases, `{GRECT}foo` will be set to contain the information desired in the usual format.

If your window has a horizontal slider bar then you can obtain the position (`WF_HSLIDE`) or size (`WF_HSLISIZ`) of the slider. The position is given as a value from 1 to 1,000, where one is at the far left of the slider bar itself, and the size is given as a value from 1 to 1,000, where 1,000 indicates a slider which entirely fills the slider bar.

Similar information can be obtained about vertical slider bars using the `WF_VSLIDE` (position) and `WF_VSLISIZ` (size) symbolic names. In all of these cases, the value requested is "returned" in `foo.g_x`.

Three other requests refer to the visible portions of your window. To obtain the handle of the topmost ("active") window - "returned" in `foo.g_x` - use the `WF_TOP` symbol. More complex are the `WF_FIRSTXYWH` and `WF_NEXTXYWH` symbols, which we will cover at a future date.

Since a positive window handle refers to a valid GEM window, while a negative handle indicates an error, you may be curious about the value zero, which is neither positive nor negative. The zero window handle refers to the GEM desktop. It is generally not a good idea to change the attributes of the desktop, but you can easily discover information about it using `wind_get()`.

Thus, to put the size of the entire GEM desktop into `{GRECT}foo`, you

would simply use:

```
wind_get ( 0, WF_CURRXYWH, &foo.g_x,
&foo.g_y, &foo.g_w, &foo.g_h );
```

The companion function `wind_set()` is called - appropriately enough - `wind_set()`. This is used to set a specific attribute of a specific window, and looks like this:

```
wind_set ( wh, info, foo );
```

The overall position and/or size of the window referred to by the window handle `{int}wh` can be adjusted by passing `WF_CURRXYWH` in place of the `{int}info` value, and putting the new screen rectangle description into `{GRECT}foo`.

If your window has sliders then their sizes and positions can be adjusted by passing `WF_HSLIDE`, `WF_HSLISIZ`, `WF_VSLIDE` or `WF_VSLISIZ`, with the new value in `foo.g_x`, while any window can be made active - "brought to the top" - by passing `WF_TOP` in `{int}info` and that window's handle in `foo.g_x`. All names and values, of course, can be interpreted in the same manner as they were in `wind_get()` calls.

Two "new" things which can be set are the text of the name bar and the info line of your window. If it has either or both of these attributes then you MUST set their values BEFORE opening the window with `wind_open()`.

The symbols to pass to `wind_set()` are `WF_NAME` and `WF_INFO`, respectively, with a char-pointer-to-the-string cast-to-long taking the place of the `foo.g_x` and `foo.g_y` fields in the function call - the final two values are ignored, but must be included, of course - like this:

```
wind_set ( wh, WF_NAME, (long)"Fubar",
0, 0 );
```

Alternatively, and for more portable code, you could use the more complex form of the same basic expression, which is given in the GRAPH.C file on the CoverDisk.

You will have noticed that the size of the working area of your window varies according to the attributes the window has and the screen resolution.

Happily, GEM provides a function which, when given a GRECT describing the working area, will calculate a GRECT for the overall window size, and vice versa. That function looks like this:

```
wind_calc ( flag, parts, foo.g_x,
foo.g_y, foo.g_w, foo.g_h, &bar.g_x,
&bar.g_y, &bar.g_w, &bar.g_h );
```

Here, `{int}parts` has the same meaning as in the `wind_create()` call we discussed earlier, while `{int}flag` can have one of two values.

If `{int}flag` is given the value `WC_BORDER` then `{GRECT}foo` is taken to describe the working area of the window, and the overall size and position is "returned" in `{GRECT}bar`. Contrariwise, if `{int}flag` is `WC_WORK` then `{GRECT}foo` is taken to be the overall size/position, with the working area placed in `{GRECT}bar` after the function call.

The final function call to think about is the `wind_update()` call. When adjusting the sizes or positions of windows, drawing or redrawing the window, and so on, it could be most annoying if the user were to try to move the window in the middle of your task, or (for example) a desk accessory were to try to write over your window at that time.

To avoid these kinds of problems, we send a message to GEM before we perform such actions, to tell it "Hold it right there, I'm busy just now, OK?" When we've finished we send another message to tell GEM that it's now safe to proceed.

To send these messages, we just use:

```
wind_update(BEG_UPDATE);
```

before performing our task, and then

```
wind_update(END_UPDATE);
```

once we've finished.

All that remains to do with windows is to talk about how to display things inside their borders, and what to do when the user does things like moving them around the screen.

There are some examples of both of these things in the GRAPH.C and MAIN.C files on the CoverDisk, but we'll be talking about them in some detail next month.

Getting to grips with C

Did you miss out on a free copy of HiSoft C, given away with the April issue of Atari ST User?

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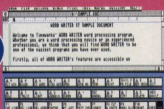
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This software was on
the November
issue's CoverDisk

Don't know your RAMs from your ROMs? Confusing your IDEs and your Ascii? Then peruse Atari ST User's highly selective, subjective and utterly indispensable...

Bluffer's guide to computer speak

- Apple** The manufacturer of business/city computers for people too snobby to use IBM PCs (or Ataris).
- application** A program designed to achieve a goal, as opposed to providing entertainment. Wordprocessors, databases and spreadsheets are all examples of applications.
- Ascii** American Standard Code for Information Interchange, or a set of letters, numbers and other characters which is used as a standard way of electronically storing and transferring text the world over.
- assembly** Not when you stand still and try not to laugh at the headmaster's stupid hat, but a "low level" (ie hard to learn) computer language which gets right inside the machine, yielding untold joys for all with the patience to learn.
- Basic** Beginners' All-purpose Symbolic Instruction Code. A user-friendly computer language, of which STOS is a popular, games-optimised ST variant.
- bulletin board** Usually run by an enthusiast, a bulletin board (or BBS) is an electronic "magazine", which you access by phone from your computer, and where you can "talk" to other users, give and take software (not commercial stuff, of course), read and send messages and catch up on gossip from around the world.
- bubble jet** A modern printer technology, involving the clever application of ink using tiny bubbles which give a smoother finish on paper than the more common dot matrix variety.
- C** A neat computer language, favoured by experts due to the methodical approach it forces the programmer to adopt to his/her work.
- co-processor** Normally referred to as a "maths co-processor", this is a chip you fit inside your machine to work alongside your CPU, relieving it of some of the strain and so speeding up the computer.
- coders** A breed of people who only come out at night, have pallid features, and program computers.
- Commodore** The manufacturer of computers owned by teenagers who their parents had bought them Mega Drives.
- comms** or communications. Usually using modems, the practice of computers "talking" to each other across phone lines.
- composite** The composite output on your computer is where the TV lead plugs in (composite means that the red, green and blue colour information which goes to make up your computer's signal output to the television are all mixed together in one lead). Composite signals lose a lot of quality when displayed, hence the wavy lines and blurriness when you look at your ST's display on a television.
- database** Like a card index storing names, addresses, memberships or whatever, but far more flexible... and far faster to use (once you've typed all your information in).
- debug** The process by which glitches are "ironed out" of programs by coders.
- disk** A means of information storage. A floppy disk is one of those little 3.5in pieces of plastic such as the little number garrishing the front of this very mag, containing - in our CoverDisk's case - material of immeasurable worth. A hard disk can store much more than a floppy and is desk-ridden and permanently cabled to your computer. An optical disk is like a hard disk but using CD-style technology (although you can record on it too).
- disk drive** The hardware which reads and writes onto disks. More specifically, you can get hard drives for hard disks as they are also known), floppy drives, for floppy disks, optical drives and so on.
- dot matrix** The most common type of computer printer, which is rapidly being superseded by more modern technology, notably inkjet and bubble jet printers, which give superior results (at a higher cost per page).
- double click** Clicking the mouse button twice in quick succession in order to instruct the computer to do something.
- DTP** desktop publishing. The electronic creation of published material, using specialist software, scanners, laser printers... the works! Atari ST User is desktop publishing.
- email** not a boy raver, but any form of electronic mail sent between compatible equipment.
- emulator** a piece of hardware which makes one computer act like another, typically to make, say, an ST into an IBM or a Macintosh.
- Falcon** Atari's newest computer, and one which represents a great leap forward in technology for the firm's range.
- font** A set of letters of the alphabet, numbers and so on, all in a similar style. This sentence is "set" in the Futura font, for example.
- format** When you buy a floppy (or a hard) disk, it contains no information whatsoever. To make it useful for storing information on, your computer must first endow the disk with some basic information - sort of like putting up shelves before putting the books onto them. This is called formatting. As all computers format their disks differently, it is usually impossible to swap disks between them.
- Fortran** A computer language.
- GDOS** Atari's Graphics Device Operating System, which is extra software to improve the ST's handling of fonts, and special graphical devices such as pointers.
- GEM** The title of Atari's desktop (the equivalent of Windows on the PC and Workbench on the Amiga).
- grab** A computerised copy of an electronic picture, such as a TV or video frame or, say, a sheet in a computer game. Atari ST User used grabs extensively, especially in its Gamer section.
- grabber** A piece of hardware used to obtain grabs.
- hack** To gain unauthorised access to another's computer/computer system. Usually conducted over the telephone using a modem, hackers do it for the challenge. They're also breaking the law.
- hi-res** or high resolution. 640 pixels by 400 on an ST's screen. Clear and detailed, the ST's hi-res mode is mono and ideal for complex programs such as professional music software, computer-aided design and other tasks requiring a lot of information to be displayed on your screen at the same time. Requires a special monitor.
- IDE** A type of disk-handling format.
- inkjet** A modern printer technology involving the squirting of ink onto paper by a printer in order to achieve neater results than a more traditional dot matrix printer.

Bluffer's guide to computer speak

- joystick** Rather dubiously named when you think about it, a joystick is the classic means of game control, comprising Fire button/s and a long, stiff shaft.
- k** Short for kilobyte.
- kilobyte** 1,024 bytes, not 1,000 as commonly assumed.
- Mb** Short for megabyte.
- med-res** or medium resolution. 640 pixels by 200 on an ST's screen. With up to four colours, this is the ideal screen resolution for many useful software packages, such as wordprocessors, databases and spreadsheets.
- megabyte** Strictly just over a million bytes, often mistakenly assumed to mean a million bytes – as you may expect, the discrepancy is of little practical importance.
- memory** Silicon chips which can store information, of which there are two kinds – ROM and RAM.
- Midi** Musical Instrument Digital Interface. Allows the ST to communicate with suitably-equipped professional electronic musical equipment. Has revolutionised the way most modern music is created.
- modem** A piece of hardware which plugs into your computer allowing it to connect to the telephone network. Nowadays offer really high speed transfers, fax facilities and the like.
- monitor** A dedicated computer display, like a TV but capable of far clearer, stiller results. Thus much easier on the eye.
- mono** Comprising of two colours (as in monochrome). Mono monitors are used by Atari high resolution screen modes and display much detail crisply and clearly.
- mouse** The small unit which plugs into your Atari and allows you to move the "mouse pointer" around the screen in order to operate the machine.
- multisync** A type of monitor which can handle varying types of output from a computer. As the Falcon has so many screen modes and resolutions, a matched multisync is pretty much a necessity.
- 9-pin** A type of dot matrix printer. A combination of nine-pins is used to print each character, by the pressing of the pins onto a ribbon between them and the paper.
- operating system** Software which tells your computer how to behave when you switch it on. Atari's operating system is TOS which tells your machine to display the GEM desktop and allows you to do basic tasks such as formatting disks and so on.
- Pascal** A complex computer language.
- platformer** All started by Manic Miner on the ZX Spectrum, platform games are at present notorious for all being exactly like each other (yawn).
- printer** A piece of hardware which can print information onto paper, like a typewriter.
- program** Anything which makes your computer do something in a program. So the desktop you see when you switch on is as much a program as the games you buy on floppy disk.
- PSU** Power supply unit.
- public domain** Software for which the author expects to receive no payment. Distributed by mail order firms for little more than the price of a disk.
- Quantum** One of the best known and most respected computer hard disk mechanisms is made by Quantum.
- RAM** Random Access Memory. Information stored on a silicon chip which is lost when you switch your computer off. RAM typically holds any program you are currently using, a game you might be playing, or data you are working on.
- ray-tracing** The computer generation of real-life objects and scenes. You design your object, set up "lights" as if you were going to take a picture, apply other "tricks" and then leave the machine to "render" your image by performing millions upon millions of calculations. The results are usually worth the hours of waiting for!
- read** What you're doing now, or what your computer does to a floppy (or hard) disk when you instruct it to.
- RGB** The type of signal your computer outputs at the monitor socket, carrying the information for each separate colour (the three of which go to make up your computer's display) to your monitor.
- ROM** Read-Only Memory, meaning something stored permanently on a silicon chip which you can "read" but not "write" over. Part of Atari's operating system are in a ROM inside your machine.
- scan** n. A computerised copy of a 2D picture or diagram, much used in DTP. v. The act of scanning an image.
- scanner** A piece of hardware used to scan images.
- screen mode** See screen resolutions.
- screen resolution** The number of pixels across and the number of pixels down the display output of your computer. 640 x 400 means the display has 640 pixels across and 400 pixels down.
- SCSI** A sophisticated disk-handling format, very popular in the IBM/Apple worlds and a refined version, SCSI II, appears on the Falcon.
- Seagate** A well-known computer hard disk mechanism.
- shareware** Available for little more than the price of a disk like public domain software, but the user is expected to pay a nominal fee should s/he find a use for the software.
- 68000** The name of the CPU in the ST.
- 68030** The name of the CPU in the Falcon; it's faster than the 68000.
- shoot-'em-up** Space Invaders was the first, now there are thousands – the classic "one of you, three billion of them" type game.
- SpeedoGDOS** Atari's improvement on GDOS, whose major enhancement is the ability to handle outline fonts (which can be scaled to any size).
- spreadsheet** A numbers-based program, which can automatically track and alter your financial predictions depending upon the information you give it. For instance, should you tell a spreadsheet looking after your company's assets that the interest rate has risen, the program will immediately recalculate how this will affect your whole financial life. Takes a lot of the tedium out of accounting and bookkeeping!
- ST** A computer manufactured by Atari (yes!) which comes in a number of guises including STF (an ST with a floppy drive); STM (with a modulator for use with a television set); STE (IE for Extended, meaning better) and Mega ST (meaning, erm, mega-tastic). The STM and the STE are the most common models.
- subscribe** What you should do to Atari ST User.
- sysop** SYSTEM OPERATOR. The person responsible for running a bulletin board.
- TOS** Various standing for The Operating System or Tramiel Operating System (after Jack Tramiel, Atari hard head) this is the bit that makes the ST behave like an ST and not any other computer. It displays the GEM desktop, for example, and handles disk formatting, copying and the like.
- 24-pin** A type of dot matrix printer. A combination of 24 pins is used to print each character, by the pressing of the pins onto a ribbon between them and the paper.
- typeface** A collection of fonts, for instance an italic font, a bold font and a normal or "roman" font, which share a common name and look. For instance, Times is a typeface comprising of a number of fonts such as Times Roman, Times Bold and so on.
- utility** A program used to improve or help the running of your machine. Programs which help to repair damaged disks are a good example of utilities.
- v** Often seen before a number after a program name (such as Protext v6.0) meaning "version" or "this edition". As programs age, bugs are ironed out, new features are added and the v number rises.
- wordprocessor** A program which allows the typing, altering, correcting, spell-checking and printing out of a written word, be it a letter, article, or whatever. I'm using a wordprocessor at the moment to type this.
- write** Your computer's storing of data on a floppy drive, hard drive, optical drive, tape streamer... indeed, upon any means of data storage.

GAME OVER!

GAMER

DOGFIGHT

OK Fido!
Underneath the fighting
tree. Right now!

Whimper!

**Reach your
prime and
win a lot in
MicroProse's
latest flight
shoot-'em-up**

**REVIEWS... EUROPEAN CHAMPIONS • DREAMLANDS COMPILATION •
WORLD CLASS RUGBY AND MUCH MORE...**

**ALSO... THE COMPLETE GAMER GUIDE TO ZOOL • ALL THE LATEST BUDGETS
REVIEWED • PLUS NEWS ON THE LATEST HAPPENINGS IN THE ST WORLD...**

Gamer GLOBE

And finally... news about guns,
Graham Taylor and, err Gloria Estefan?

Sensible Software are becoming known for simply producing "football games", but this is not the case because over the years Sensible have amassed a few games that would more than impress anyone.

Moving away from the football, Sensible bring us Cannon Fodder. At your disposal are over 300 soldiers with different skills. You can choose a platoon of crack troops and send them into battle.

There are 100 phases of action with 30 different missions and five terrain types, including an English country village, the jungle and the Arctic wastes.

Have you got what it takes to track down the abandoned helicopter in the middle of the desert and rescue Mr President from the enemy base before everyone gets blown to smithereens by heat-seeking missiles?

Do you have the guts to negotiate Arctic wastelands to find the scud missile factory surrounded by treacherous booby traps? Have you the mettle to enter a heavily occupied sys-

Great Guns!

tems before returning to the steamy jungle with only a few jeeps at your disposal to protect

the natives from advancing tanks? If you answer "yes" to any of these questions then you will be an ideal candidate for Cannon Fodder.

Just like a real military big cheese, you give the orders from the veritable safety of an armchair. You can select a leader and tell the boys to follow him, or send in a lone soldier or a handful of guys with orders to only fire when fired upon.

When it comes to aural accompaniment, Cannon Fodder cannot be beaten - every event has an associated noise. There are spot effects and spoken words galore! The graphics in Sensible's soldier'em-up are small, but very well defined and look very impressive, as you can tell from the screenshots. Cannon Fodder will be available within the next couple of weeks. Prices have yet to be determined, but you can expect to pay around £25.

Games tips from Euro champion

Games players will soon be able to pick up hints and tips on how to improve their scores from a new video presented by Dominik Diamond, former presenter of Channel 4's Gamesmaster.

Power Play shows many of the techniques used by UK and European games champion Danny Curley, a product evaluator in the games software industry.

The tips contained in the video work across all formats of home computers and consoles and include strategic skills, joystick control, screen positioning and weapon techniques. The video will cost £10.99.



HMV open world's largest games store

HMV have just opened the world's biggest computer and video games store and claim it offers games players the largest range of leisure software anywhere.

It has been named Level One and can be found on the first floor of the firm's flagship store at 150 Oxford Street, London.

Customers enter through a futuristic tunnel which opens into a huge floor featuring surround sound, a video games challenge area and mood-altering lights.

The atmosphere of the store changes depending on the time and day of the week.

During mid-week lunch-times, for example, the mood is soft and relaxing but on Saturday's when younger buyers visit the environment is "fast, brash and hypnotic".

Customers are able to play latest games in a challenge area where up

to four teams - eight players in all - can compete against each other simultaneously.

It is expected that around 200 major contests will be held every year, with each lasting between two and four hours. Anyone can play and there are T-shirt prizes for winners. "Level One offers the greatest choice in the most

fantastic retail environment," says David Terrill, the company's marketing director.

"It underlines HMV's commitment to this expanding market and clearly signals our intent to become the UK's premier games retailer."

The company plan to have games departments in more than 40 stores - nearly half their chain - by the end of the year.



Level One: The world's largest games store opened recently

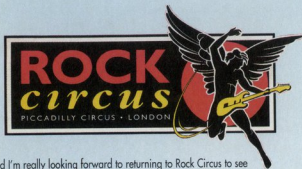
Immortal Gloria

Gloria Estefan will be celebrated with a permanent tribute at Madame Tussauds Rock Circus in London in the form of a unique wax bust to be sculpted by the renowned Madame Tussauds sculptor Paul Bainbridge.

Gloria recently had a sitting at the world famous Madame Tussauds studios in London where exact measurements were taken with calipers and detailed photographs from all angles, which will be used as reference material for the sculptor.

Gloria amazed at the attention to detail said: "Before the sitting I never knew exactly how far apart my eyes were and I never realised just how many measurements one person can have.

"It is a pleasure and an honour to be included at Madame Tussauds Rock Circus



and I'm really looking forward to returning to Rock Circus to see the completed sculpture."

This honour has been given to Gloria in recognition of her phenomenal worldwide success and popularity as a recording artist including sales of over 50 platinum albums worldwide.

Gloria, a daughter of Cuban immigrants, is regarded as an ambassador for all the Americas and this latest tribute adds to a long list of awards including cement impressions of her hands and feet at Hollywood's Hall of Fame. The sculpture will take six months to complete and Gloria will make a special trip to London to unveil the figure.

You may be thinking about what all this has to do with ST games. Well, the answer is absolutely nothing at all, but we at Gamer thought you'd just like to know. Hey, if any other international recording artists get the chance to be immortalised in wax, we'll be sure to let you know as soon as it happens.

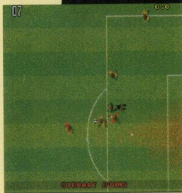
The Return of Mr Turnip Head

In June last year, Graham Taylor's Soccer Challenge was released to great reviews and entered the Gallup Top 40. Despite the national squad's rocky performance, Soccer Challenge continued to be a top seller, peaking at number 4, and was still in the Top 40 this May almost a year after its original release.

This is no mean achievement because let's face it, Graham Taylor wasn't the most popular man in England back then. In fact, I do believe he is on the Top 10 list of the most hated men in Britain, but hey, Krisalis rode the storm of hate and produced a rather good football management simulation.

They are now about to release the game on their Buzz budget label for a measly price of only £9.99. The inclusion of the Premier League, the three divisions plus the GM Conference all contain editable squads with real player names along with a host of other features.

All these factors make Soccer Challenge more than a match for similar simulations being offered for twice the price and it's a right bargain if ever I saw one.



INNARDS

And it's goodbye from...

REVIEWS-REVIEWS-REVIEWS

EUROPEAN CHAMPIONS72

Ocean hit the footy trail and lay down their attempt to beat Kick Off and Sensible Soccer to the top of the charts

WORLD CLASS RUGBY72

Jump in the scrum, score a few tries and then leap into the bath for a chorus of some crude and lewd rugby songs

DOGFIIGHT74

Take to the skies in your Sopwith Camel, as you take on the might of today's modern aircraft in MicroProse's latest flight simarama

DREAMLANDS79

Stormlands, Ishar and Transarctica have all been compiled into one fantastic pack courtesy of Daze Marketing. You lucky, lucky people!



REGULARS-REGULARS-REGULARS

CHEAP SEATS80

Starved of decent games because you can't afford them? Well, fear not because look at all these brilliant bargains!

CHEAT MODE:

ZOOL83

Oh yes 'tis the complete guide to Gremlin's platform romparound! What would you do without us?

START MATCH

ARSENAL
MANAGER PLAYER

ASTON VILLA
MANAGER PLAYER

4 SKILL
LEVEL

NORMAL
PITCH

NORMAL
PLAY

FOUR
MINUTES

NO
WIND



EXIT

Sing along to
the Options
menu and its
mind-blowing
decisions

GAMER GOLD

TACTICS



Here's where it
all happens. Big
decisions are
made on the
tactics screen

ATTACK

ZONAL

EXIT

Football is not a funny old game – in fact there's nothing funny about it at all, although it has to be said it's far more humorous on a computer than in real life.

All soccer die-hards will be looking at the page now with their faces a mixture of outrage and amazement. So, to validate such an outlandish statement I'll have to justify it.

How many of you out there in the real world have in your dim and distant, or indeed current life, been involved in what is termed as amateur football?

Sunday League, as it's better known, is where most of us finally realise we're not going to make the England squad and resign ourselves to the fact that we don't possess a Maradona-like touch.

Subsequently we lapse into some poor footballing habits and start working out in a different way. Training starts at 7pm sharp in the Stud and Whistle where you meet up with Gazza, Bozza, Sniffa, Frogga, Psycho, big Dave and the rest of the squad.

By nine o'clock training's well under way,

Sniffa, the team's excrement expert, has already filled a pint pot and his jeans, to jubilant cries from the rest of the squad.

At 9.45pm, Spud O'Reilly, manager of the team, stumbles into the bar. Eleven pints of Guinness have not stood him in good stead and within five minutes he has caused a brawl for vomiting at the Salvation Army's Warcy representative.

As the dust settles the last of the squad are ejected and lie prostrate on the pavement. However, being the keen hardened pros they are, the lads vow to train on and the Dog and Lamp Post is only around the corner.

As closing time looms the team push themselves to the limit with a range of interesting

exercises. These range from Last One to the Bar to a Girlie Pull, through to Fizz-Buzz and Two Fingers.

Next morning at ten, Spud stands in the cold morning air waiting for his team of primed superhumans to arrive.

Time marches rapidly towards kick-off, the opposition have arrived, changed, complained to the ref and still half the squad are AWOL. Two minutes before kick-off Bozza screeches into the car park in his sporty XR3 clone. Out climb the missing players all looking the worse for wear from a night on the wrong side of a police cell. There follows a frenetic exchange of apologies, kit and bowls as panic sets in to beat the referee's fine

for late kick-off. On the stroke of eleven, The Butcher's Offal 1st XI stride forth into sheets of rain and the smell of Ralplex and curry.

There then follows 90 minutes of bone-crunching braying, as 22 mules wobble around in a foot of mud, swearing, fouling and sweating last night's training session out of them.

Fortunately, this form of soccer is a Wembley's-length away from European Champions. Ocean's latest foray into footy simulation puts you right in the studmarks of (as the name suggests) European football.

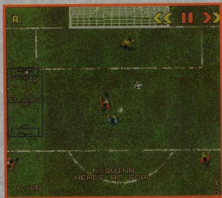
The first thing to say about Euro Champs is that although it's basically a football title to play against your ST or a few mates, there's more to it than that.

For one, EC gives you the opportunity to make tactical decisions about your players

**Can you kick it? Yes you can!
Well you can waggle your
joystick, with Ocean's new on
yer 'ead-tastic footy frolic**

EUROPEAN

The overhead view gives us a glorious view of the Manchester derby from the Michelin balloon. Here we see donkey Quinn convert a David White hoof, with you've guessed it his head



before the match. Employing a very simple system, you can decide how your players will move on such things as corners and goal kicks. You can implement a heavily defensive system (à la Manchester City) or thrill the crowd with wing play and overlapping full-backs (like Villa always do).

Within the main mouse-controlled icon menu there are more options than Kevin Keegan has curly ringlets. The choice is yours to decide from every top flight club from the main leagues within Europe.

You can alter the pitch, introduce wind, give the ref a tolerance for showing funny coloured cardboard, play in league or cup, and that's just the beginning.

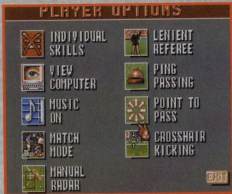
Once you've selected another screen you can alter

your players attributes, opt for equal skill within your squad or set individual levels of skill for each player. This is very handy for the custom teams option, so you can put yourself up front and can give yourself loads of skill. After you've pondered over the plethora of choices an offer you might actually get to the touchline.

The play itself is very reminiscent of Emlyn Hughes' International Soccer - this is because they've both been programmed by Audiogenic.

European Champions differs from rivals like Kick Off and Sensi Soccer in its graphics and presentation. For one, in EC the sprites of the characters are a lot larger and detailed than those in either of its rivals.

The characters being larger means that unlike Sensi you only get a portion of the pitch on your screen at one particular time. However, a radar gives you an overview of



What more menus? Yes I know, but they all go to make it a more realistic game of computer footy... if there is such a thing

the positions of the players and the player in possession. This is the kind of tool I could do with on a cold Sunday morning when a 17-stone abattoir worker is bearing down on me. The other thing to mention is that to all intents and purposes EC is two games, because you can view play from overhead or the contemporary horizontal left-right view.

The play itself takes a little coming to terms with. Euro Champ uses a slightly different system to other footy titles you might have come into contact with previously.

For one it contains an automatic corner, throw-in and shoot system, which takes you a little by surprise at first. This may sound a little odd, especially shooting, but it does produce some spectacular finishing. It's also worth pointing out that auto-shoot can be overridden.

With an auto-throw and corner system it also means that while a computer player is taking the throw, you can control a player the throw will be directed at.

Passing also has some rather fresh approaches to it. For example "ping passing" enables you to pick out a player, on or off screen, for a precision pass.

When you do finally manage to convert the ball into the back of the net, you also have a full video replay at your disposal to view your triumphs and analyse your mistakes on.

Once you've mastered the control system, which at first renders the play a little alien and gives a slight feeling of being out of your con-

trol, EC is really very playable.

The graphics are smart and once you're accustomed to the control system European Champions is a really enjoyable joystick jape against mates or the computer.

It's always going to be tough to compare EC with such legends as Sensible Soccer and maestros like Kick Off, but it has to be said that while Euro champ has only just turned pro, it's straight in the first team and quite capable of holding its place.

With the variety of options and different competitions available at your fingertips, European Champions will keep you on the attack well into injury time.

SIMON CLAYS

VISION	
GGGGGGGG	●●
AUDIO	
GGGGGGGG	●●
DIFFICULTY	
GGGGGGGG	●●
LASTABILITY	
GGGGGGGGGG	●●
European Champions puts a breath of fresh air back into the metaphorical sweaty shirt of the football game. It's not Sensi and it's not Kick Off, but it is different. This makes it well worth the money.	91%
Publisher > Ocean Developer > Audiogenic Disks > 2 Price > \$25.99 HD Install > No Size > 1/2 meg	

CHAMPIONS

Ever fancied playing Quantum Leap with 80 years of flight technology? Well, now's your chance to take part in the noble art of the Dogfight

Now and again something gets itself released for the ST that quite simply is too complicated for us mere mortals at Gamer Towers to handle.

In this case it's Dogfight and with a name like that, it doesn't come as much of a shock to discover that it's the latest release from the kings, neigh gods of the simulation racket, MicroProse.

Billed as absolutely huge by their PR-type sausage Jason "Take That" Dutton, we felt that reviewing this product should be handled by someone who has both respect and experience from the flying and buying public.

So it's a great honour for me to hand you over to flight simulation's greatest stunt and fighter pilot Spunky Plusfours, who we now join on the runway.

"Well hello, it's your resident fighter ace, good old Spunky here, who today sits before you at the controls of one of my all time fave kits, the bally Sopworth Camel.

"Before we go any further I should just like to say a big hello and cuddles to Ginger and Chalky who I know will be in the mess room of our club right now enjoying a bit of a tippie."

"Anyway, you join me in glorious sunshine with blue cloudless skies, so it should be a spiffing flight with some super rough and tumble against me old arch rival the baron. I shall now taxi down the tarmac and get my kite off terra firma."

So saying, Spunky guns the engine on his beloved Sopworth and waits for the crackle of

DOGFIGHT

The dirty dozen

The Sopworth Camel

Type: Single seat bi-plane fighter, escort and light bomber
 Performance: 170kmh/13,000ft ceiling
 Weapons: Twin .303in Vickers machine guns generating 200rpm
 Notes: A fearsome fighter in its day with great turning finesse and also very cheap to repair and manufacture.



MkII Supermarine Spitfire

Type: Single seat, single engine fixed wing fighter
 Performance: 590kmh
 Weapons: Eight wing mounted .303 machine guns, each capable of 1200rpm
 Notes: The prototype was winner of the Schneider Trophy air race in 1929. Following typical government indecision it wasn't until the inevitability of war that the Spitfire went into production. Its principle role was to take out fighter escorts and remained in production throughout the whole of World War II.



The Fokker DR1

Type: Single seat triplane fighter
 Performance: 166kmh/14,000ft ceiling
 Weapons: Twin .312 MG08/15 machine guns at about 600rpm
 Notes: The Red Barons' favourite plane it has great manoeuvrability despite early setbacks.



Messerschmitt Bf109E

Type: Single seat, single engine fixed wing fighter
 Performance: 570kmh/34,450ft ceiling
 Weapons: Two wing mounted 20mm MGFF cannon and two .312in engine mounted machine guns
 Notes: Having filled a multi role in the Spanish Civil War, the 109 became immensely popular. At the outbreak of WW2 the Messerschmitt became the principle bomber support fighter.



F-86 Sabre

Type: Single seater fighter bomber
 Performance: 1,091kmh/45,000ft ceiling
 Weapons: Six M-3 machine guns at 1250rpm
 Notes: Following the demise of the propeller, in 1949 the first F-86 appeared. Different to other early jets it employed swept wing technology, which allowed it cross the sound barrier. Most active in Korea, once rockets were introduced it became the first modern jet fighter.



Mikoyan-Gurevich MiG-15

Type: Single seat fighter
 Performance: 1,075kmh/51,000ft ceiling
 Weapons: One 37mm cannon and one 23mm nose cannon
 Notes: After the fall of Berlin and the captured rocket technology the race was on to develop jet fighters.





Pick a mission on the main menu



Select a war zone and choose your fate



Just another one of the many views of your F-16

GAMER GOLD

the ignition, and finally the propeller jumps into life.

Minutes later, Spunky is airborne. Teeth gritted, flying hat in place, scarf flowing and moustache perfectly groomed, Spunky launches into his best Raymond Baxter-type air show narrative:

"The Camel has the glorious distinction of having destroyed more enemy craft than any other combat plane. I myself have been responsible for a good many of them I can tell you. Developed in 1916 it is capable of 170km/h and can climb to a... I say what the bloody nora's that?"

Spunky's questions are soon answered as a glistening metallic dart booms past its very fabric. The noise is tremendous as

Spunky's gritted teeth and steely eyes turn to a look of absolute astonishment.

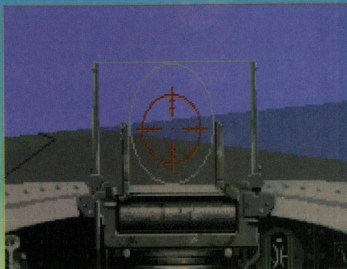
"What the blooming hell is that? A spaceship? What's going on air traffic control? Am I supposed to take on that wretched contraption? Where's the bloomin' Fokkers... Don't say El Barony is in that thing?"

Before Spunky can ask any more of the many questions that are swimming around his confused brain, he notices in his rear view mirror a rather ominous sight. Said unidentified craft is on his tail and closing at an incredible rate of knots.

As Spunky attempts to outmanoeuvre the craft as only a wily fox of his calibre can, he notices something that stops him in his tracks.

"Cor blimey, that silly sausage is letting off fireworks at..."

But before he can finish his rather premature and foolish statement, three metres of



Left a bit... right a bit... left a bit... It's the golden shot!

McDonnell Douglas F-4J Phantom II

Type: Twin seat all-weather interceptor
Performance: 1,500kmh/60,000ft ceiling
Weapons: One 20mm Vulcan six-barrel machine gun. Four belly mounted AIM-7 Sparrow air to air missiles. Four AIM-9 sidewinder air-to-air missiles. 18 x 130mm Zuni rockets. Four AGM Maverick ground-to-air missiles.

Notes: Following the hysteria generated by the Mig-15 (normal US policy) the F-4 was introduced. Undergoing a variety of changes it gave Soviet pilots a hell of a shock in Vietnam, and even now refuses to retire from active service.



MIG-21 Fishbed

Type: Single seat daytime fighter
Performance: 2070kmh/59,050ft ceiling
Weapons: One 30mm under belly cannon. Two/four K-13 All air-to-air missiles. Two/four AATO air-to-air missiles.

Notes: Frequent opponent of the Phantom, the MIG-21 has a Mach 2 capability and was an excellent combat aircraft.



British Aerospace Sea Harrier FR1

Type: Single seat ship based multi-role V/STOL fighter/bomber
Performance: 1,584kmh/over 50,000ft ceiling
Weapons: Twin 30mm Aden cannon in ventral packs. Two/four AIM-9 Sidewinders. 18/36 SNEB 68 rockets.

Notes: Developed in a time when it was anticipated that one of the first casualties of war would be the runway, the Harrier with its Vertical/Short Take Off and Landing capabilities took care of this problem.



Dassault Breguet Mirage IIIE

Type: Single-seat multi-role fighter bomber
Performance: 2,350kmh/can reach 36,000ft in three minutes

Weapons: Two 30mm 5-52 cannon. One Matra R.530 Radar/homing AAM. Two R550 Magic AAM. 18/36 Matra RL F2 rockets.

Notes: The Mirage in all its forms, is without a doubt one of the most successful fighters since WWII. It was the first fighter to reach Mach 2 in level flight yet cost remarkably little to manufacture.



General Dynamics F-16A Fighting Falcon

Type: Single seat fighter bomber
Performance: 2,090kmh/60,000ft ceiling
Weapons: One 20mm M-61 multi-barrel machine gun. Four AIM-9 sidewinders. Four AGM-65 Maverick missiles. 18 Mk4 FFAF Rockets.

Notes: Designed largely as a successor to the ageing Starfighter, it soon became apparent that the Falcon was also worthy of taking over from the Phantom. The F-16 has amazing manoeuvrability and at the time of its introduction could out fly anything in the World. In fact, it can even better the awesomely powerful MIG-25.



MIG-23 Flogger B

Type: Single seat all weather interceptor
Performance: 2,445kmh/55,000ft ceiling
Weapons: One 23mm twin barrel machine gun. Two/four AA-8 Aphid missiles. Two AATO Advanced Atoll. Two AS7 Kerry and 12 57mm ground attack missiles.

Notes: During the 60s most Air Forces came to the conclusion that the multi-role aircraft was the way forward. The US unveiled the F-111 with its variable geometry wings, however due to financial and design problems the F-111 was never the success it was intended to be.



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ATARI

ST

REVIEW



THE FUTURE OF THE FALCON! REPORT INSIDE

BEYOND HARD DRIVES

THE LATEST TECHNOLOGY ON VIEW

ZOOL!
THE HERO FINALLY EMERGES ON THE ST



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the finest US hardware, the AIM-9L Sidewinder laser-guided missile, have snaked into the rump of Spunky's ill-begotten fuselage.

There then follows a real fireworks display as bits of Spunky and the Camel descend earthwards to rapturous applause and cries of "Bravo!" from the ground crew.

Well, not all of Spunky has been recovered as yet, but we're reliably informed that he will live to fly another simulator soon -

A pilot's tale



Meet Spunky Plusfour's enterprising airman from WWI. Here we see Spunky keeping his eyes peeled for the enemy



Oh, no silly Spunky! That's not his plane, that's a Fokker



Meanwhile unbeknownst to Spunky, top ace Chuck Spudvator roars in on his six and releases a full load in his direction



A direct hit! Chuck looks on as Spunky spirals into a nose dive



The plane explodes, but far from there being bits of Spunky everywhere, the lucky blighter bails out and floats to earth

after all, he is only a computer-generated character and you can't hurt them for very long.

Anyway, Spunky's endeavours beautifully illustrate the whole concept of Dogfight, which is to allow you to engage in aerial combat in a range of jets and planes which span an era of 80 years.

The first thing to be said is that Dogfight marks a departure for MicroProse. For the first time they've swung away from the accuracy angle which they've made their benchmark, and developed a more thrills-and-spills fun simulator.

In Dogfight you are presented with three main options which decide what type of flight of fancy you are going to take part in.

The first choice for you to deliberate over is whether to engage in Duel Mode. This is possibly the quickest way to get airborne and taste air combat.

In Duel Mode you are provided with a choice of six historical eras and two typical opposing craft from that time. You can for example, choose to be - like Spunky - and take on the Hun in your Sopwith Camel.

FALKLANDS WAR

Alternatively, career forward in time and re-enact the Falkland War or the Syrian Conflict in more modern jets like the Harrier or the F-16.

The other smart thing about Duel mode is that you can start your flight at varying mid-air tactical positions, so it serves as fine practice for all the rookies.

The next option for your perusal is the What If? mode. This option allows you to engage in combat to the death in aircraft from different times. This means you can pit your wits against a MiG-21 from the 50s in a World War II Spitfire.

In all there are 12 different planes for you to experiment with and you're not just limited to a one-on-one confrontation. Once you start to get to grips with controlling the planes and gain confidence, you can take on up to five enemy craft at the same time.

The other option for you to scratch your chin over is where on earth you are going to carry out your aerial frolics. You can choose from seven different worldwide hot-spots including Vietnam, Korea and of course the hottest spot of them all, the Middle East.

As if that wasn't enough, there's yet another option which is actually the very core of Dogfight. The Mission option allows you to enact full-blown scenarios from all of

Let's have a sit in yer cockpit

This is the old cockpit. Notice the walnut and leather finish. Relax in the splendour of the Chesterfield seat while glancing over the classically-styled clocks, before giving your jewel-encrusted stick a good pull



This is the new rock-a-doodle-cock-pit. This model comes with air-bag, central locking, uncomfortable Recaro synthetic plastic smelling seats, lots of useless Ford dials like Turbo-boost, stereo that jams your tape in forever and a tape holder that automatically turns your tape into The Best of Queen after a week

the conflicts and wariness previously described. In the Mission option you also have the choice of deciding what type of mission to embark upon. Perhaps you'd like to patrol around the Dover coast defending our shores from the might of the German Luftwaffe? Conversely you may prefer the blood and thunder of a search and destroy raid deep in the Korean jungle.

Overall it's very hard not to be impressed with Dogfight. It's absolutely huge in proportions and initially there'll be plenty to keep you occupied.

With the number of missions to choose from and the variety of scenarios to enjoy, I'm not sure whether you'll ever need another flying game.

Graphically Dogfight is rather good. The planes have quite a lot of detail about them and even feature such luxuries as wing markings. The only sacrifice I noticed was in the ground detail, but on the whole this does not affect Dogfight's playability.

On the whole the planes move accurately as you'd expect them to. As usual with MicroProse games, the horizontal screen updates are quick and smooth and give an impression of flight.

There are also some nice little extra touches that make Dogfight that little bit

sweeter to play. For one you get more enough external angles and zoom facilities to muck about with. On Dogfight, however, you can also exercise this whim on your parachuting pilot as he floats to the ground.

Another nice touch is when you fly at the sun you suffer sun blindness and the screen goes white as you lose vision. Add the customary configuration screen, the normal phone book size manual, and a modem link up for head to heads, and you've quite a lot of simulator.

Dogfight may not find too many friends within the purist flight simulator club because of a few short-cuts MicroProse have taken to make it more playable.

For example, the majority of jets have different head-up displays; for ease of use these have been standardised.

However, if you're not too bothered about slight artistic licence and want to enjoy a very fine flight simulator that's full to the brim with excitement and action, then Dogfight's definitely the one for you.

SIMON CLAYS

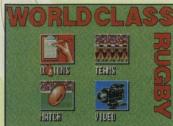


Take a quantum leap back in time and become that butch chappie the Red Baron



A Harrier cruises over a blue zig-zaggy bit

VISION	●●●●●●●●
AUDIO	●●●●●●●●
DIFFICULTY	●●●●●●●●
LASTABILITY	●●●●●●●●
Dogfight is a trolicking flight of fancy for aces all over the world. slick graphics coupled up with immense gameplay will make this a must for combat flying addicts.	91%
Publisher ▶ MicroProse Developer ▶ In-house Disks ▶ 3 Price ▶ £34.99 HD Install ▶ Yes Size ▶ 1 meg	



This is one of many options screens you can select...erm options, match, teams or watch a video

Swing low sweet chariot, coming to take me home... and so on. It's time for an Eddie Waring up and under in Audiogenic's latest rip-your-ear-off Rugby simulation

WORLD CLASS RUGBY

Rugby has come a long way in the public eye over the past few years. The image of the rugby player has been dramatically enhanced through events such as the Rugby World Cup and via players like Messrs Carling and Guscott...

Gone is the image of 30 fat blokes charging at each other like bulls on a field of mud, although this admittedly still happens in many of the Sunday morning leagues, where most of the competitors are still full to the brim with lager from the previous night.

To gain a place in the squad you must have a recognised talent for alcoholic consumption, a taste for human flesh, an automatic cut out system which gives total resilience to pain and the neck of a bull terrier.

Fortunately for the gaming public, Audiogenic have not based their Rugby sim on this form of player and have instead decided to concentrate their efforts on the more Aflantean form of player.

The first thing you're probably immediately aware of is the fact that WCR is now on budget. But what you probably don't know is that Audiogenic are also responsible for European Champions (featured in this issue, but under the Ocean umbrella) and the similarities are blatant if you examine the menu option screens.

Being the older relative of Euro Champs, I'm presuming this menu system was something that was developed back in late 1991 when Rugby got its first full price cap - sorry folks, can't remember that far back into the annals of software history.

The main thing to say about the options screens is that they are extremely user friendly, especially as they are so in-depth. From these screens you can select everything from the pitch size through to the amount of wind (this has nothing to do with how much carry your players have consumed).

You also select and edit your squads and take part in practically any competition plausible. For example, you may wish to become the All Blacks in the World Cup and edit your squad so you and all your mates can get their watus pulled in the scrum.

Memes also give you life or death decisions about action replays, the choice of 2D or 3D



One set of little red dots take on a set of little white dots, in the million miles up in the sky satellite view

viewing modes, an aerial blimp mode (which has nothing to do with a fat bloke with a camera-clip in a helicopter) and a series of action replays.

Action replays being the things that they are, you can toggle them on or off, especially if you're playing two-player mode and your mate just scored a match-winning try.

OK, so it's got more options to alter the play than you'll ever need, but how does it play? After all, Rugby is never going to be the most easy simulation to convert.

The rules for one thing, I don't think some of the people involved in the game were fully aware of the rules, so are we unsuspecting novices supposed to understand immediately them? Play is fast and frenetic, especially

against the computer, so it's better to cut your teeth against a friend in the two-player mode.

Rugby World Cup features all the elements of the real McCoy you'd expect. Whether it be offside or knock ons, they're all featured. There are also a certain amount of special plays for you to select automatically at such things as line outs and scrums.

As well as all the technical aspects to Rugby, this simulation also features injuries. What this means to you and me is that as your player is more and more involved in the match, so his energy levels wear down and his likelihood to sustain an injury increases.

Graphically, WCR is, nothing outstanding but it manages a level of competence and clarity which makes it playable. Soundwise it's not



Hey there you big chaps, any chance of an unfriendly?

a "sweet chariot", but it's no tumble and the sound doesn't detract from the game like some ST titles manage.

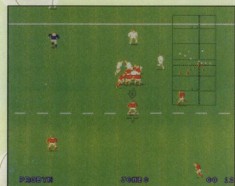
As full time approaches and the daxxon is about to sound, it has to be said that World Class Rugby isn't a bad conversion at all. In fact it's very playable if you know and understand the rules of Rugby.

Unfortunately not everyone does, so I've a very strong feeling that it'll only appeal to the enthusiast. The greatest criticism I have of the title is that Audiogenic didn't include any rules with it. Bearing this in mind, what hope has the mug punter got of understanding what's happening?

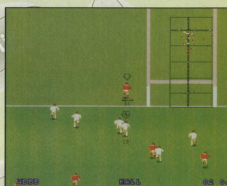
Still at the budget price of £14.99 it might just be worth rubbing the Rolox on and mixing it up with the big scrum hall.

SIMON CLAYS

VISION	
●●●●●●●●	●●●●●●●●
AUDIO	
●●●●●●●●	●●●●●●●●
DIFFICULTY	
●●●●●●●●	●●●●●●●●
LASTABILITY	
●●●●●●●●	●●●●●●●●
Rugby was never going to be an easy conversion to master. World Class Rugby is a very brawny attempt, but won't win everyone's hearts. Definitely one for the enthusiast.	65%
Publisher > Audiogenic	
Developer > In house	
Disks > 1	
Price > \$14.99	
HD Install > No	
Size > 1/2 meg	



Oy, mate! watch where you're sticking your fist will you?



Bah, 150 stone of muscle and still the little weasel scores a try



The tight curly locks of Jonathan Webb attempts another conversion, in super-special sunglasses 3D

DREAMLANDS

Do you play full pricers all the time? Well, now you can just wash and go with this marvellous three-in-one compilation bundle from Silmarils



Storm Master

This is perhaps the weakest title in the compilation and somewhat pales when compared to its bundle partners. In this arcade/strategy game you get to harness the power of the winds (that's begging for a schoolboy-type pun) in the land of Eolia as you strive to become the Storm Master.

Eolia is in constant conflict with its twin island, Sharkaania, where the winds are the masters of natural harmony. The reason for the war has been forgotten long ago, so you'd think they'd just shake and make up, but that wouldn't really make a good computer

product.

You have been appointed by the Council of Seven to take upon the task of Grand Magister of Eolia who previous applicant was viciously murdered only days ago.

Your goal is to loot and destroy seven enemy cities and thus cause the

fall of Sharkaania, but the only snag is that your enemy is trying to do the same to you.

Although it is an arcade and a strategy game, the emphasis is on the latter. The graphics are adequate and the sound is reasonable. If you like this type of game then I suppose you might have already bought it, but if you haven't then you'll be satisfied with it in the compilation.

If you don't like this type of thing then there's no harm in chucking it straight in the bin and concentrating on the other two far superior products.

Strive to become the Storm Master and take control of the powerful winds



Ishar

Ishar is regarded by many as one of the finest RPGs you can buy for the ST and was given generous marks by the various computer magazines. This Silmarils adventure is heavily influenced by Dungeon Master, but that isn't such a bad thing.

The graphics are perhaps some of the finest seen in an RPG and really give the whole product a polished and professional feel.

The action centres around the exploits of a band of five brave and heroic adventurers as they try to kill a shady and powerful figure called Krough.

Krough, who has slowly grown rich

and powerful and built a temple (the Ishar) on the Kingdom's borders, threatens the world of Kendoria. The king has decided that you and your band of warriors should rightfully dispose of him.

Ishar - Legend of the Fortress boasts over 100,000 locations and hundreds of enemies and characters. The game uses a flexible, uncomplicated and user friendly control system which makes it simple and fun to use.

This is a truly great adventure and one that any half-decent RPG fan could not do without. It may look and play like Dungeon Master, but Ishar is terrific in its



Roam around with your merry band of adventurers in this fantastic RPG



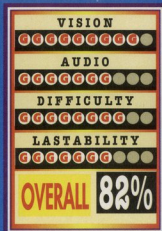
Transarctica

It's not every day you get up out of bed and find that the planet Earth has been completely frozen over! Well, that is what has happened in Transarctica. The sun can no longer be seen and has become a mystical heavenly body.

Apart from the re-emergence of the woolly mammoth, the only means of transport is the steam train. The Viking Union have complete control over the immense railway network and thus they monopolise all means of transport, giving them unquestionable authority.

You play the part of Chief of the Ambivalents, a set of curious beings who seek out the old myths of the sun. Your mission is to find a way to restore the sun to the world. The Viking Union is none too pleased about this fact because if the sun reappears they'll lose power and a whole lot of money to boot. The Ambivalents' greatest victory to date is the theft of one of the Viking Union's greatest trains, the Transarctica.

To progress successfully you must build up the size and strength of the Transarctica. Additional wagons can be bought and extra money can be gained by trading. You must also avoid the battle trains of the Viking Union and other hazards such as wolves. Transarctica is really a



trading game that contains only a small hint of arcade action. The graphics are excellent and the sound is adequate enough. I guess that if you like trading games then you'll love Transarctica. It is well worth spending a few hours on and is a worthy inclusion into this compilation.

Jonathan Maddock



Choo choo! Parade around the icy wastes in your big engine and keep look out for woolly mammoths

Publisher > Daze
Developer > Silmarils
Disks > 5
Price > \$29.99
HD Install > N/A
Size > 1/8 meg

The CHEAP seats

Simon's selection

There were no surprises after the release of Spielberg's *Hook* on discovering that a computer crossover would follow shortly after. Even though the film suffered some criticism from the press, it didn't stop the ST version ramping its way up the chart.

It sticks closely to the sickly sugar-coated film, where Spielberg in his infinite wisdom has totally forgotten the original JM Barrie story and made his own up.

In this version Peter Pan is set in modern America and has done precisely what he's not supposed to do: Grown up.

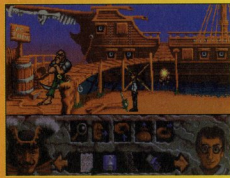
So, imagine his surprise when a fairy turn up on his doorstep (mind you it's set in New York and there are fairies everywhere there, so it shouldn't have come as that much of a shocker).

Anyway, Peter's been so wrapped up in his work as the local abattoir's inspector of all things runny and internal, that he's neglected his own kids.

In the meantime, Captain Hook has been in and made it away back to Neverland with



Peter and Tinkerbell check out someone's Levi's. Hmm, there must be a rude gag in a name like Tinkerbell



Hey! You baldy, aren't you in Frankie Goes to Hollywood? I suppose you're the crimson pirate

Hook

The Hit Squad ■ £9.99

Pete's kids. The basic plot is that he must travel with Tinkerbell back to Neverland and rescue his kiddlets.

On the way he must rediscover his magic powers and wear a pirate's costume so that folk in the land of Never will take him seriously.

Playwise, Hook is very much in the Monkey Island vein with one difference - it's not as good. Graphically it looks really pretty, having a very cartoony feel to it. But both in the plot and the play let it down.

The basic problem is that there's just not enough substance to it. While some of the puzzles take a little working out, but through interaction with the characters, it's all pretty cinch to suss out.

Largely, Hook's not too bad. Its size limits its complexity, but it looks fairly cute and fluffy. Really it's the kind of purchase that the younger end of the ST market will enjoy and probably not involving enough for the big boys and girls.



73%

I don't know about you, but I love a good racing game. Yes, speeding around corners at death-defying speeds, burning rubber up the straights, skidding through the chicanes and taking the waving chequered flag.

You get all that, but there are rules to be kept to if you're driving a fancy Formula One racing car. What I want is something more dangerous, something more exciting and something more illegal. As if by chance what should stop in my lap, but a copy of *Crazy Cars 2*, and at an incredible budget price as well.

You are at the wheel of an Ferrari F40 to smash a stolen car racket which involves corrupt policemen. You must travel through several states in America to chase and stop them.

You have to watch your speed though because there are honest police officers patrolling the

Crazy Cars 2

Fox Hits ■ £9.99

highways and they don't appreciate the sight of an F40 crossing their state at 200mph.

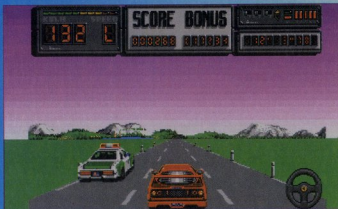
When I said watch your speed I didn't mean slow down, I meant speed up because if they catch you it'll be game over. *Crazy Cars 2* features

some great chunky colourful graphics and is perfect for boy (or girl) racers who are feeling the need for speed.

Titus's race-'em-up plays well, it's full of control and is surprisingly addictive. It may not be the best car racing game in the world, but for just under a tenner it is worth splashing out on.



75%



Die pig, I'm gonna shoot past you like my botty's on fire!



Life on the open road, la da da da da di

Oh no! There's a hole in my *chez* lounge, there's a rip in my armchair and worst of all my PVC Chesterfield makes a fart noise. This can only mean one thing, I'm in the Cheap Seats

Jonathan's selections

If you've never seen or heard about Monkey Island then you haven't been living on planet Earth! It is, in my opinion, a classic and one that your computer shouldn't be without.

You play the part of Guybrush Threepwood whose travels have led him to Melée Island in a quest to fulfil his life's ambition to become a fierce, swashbuckling, bloodthirsty pirate.

You direct Guybrush as he first explores Melée Island and then ventures on towards the mysterious Monkey Island. On Melée Island, Guybrush will have to prove himself worthy of becoming a pirate by completing the Three Trials.

Through the course of completing these trials, you and Guybrush will learn much about pirate life and local folklore.

For those not in the know, Monkey Island uses a very clever control system. By clicking on verbs and nouns placed at the bottom of the screen you can construct sentences to tell Guybrush what to do.

To move him around all you have to do is simply point the cursor where you want him to



Guide Guybrush Threepwood around the wonders of Monkey Island. Har har har Jim Lad, shiver me timbers, etc etc

The Secret of Monkey Island

Kixx = £16.99

GAMER GOLD

go and click. It is all very simple and you can operate everything quickly without any hassle.

There is no set way to complete Monkey Island - you more or less stumble over clues and puzzles as you progress. Solutions are not always obvious, so its best to pick up everything that you can get your hands on.

The graphics are brilliant, the animation is wonderful, combined they still put a lot of today's ST games to shame. One of the best things about Monkey Island is the humour. There are top-rate gags and puns from start to

finish and you'll regularly find yourself chuckling along.

Graphics, sound, playability and addiction levels go right off the scale where this adventure is concerned. Now is the time to buy Monkey Island because for just over £15 you won't get anything better for the rest of your life.



Guybrush's enemy Le Chuck has a laugh and a giggle with one of his bony chums

is wrestling fixed? Yes, of course it is. It used to be a sport with a slight undercurrent of entertainment, but now it's pure entertainment with a slight undercurrent of sport.

There has never been a good wrestling game for home computers, but now with the introduction of WWF and WCW and the ensuing star-spangled outlandishness and showbiz there is a good chance of someone doing a brilliant piece of software.

Ocean tried to do it two years ago with WWF Wrestlemania and failed, but they could so easily have succeeded. Ocean's grapple-em-up featured various overdosed steroid freaks from the world of all-American wrestling.

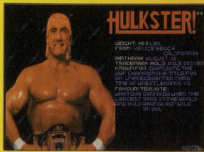
You could become the undisputed champion Hulk Hogan or the hairy face-painted Ultimate Warrior. Or you could choose The British Bulldog, also known as a fairly ordinary guy with big muscles from Leeds who couldn't quite make it in the British wrestling ring.

Once you'd picked one of these so called "fantastic" wrestlers you had the opportunity to grapple with the enemy. Starting with the Warlord and making your way through to the final against Sergeant Slaughter to win the Wrestlemania belt.

Each bout lasts a maximum of five minutes. During this time the match can be won by pin-

WWF Wrestlemania

The Hit Squad = £9.99



Mr Nanny! Ha ha ha ha ha ha. Suburban Command! He he he he he he. What a blonde haired jessie!

ning the opposing wrestler to the canvas for a count of three seconds.

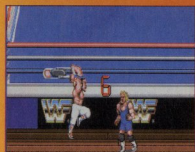
You can achieve this by using all your "really great" grapple moves, because you get a hull repertoire of kicks, punches, stamps, head butts, knee drops and suplexes.

All this can be performed by waggling your stick and by bashing at the Fire buttons at various opportune moments. This is where the problem with Wrestlemania lies. The control system is so difficult that you regularly get your head kicked in and lose. When two wrestlers start to grapple with each other, you have to waggle your stick like crazy to see who gets the advantage.

To gain this advantage against the computer is easy, but against a friend it's incredibly difficult because you tend to be evenly matched, so it makes the game rather monotonous.

The graphics are really quite good with digitised pictures of the wrestlers involved. The in-game characters are quite well animated, too.

The sound is fairly annoying and gets you reaching for the volume control. WWF Wrestlemania could've been quite good, but it isn't due to the control system which spoils everything. Even for just under a tenner I'd be hard pushed to recommend this to anyone except the very naive or the dedicated WWF fan.



The British Bulldog shows that true Brit spirit and cheats by smacking Mr Perfect over the head with a steel chair





cheat mode

THE GAMER GUIDE TO

ZOOL

Here is a complete set of tips on how to complete Gremlin's ground-breaking platform romp



Sweet World

1.1

Zool's flying sword attack can destroy some lollipops to gain extra bonuses. The first wall to the right of the second restart point can be punched through to gain a super bonus. Just above the second restart point there is also a vertically moving platform - jump on this to gain access to an extra life.

1.2

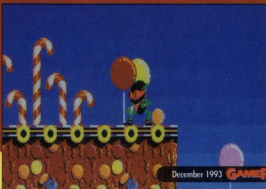
Try to complete this level as easily as possible. If you pick up a shield move as fast as you can towards the exit. Watch out for large drops as they normally have spiked bottoms.

1.3

You will encounter a series of boxes with "hit" written on them. Hit the first and third to gain bonuses. There are two possible ways to defeat this level. You may take on the end Boss, in which case the best tactic in dealing with him is to stand at the left of the screen, leaping up to avoid his bombs while shooting him as fast as you can.

The second way to defeat the level is to let your timer run down to 50 at which point the first right-hand wall at the start of the level can be punched through. This allows you into a secret room containing bonuses, extra time, two extra lives and an exit to complete the world.

Zool tucks into a couple of lollipops on the Sweet World. I bet he turns into a right fat little alien!



Music World

2.1

Look out for the small remote controls as they are the restart points for the music world. Use Zool's flying sword attack to destroy the speakers and gain extra bonuses.

Jump up into the bell and you can use it as a shield to get past a lot of baddies, just press Fire while inside to break out. Directly above the first restart point (about a screen above) is an invisible entrance to the first shoot-'em-up bonus level.

The first piano you encounter doesn't appear to do anything, however if you play the Close Encounters tune you will enter the second shoot-'em-up level. For those who are not too sure what the tune is, jump on the coloured notes in the following sequence: Grey, white, black, red and green.

2.2

It is very important on this level to be able to use the pianos, so take your time getting used to hitting the right notes. If you make a mistake, jump off the piano and move away a little then start again.

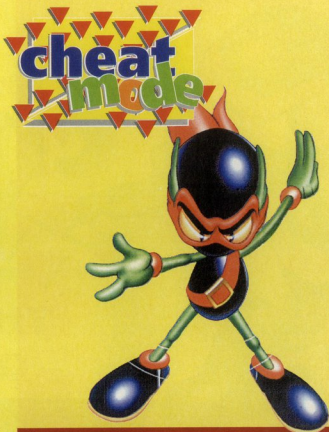
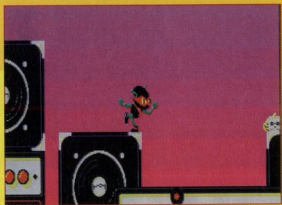
On the first piano you come across use the brown, yellow, red, orange and green notes to create a large note over the piano, jump onto this to enter a hidden room which contains bonuses and a new set of notes.

Enter these notes on the same piano, brown, orange, green and dark blue to gain an extra life. When you reach the next piano (which is located at the end of the level) enter these notes: Red, yellow, light blue and dark blue. Another large note will appear, jump on this to be carried to the exit.

2.3

Try to keep going as fast as possible on this level as you don't have much time. On long runs use Zool's sliding attack to kill baddies. To kill the boss monster you must shoot the guitar while its eye is open. You must stay near the left edge of the screen dodging the lightning bolts and destroying the fruit that is fired at you.

The ninja from the Nth Dimension boogies on down to latest thumping tunes. Come on!



Fruit World

3.1

Watch out for the bananas that act as restart points. You can gain extra bonuses by crouching down and pulling radishes from the ground and also by cutting the tops off some carrots.

Stand still and keep destroying falling grapes to replenish health. Try and work your way along the top of the level because near the end you will find an extra life. If you find the exit but do not have enough bonuses to complete the level work your way back and look for a slightly different route.

3.2

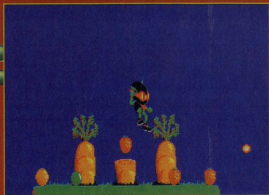
Punch through the first right-hand wall to gain lots of bonus points. Remember to bounce on the can lids to get to extra bonuses and gain an extra life. You will come across a hole filled with bonuses in a V-shaped punch through the left-hand wall to gain extra bonuses.

3.3

Punch through the first low right-hand wall to gain bonuses. At the next big left-hand wall (by a tree), punch it for even more bonuses. Continue on until you find a series of fruit cans; bouncing on the lid will propel you up in the air to gain an extra life.

To kill the boss you first have to shoot the alarm clock (which is indestructible) to wake the banana up. When attacked try to stay to the left of the screen while shooting the banana.

If you die while fighting the banana (a likely occurrence), you can get back to him from the last restart point by just running right and shooting as fast as you can, this should take care of all the enemies and keep Zool safe.



Wait a minute, this is the first level isn't it?
What is that carrot doing there then? Strange!

Tool World

4.1

Watch out for the blocks of wood with nails in. These are the restart points. The darker shades of wood invariably lead to lots of bonus points. Go right from the start of the level until you come to the first wooden platform, take Zool to the top and jump left from the far left-hand edge of the wood to enter the third shoot-'em-up level.

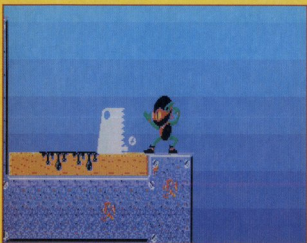
4.2

It can be very hard to gain enough bonuses on this level, so try not to miss any you see, especially large groups.

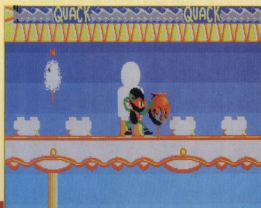
4.3

Quite possibly one of the hardest levels in the game. The best bet is to search the beginning part of the level for as many bonuses as possible as they get much more scarce the further you progress.

When you finally meet the boss monster go for his eyes as quickly as possible. Speed is very important here as the drill takes out the ground beneath Zool. If you've got the energy it can be worthwhile to take a couple of hits in order to get several attacks in on the drill.



What a tool! Fancy having an argument with a saw. **Safety lesson No 1: Don't fight with things that will maim you!**



Zool takes a bite out of a toffee apple. Well that's fair enough I suppose. "Fair" enough, geddit eh! Oh dear...

Fair World

6.1

Again the restart points are well marked and look similar to those found on level one. Try to let the hammer monsters hit the base of the bell machine and if you've positioned Zool correctly he will be carried rapidly upwards.

6.2

If you come to a dead end on this level then hang around for a while and you may well see a balloon come into sight which will carry Zool onwards. If you can't see where to jump next take the biggest jump you can because there may well be a platform some way away.

6.3

If you see bonuses you can't reach then see if a balloon is around to lift you up. To complete the Zool arcade machine, start it up and keep jumping on the red button... When an obstacle appears, walk onto the white button to jump over it, then revert back to jumping on the red button. When you have completed the machine you will gain an extra three lives. To destroy the final boss (the evil clown), stand on the first platform, duck down and then shoot him in his large central eye.



Toy World

5.1

The restart points for this level are nice recognisable "hit" signs. Watch out for low, fast-moving clouds and the tanks which will fire at you. Remember also that you can only stand on the red and green blocks, not the blue or orange.

Travel right from the start of the level until you come to the giant bonus panda. Jump onto the left-hand blue column and jump left; you should hit the hidden entrance to access the fourth and final shoot-'em-up level.

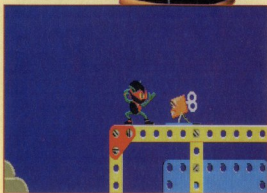
5.2

Very similar to level one. Basically just be careful and remember to use the restart points and you should find this quite an easy level.

5.3

Be very careful about dropping down any gaps as they could well be spiked. At one point you will arrive at an area containing several very similar looking holes.

Drop down the sixth hole to progress. To kill the robot boss shoot at his head, but watch out for when he opens his chest because then the robot will shoot back at you.

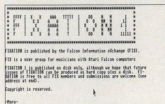


Leaping on top of some Meccano, Zool is faced with a clockwork thingy from, er hell

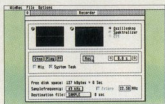
Getting a FIX

FIX – Falcon Information eXchange – is a new user group for musicians using the Falcon. It was launched at the Midi Music Show in April and I've just received the first issue.

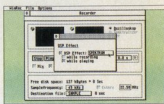
The magazine, called naturally enough *Fixation*, is distributed on disk which means it can include programs and demos, too.



The opening page of *Fixation*, the disk magazine for musicians with Falcon computers



WinRec is shareware and offers an excellent introduction to direct-to-disk recording



WinRec lets you load effect types from disk and apply them during recording or playback

COMPLETE LIST

The first issue contains several text files and two programs. There are news and views on music and Falcon-related issues plus a complete list of all known Falcon music programs which FIX have kindly allowed us to reprint.

There's some technical info about the Falcon's sampling rates and Cubase Audio and a feature which puts forward a convincing argument as to why the Falcon is

going to be the new computer for musicians. It includes a plug for FOG – Falcon Owners Group – which is for all Falcon users, not just musicians. Membership of FOG is £16.99 per year. If you

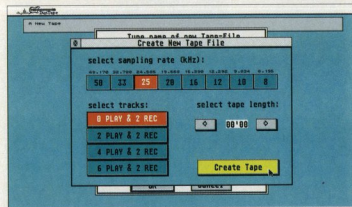
want a sample, send them £2.25. The first issue is especially for non-Falcon owners so if you're thinking of going Falcon it may be worth a look. For more information, call FOG on 0275 843241. FOG has

Ian Waugh on a new user group who really are fixing it for the Falcon, plus ten years of Midi and the rest of the news

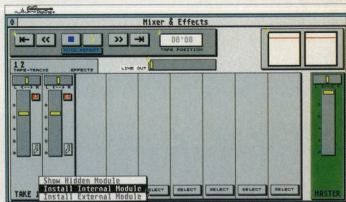
also started a Falcon BBS called *Holodeck* on 0454 317047.

The FIX disk contains a demo of *DigiTape*, the new hard disk recording program from CGS ComputerBild (081-679 7307) plus WinRec, a shareware stereo hard disk recorder.

Membership of FIX is £20 per year and looks like an excellent investment if you want to keep up with the latest music happenings on the Falcon. More from FIX on 081-340 1871.



The *DigiTape* demo supplied with *Fixation*. First set the sampling rate and the tracks and the tape length



DigiTape has a Mixer & Effects page

The Midi story – ten years of progress

It's ten years since Midi was developed and if the developers knew how popular it was going to be they would no doubt have included many more options.

But Midi has been developing over the years and continues to do so. Many of the features we take for granted today were not in the original spec. Here are a few of the more useful and popular ones:

- Standard Midi Files: they spawned a whole new industry of pre-programmed music files.
- General Midi: we've heard a lot about this recently. Coupled with SMFs, it's probably done more to bring Midi and music to the masses than anything else.

- Midi Sample Dump: it's slow but at least it does let you transfer sample data from one machine to another.
- MMC (Midi Machine Control): allows Midi to sync with audio tape.

And Midi is still developing. Other proposals include a File Dump which will let you transfer song data down a Midi line; a Tuning Standard which will allow alternate tunings to be used with greater ease; and the adoption of Sound Controllers which will let you change the tone of a sound.

For example, Controller 72 would edit the release time, Controller 73 the attack time, Controller 74 brightness and so on. I wonder what the next ten years will bring?

Breaking thru into video

Last month I played couch potato and looked at Labyrinth's Notator and Cubase tutorial videos. I promised myself another stretch on the sofa this month to look at the Breakthru video. And I'm glad I did.

It runs for 2 hours 27 minutes and is presented by one of Gajit's main men, Alan Ackers. Unlike last month's videos, Alan's presentation is very tight. He must be reading from a script although he's not at all stilted or wooden. If he made any mistakes, they must have shot the scene again.

The video begins with four introductory sections telling you basically how to set up your Midi gear and explaining what the program is about. This is followed by 12 lessons and tailed with a troubleshooting section.

INFORMATION

One of the problems with video manuals – certainly the main problem – is the fact that they simply can't hold as much information as a written manual. A complete video tutorial for a program such as Notator or Cubase would probably last for days!

The Breakthru video, however,

does manage to cram in every feature of the program although in defence of the other videos, it must be said that Breakthru is considerably less complex than Notator or Cubase.

HIGH PRICE

However, the design team obviously worked out a script and stuck to it, squeezing in as much information as possible. In short – it's excellent!

The main stumbling block to success is likely to be the price. This is a far higher proportion of the cost of the program than the price of the other two manuals. Whether Breakthru owners will fork out around a third as much again for the video remains to be seen.

However, if they do, they are certainly getting one of the best software video manuals around. If you can't learn how to use the program after viewing this you should take up train spotting.

Getting the most from Breakthru & Breakthru Plus costs £39.95. More from Labyrinth Video Manuals, Unit P3, Roe Lee Industrial Estate, Whalley New Road, Blackburn BB1 9SU. Tel: 0254 662096.

Yamaha go nuts over Sqrrel

Yamaha have a good track record of supporting their products with software – free software at that! The latest release is Sqrrel II which is a Bankloader/Manager for the QY20. It is designed for the ST and STE and runs in hi-res mode. It will run on the Falcon but sometimes parts of the screen do not update properly.

It's based, of course, on Sqrrel I which was a similar type of program for the QY10 and the QY20 is – yes, you guessed – based on the QY10.

It's essentially a portable keyboard complete with automatic accompaniment patterns plus a sequencer, all crammed into a box the size of a video cassette. The QY20 scores several points over the QY10 as it's much easier to use, has better sounds and more up-front patterns.

MEMORY DUMPS

Sqrrel II can handle two complete QY memory dumps (that is, up to 100 patterns, 20 songs and setup data) which can then be saved to disk. The main screen shows all the patterns and songs in one of the two memory banks.

You can move patterns around simply by dragging and dropping with the right mouse button, rename patterns and songs and sort them. You can see which patterns are used by a particular song and print out a complete list of all the patterns and songs.

In the setup page you can edit the QY20's system configuration parameters such as tuning, transpose, keyboard zone, gate time, velocity and so on. Some of the parameters are shown graphically which makes them easier to edit.

Sqrrel is readily easy to use. The instructions are provided online within the program as a series of help pages and are very complete. It's an excellent program and it's hard to believe it's free. It's every bit as good as commercial software.

It was, in fact, written by Y-Nat, who program editors for Newtronic. In short, no QY20 owner should be without it.

It should be available from all good PD libraries or direct from Yamaha on 0908 366700.

The following is a list of all known music-related products for the Falcon, courtesy of FIX, in alphabetical order. It includes public domain software but not programs which were not written specifically for the Falcon other than the major players.

41/40 • £399 • D2D Systems: 0223 421107

Audio expander offering four inputs and four outputs plus SPDIF and AES/EBU digital in and out.

4T/FX (including D2D Edit) • £299 • D2D Systems: 0223 421107

Four-track hard disk recording software with built-in digital effects.

Audio Fun Machine • Free from Atari

This is the one that is now shipping free with the Falcon, although early purchasers won't have received it. Falcon owners should contact Atari for instructions on how to get it sent free of charge, along with MultiTOS and Speedo GDOS.

Cubase • £299 • Harman Audio: 081-207 5050

Sequencing and scorewriting package.

Cubase Audio • £799 • Harman Audio: 081-207 5050

Integrated sequencing, scorewriting and eight

Falcon music products

channel hard disk recording package. Should be available as you read this.

D2D Edit • £150 • D2D Systems: 0223 421107

Stereo digital audio editing software.

DigiTape Lite • £141 • CGS ComputerBild: 081-679 7307

Six-track digital recording.

DigiTape • £399 (approx) • CGS ComputerBild: 081-679 7307

Full blown version of DigiTape with waveform editing and 32 "virtual tracks" for editing purposes. SPDIF hardware for the DSP part is being developed. Should be available as you read this.

Fortune

Trivial German PD program which lets you create "sound cites". A cite welcomes you with a message on boot up, but this plays sampled sound too.

MixIt Falcon • £49 • Intrinsic Technology: 081-761 0178

Four-input passive mixer for the Falcon audio input, with 1/4in jack inputs, L/R routing and sliding faders, enabling line level signals to be attenuated to mic level.

Musicom 1 • £49 • Compo: 0480 891189

Stereo hard disk recording with effects.

Musicom 2 • £TBA • Compo: 0480 891189

Hard disk recording with effects and SMPTE synchronisation. Still under development.

Notator Logic • £499 • Sound Technology: 0462 480000

Object-oriented recording and notation system.

Planet • £TBA • Rhythm 'n Soft, France

Sequencing software. Not yet available.

Pratracker

PD Tracker program.

SMPTETrack Platinum • £TBA • Barefoot, USA

Sequencer.

SPDIO • £199 • D2D Systems: 0223 421107

Digital interface operating at 44.1 or 48kHz via SPDIF standard, for use with D2D Edit. Connects to DSP port.

WinRec

German shareware stereo hard disk recording software

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Now that our ST-based "three-in-one" computer is up and running we need to ensure that the three environments integrate as smoothly as possible.

This is not a very important concern if your only interest in emulation is the ability to take work home, since there is no problem with disk formats – the ST and PC formats are virtually identical, and Spectre GCR handles Mac disks with ease – you may never need to cross the boundaries between the operating systems except for file copying.

Most of us, however, would consider that a waste as there are so many ways in which PC or Mac software can enhance your ST projects.

With a DOS emulator and Spectre GCR you have most of the entire software world at your disposal, so if your ST programs won't do what you want then there's always a good chance that a switch to one of the other two systems will give you the feature you are looking for!

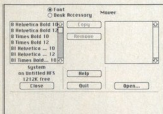
VANILLA ST

With that in mind, I am going to draw your attention this month to some extremely useful Mac utilities. There cannot be many Atari owners who are content with a plain vanilla ST and we all accumulate dozens of little AUTO folder programs, desk accessories and other utilities to make life easier, and make the same applies to the Mac.

There are literally hundreds of these little helpers available, and every Mac owner will have his or her own recommendations to make as to which of these are "absolutely essential".

The utilities introduced on this page, however, are hand-picked especially for the Atari three-in-one. They are mostly desk accessories and control panel devices and work in a similar fashion to TOS desk accessories and CPX modules.

To install them, copy the files to



ST owners may be confused by the need to install fonts and desk accessories with the Font/DA mover rather than simply copying them to the boot drive. System 7 no longer requires this, but until Spectre GCR catches up with System 7 we shall just have to put up with it!

Desktop Desirables

the system folder and run the Font/DA Mover for the accessories, or open the Control Panel for the CDEVs.

Pride of place among the accessories must go to DOSReadA which enables you to read files from ST or PC disks without the usual detour via the Apple File Exchange or the Transverter. The files can be copied onto the Mac desktop or, if you open DOSReadA from within a Mac application, copied to the clipboard and then pasted straight into the current application.

It cannot write to TOS and DOS disks and will therefore not make the Transverter completely redundant but it is extremely handy when you suddenly realise that you have forgotten to "transvert" a text or picture file – no need to quit from Spectre, just click on the accessory slot and stick the floppy into the drive.

DOSReadA can even automatically strip line-feed and carriage return characters from text files imported into a wordprocessor or DTP package. It is available from Software Diffusion Limited, 4 Hurst Lodge, Stanley Avenue, Wembley HA0 4JG.

A useful companion program to DOSReadA as well as the Transverter is Imagery, a graphics file converter that handles most of the common ST and PC image formats and translates them into the standard Mac formats.

Imagery can be obtained from most PD and shareware libraries and is a standard application that is launched simply by double-clicking on its icon or filename.

A screen dump utility can some-

times be the crude but effective solution when there is no other obvious way to capture an image in a standard file format and the best I know is Flash-It.

There is also a similar desk accessory called Camera, but accessories are not ideal for this purpose as they are locked out of certain situations whereas Flash-It, once installed, will work at almost any time with a simple, user-definable key combination.

More importantly, it will cope with screens larger than the standard Mac Plus monitor – such as the ST monitor which offers 20 per cent more space than those Apple portholes!

If that is not enough video real estate for you, try Stepping Out II. This is a virtual screen utility that will give you enormous worktops without any investment in hardware: particularly handy for desktop publishers and spreadsheet users as you can view the entire

page without zooming.

It does this by redefining the monitor screen as a window onto the desktop which moves around the virtual screen as you hit the edge of the visible area. It works extremely well but can, of course, slow things down if you go overboard when defining the virtual screen dimensions.

POSTSCRIPT

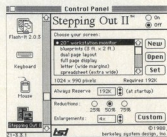
Stepping Out is a commercial utility available from most Mac dealers, as is the Adobe Type Manager. ATM, which is also widely used on Windows PCs, uses standard PostScript fonts for the screen display, thus abolishing the need for separate bitmapped equivalents of your printer fonts and vastly enhancing the quality of visual control over your output.

ST owners, however, will derive an additional benefit from ATM when it comes to printing from within Spectre GCR. Since ATM will always scale the font outlines to take maximum advantage of the resolution of the output device, printed output produced with Spectre's ImageWriter driver looks much superior. The improvement is confined to text output, of course, as ATM has no effect on graphics – it is not display PostScript.

● Next month, a look at similar utilities for DOS and Windows.



All Control panel devices can be configured "on the fly" by opening the Control Panel and clicking on the relevant icon. Flash-It gives you the option to redefine the keyboard short-cut used to activate it, and choose the default destination



Being able to display A4 double page spreads side by side is one of the benefits of Stepping Out. A bit slower than the hardware solution, of course, but still eminently usable

Among the mass of desktop accessories and utilities available to Mac owners are some especially useful for ST emulators. Günter Minnerup highlights some desirable little helpers

Watch out, they taste curly!

£300
worth of games
to be won

Here's your opportunity to be entertained by the one and only Colin Curly



Despite the considerable investment to perfect the animation, graphics and game play that make up One Step Beyond – if you don't manage to win a free copy, you can have the unusual luxury of a reduction in the price of a new release – One Step beyond costs only £19.95. "Don't be fooled into thinking that this is easy stuff."

ST Action, September 1993
One Step Beyond follows on from the successes of Push Over, winner of the Atari ST User Gamer Gold award.

Atari ST User Gamer Gold award.

"If you are itching for a new refreshing puzzle game with tons of originality slapped in it, then I'd leg it down to the shops today and get Pushover."

Gamer, Atari ST User

As well as ten copies of the original Pushover, we've got five copies of One Step Beyond (one of the latest releases from Ocean Software) to give away free to the best five entries in this month's competition.

One Step Beyond took almost a

year to develop. Colin Curly, one stormy night, finds himself sucked into his computer while eating his Quavers. In order to escape he has to solve a series of increasingly baffling puzzles taking him through 100 levels and ten Quaver zones.

HOW TO ENTER

You can enter by calling 0891 543306 as many times as you wish. All you have to do is answer the very simple questions below. Try to avoid background noise.

You will be asked to leave your answers together with your name and full postal address including postcode. Please speak clearly, spelling out any difficult words.

1. How much does One Step Beyond retail at?

- a. £25.95
b. £19.95
c. £29.95

2. How many levels are there in One Step Beyond?

- a. 75
b. 50
c. 100

3. What is Mr Curly's first name?

- a. Kevin
b. Christopher
c. Colin

A copy of the Pushover or One Step Beyond could be yours for a quick phone call, which should cost you under £1 at cheap rate. To keep the bill to a minimum try to avoid background noise, which may necessitate repetition of answers.



0891 543306

The closing date is December 31. The prize winner will be drawn from all the correct entries received and will be informed in writing within two months of the closing date. Result information may be obtained by writing to our offices. No cash alternative to the prize is available. The editor's decision is final. No correspondence will be entered into. Calls are charged at 36p per minute cheap rate and 48p per minute at all other times.

Telephone talk

AT Command auto answer See **Hayes Commands**. Allows a modem to answer incoming phone calls automatically. Mostly used by bulletin boards.

auto dial Allows a modem to dial phone numbers for you. Older modems required you to dial the number manually using your telephone handset, then switch the modem online.

Ascii A common computer term which defines the way that the alphabet and other characters are represented numerically inside a computer. The letter A is given the number 65, B is 66, and so on. Since computers and modems can only work internally with numbers, this coding is vital - but it is usually invisible to the user, so you don't need to worry about it.

baud rate The underlying rate at which a computer or modem can handle signal changes along a serial connection - usually used to define the speed of an RS232 connection. Often you will find that a modem can transfer text much faster than this basic rate by using special compression techniques. The term "bps" is generally more accurate - so talk about "a 9,600 bps modem" rather than "a 9,600 baud modem". See also **bps** and **cps**.

bps Bits per Second: Refers to the number of "bits" of data that a modem can transmit each second. It is usually preferable to use this term to describe the transmission rate of higher speed modems, rather than quoting a baud rate. Note: Eight bits make up one byte of data. See also **cps** and **baud rate**.

bulletin board A computer system which you can dial into using a modem, and leave messages and files for other users. Usually privately run, there are however some larger commercial systems such as CIX and CompuServe.

carrier The tone which a modem sends down the phone line to indicate that it is switched on and ready to receive data. When another carrier tone is detected from the other end of the phone line, the two modems can connect with each other. At this point, the "Carrier Detect" signal on the modem is turned on, so the computer knows it can now start talking.

checksum A way to verify that data has been received correctly. Most often used within file transfer systems such as Xmodem.

cps Characters per Second: This is a "real world" indication of modem speed, and much more meaningful than the technical bps and baud rate figures. For example, a 2,400bps modem can transfer text at 240 cps (or often slightly faster if error correction is used). See also **bps**, **baud rate** and **start/stop bits**.

CRC Cyclic Redundancy Check: A more sophisticated type of checksum.

CTS/RTS This is one type of flow control, which uses two special wires in a modem cable to indicate when the modem and computer are each ready to accept data. This mode can cause problems with older versions of TOS, but these can be cured by pulling a small patch program into the AUTO folder on your boot disk. See also **flow control** and **Xon/Xoff**.

data compression duplex Defines how data is sent down the phone line. Full duplex allows two-way transmission, whereas half duplex only allows one end to transmit at a time. Most systems use full duplex.

DTR/DSR Control signals used to allow the modem and computer to indicate that they are switched on and ready to start work. See **MNP5** and **V42**.

error correction flow control This allows two computers to inform each other when they are each ready to receive data. Sometimes, perhaps while writing a file to disk or while you are using a dialogue or menu, a computer will temporarily not be able to receive data from the modem, so it uses flow control to tell the other end to stop sending for a moment. See also **CTS/RTS** and **Xon/Xoff**.

Hayes commands Several years ago, the Hayes company designed a modem which could be controlled by sending a series of special text commands from your computer - e.g. AT D to dial, AT H to hang up, AT S to control internal settings. Previously, all modems were controlled by switches on the front panel, but this new system was so elegant and simple that almost every modem manufacturer now uses it (although as new features have been

added, much of the old simplicity has been lost).

Kermit An error-corrected file transfer system, not much used on small computers but quite popular on larger systems. See also **X/Y/Zmodem**.

local echo Most bulletin board systems actually send every character that you type straight back to you, and it is that echoed character which appears on your screen (this is useful to confirm that the character has been received correctly at the other end). When talking directly to another modem, this does not happen, so it is advisable to switch on a local echo mode, so that you can see what you are typing.

MNP4 Micromodem Networking Protocol number 4. This is a proprietary standard which allows two modems to compensate for any errors caused by noisy phone lines. Supported on many modems, you may also find the term **V42** used, which is a slightly more efficient variation of error correction.

MNP5 Micromodem Networking Protocol number 5. This is a proprietary standard for the compression of data (especially text) sent via modems. It works a bit like the ARC archiver software, but the coding and decoding is instantaneous and happens within the modem. The overall effect can be to virtually double your data transmission speed. Supported on many modems, you may also find the term **V42bis** used, which is a slightly more efficient variation of data compression, giving nearer three times the basic data rate.

parity A mostly-obsolete method used to allow computers to detect errors. If used, it can be either odd or even.

RS232 The industry standard which defines the serial cable connection used between your computer and your modem.

start/stop bits These are single bits which are sent before and after each byte of data. These are required on any RS232 system, but modems which use the **MNP4** or **V42** error correction systems will strip them off before sending the byte, thus making the transmission around 20 per cent faster (since the modem has to send just 8 bits per character, instead of a start bit, 8 bits of data, and a stop bit).

V numbers We've covered these in a previous issue, but briefly they are just predefined industry standards for modem-to-modem communications:

- V21**: 300 bps
- V22**: 1200 bps
- V22bis**: 2400 bps
- V23**: 1200 bps receive and 75 bps transmit (mainly used for Prestel)
- V27**: Fax at 4800 bps
- V29**: Fax at 9600 bps
- V32**: 9600 bps
- V32bis**: 14400 bps

V42: Error correction system, also known as LAPM, compatible with and slightly better than **MNP4**.

V42bis: Data compression system, compatible with and slightly better than **MNP5**.

word length Virtually obsolete method to define how many bits make up each character. Now almost universally set to eight.

Xmodem An older file transfer system, capable of sending a single file and verifying that it has been received correctly.

Xon/Xoff This is one type of flow control. It uses two special Ascii characters to tell the computer at the other end of the phone line to stop sending text (Xoff), sent by pressing Control-S and when to restart the transmission again (Xon, sent by pressing Control-Q). This method is not as reliable as using **CTS/RTS** flow control, especially with fast modems. See also **flow control**.

Ymodem A file transfer system, like **Xmodem**, but capable of sending additional information such as filenames, sizes, etc.

Zmodem A file transfer system, like **Ymodem**, but far more intelligent and capable of sending multiple files, checking whether similar files already exist, re-starting failed transmissions part way through, etc. If possible, use this in preference to **Xmodem** or **Ymodem**.

André Willey presents a glossary of some of the more common terms you're likely to come across in the sometimes confusing world of comms

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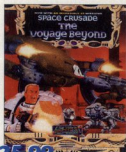
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Mix and match

There's one handy use for a font editor that often gets little attention, and that's customising your fonts. By customising, I don't mean altering the outlines – you should always avoid editing a well-designed font without very good reason – but rather swapping characters around and perhaps adding new ones imported from other fonts.

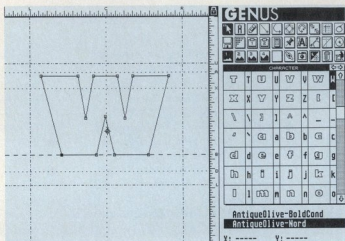
Fonts contain a number of weird and wonderful characters and unless you are dealing with foreign languages or scientific notation, most of them will probably never be used.

SYMBOLS

You might (and should always) use the curly quotes (‘’ and ’’) but it's rare indeed to need things like inverted exclamation marks and the ð diphthong.

Sometimes it makes far more sense to remove the squiggles and blobs and replace them with more useful things like bullets, swash characters and even symbols like arrows and ornaments. You could also move some characters around and put them somewhere where they can be accessed quickly and easily from the keyboard.

For example, the wiggly and square brackets to the right of the P key on the ST's keyboard are unlikely to excite anyone. You could edit your fonts so that these become the opening and closing



Editing fonts using Genus

quotes, for example.

Another handy trick concerns the key between the zero and the equals sign on the top row of the keyboard. This normally provides a standard hyphen or an underline when shifted, neither of which are particularly useful in DTP except for denoting a negative sum. Why not replace them with the en and em dashes? You can always put the hyphen or minus sign somewhere

else such as in place of the tilde (~).

The advantage of doing this way is that you'll always use the correct dash without having to remember the special combination of key presses that it normally requires.

Another useful character to import is the bullet. Standard fonts provide only one bullet – a black circle – but there are far better,

Andrew Wright looks at customising typefaces and has some interesting news on upgrades

more professional looking ones. My own preference is for a hollow square with a drop shadow. On all my body text typefaces, I've replaced the hash sign with this symbol imported from Zap Dingbats.

If you're feeling really adventurous, you can actually mix and match typefaces for specific design purposes. By mix and match, I mean take two closely related typefaces and swap the capitals of one for those of the other. This you end up with a display face where the capitals might be bold and the lower case letters the normal weight.

Endless possibilities present themselves here but don't get carried away – mixing contrasting typefaces will probably look pretty terrible. Try it with a combination like Gill Sans Bold and Gill Sans Light or two weights of any typeface.

If you don't have two weights of a typeface, editors like Genus can modify the height or width of an entire font with a couple of mouse clicks. Use features like this to create a second, narrower font and then replace the capitals with the original ones.

Create Display Fonts



A New Emphasis

Mixing and matching examples

Timeworks to get upgrade?

At the time of writing, GST still haven't made a decision about whether or not to upgrade Timeworks Publisher to work with Atari's SpeedoGDOS. According to GST's Simon Jones, the incompatibility problem is due to one or two non-standard methods employed by the Timeworks program to register and handle GDOS fonts.

"We know roughly what the problems are though we haven't actually managed to get it up and running ourselves," he said. "The company will be taking a decision as to how to proceed in the near future."

Which leads me to suspect that user pressure may well be the key. So if you want to see a version of Timeworks that will work properly with SpeedoGDOS, why not write to GST?

One organisation that has no qualms at all about upgrading is the ST Club. Several DTP-based products have had minor and major upgrades and existing owners can return their master disks together with the right amount of money which varies from £2.50 to £10

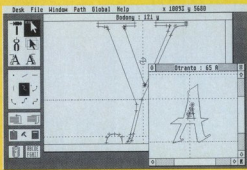
depending upon the product. PageAssistant 2, the online help utility for PageStream, now has a full GEM interface and more information on v2.2, including tips and tricks such as bar coding, leader tabs and suppressing areas from printing.

CalAssistant (for Calamus 1.09n) has been upgraded too and increased to 40 pages in length with the addition of sections on frame types, clipboards, macros and special design effects.

The budget font editor, Fonty, has been much improved (to v1.03) with a menu option for the PFB to CFN conversion utility, command line options, batch conversion and more flexibility in the types of PostScript font that can be converted. Characters can also be previewed with full fill and checks for fill errors and open paths at the same time.

Contact the ST Club on 0602 410241 for more details.

Good old Fonty is given the upgrade treatment – shame the name wasn't changed



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- Mega Mono monitor 2nd drive, Scart software, £375. Tel: 0203 398973
- STE contacts wanted: Ben, 14 Castle Road, Bury, Lancs, England.
- Atari ST contacts wanted write to: F Myrland, 3853 Vradal, Norway.
- ST contacts: Desmond Townson, Peacehaven, Love Lane, Bickington, Devon, TQ12 6JT.
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- Mega STE 4Mb RAM 1.44Mb floppy, 52Mb hard drive, external drive, SM144 monitor, Vidi ST, ATOnce, mice, loads of software (business and games). £750, Tel. David: 0761 412851.
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First off, check if you qualify for a grant, check out the help lines for local and national agencies in the box above, and don't stop hounding them until you've got a grant, or you're absolutely certain you don't qualify.

Then, if you don't get a grant, or

Useful contacts

Business in the Community (for details of all local Enterprise Agencies in UK) 071-253 3716

Scottish Business in the Community (for Enterprise Trusts in Scotland) 031-334 9876

Small Firms Service (London only) for information and counselling 0800 222999

Training and Enterprise Councils (for details of local TECs) 0742 294776

Local Enterprise Companies (LECs) 041-248 2700 (ask for Enterprise Company Operations)

Rural Development Commission 0722 336255

Department of Trade and Industry (for information packs and your own regional DTI number) 0800 500200

High street banks: Call you main local branch

by way of a loan, anyway, so I've concentrated on that option here.

The main advantages in a bank loan are that you will know exactly how much you are paying and for how long, and that when the agreement finishes, you will own the equipment.

Loans can either be secured - through, say, a life policy or

initial financial advantages of choosing a loan rather than a lease agreement.

Not all leasing agreements are the same. With lease purchase or capital leasing you will own the equipment at the end of your agreement.

With other leasing arrangements, such as an operating lease,

You could find yourself paying to get out of one agreement and then starting all over again with another with similar drawbacks.

One way round that problem, of course, is to lease or rent from an equipment supplier, cutting out the finance men in the middle.

The advantage is that the supplier should know their own equipment and should be able to provide technical and training support within the terms of the agreement.

One snag with leasing for new or relatively new businesses is that you do usually have to prove you have traded successfully for a couple of years or more.

At the end of a lease agreement with some companies, you can pay a tiny percentage (around £20 in every £1,000) to own the equipment.

Another option at the end of some leases is continued rental of the same equipment for a "peppercorn" rent. Alternatively, you may

Busting out of the gloom

the amount is only a fraction of the total cost of your equipment, what do you do for the rest? Is the bank still the best bet? If it's mainly new equipment you need - like a high quality laser printer or several brand new, networked Falcons - could leasing or renting be the way forward?

Most banks operate services aimed specifically at new and small businesses. Some even offer incentives to small businesses such as free banking for a set period to go along with the finance agreement.

There is no easy answer to the question: "Is it best to go for an overdraft or a loan?" Much depends on the fortunes of the business and fluctuations in interest rates. The rate of interest on an overdraft will be about the same as on a loan with a variable rate.

If you're good at guessing the market, you might save money by going for a fixed interest rate loan - but if rates fall substantially, you lose.

Most of the high street banks prefer to finance equipment purchases

against property - or unsecured, though in the latter case the bank will undoubtedly want to know a little more about you and your business.

Loans may be slightly less expensive than other options such as leasing, and will certainly be less expensive than hire purchase. But don't forget there will probably be arrangement fees, which in many cases are negotiable.

If your business is in profit, there will be tax advantages, too, in being able to deduct capital allowances from income tax.

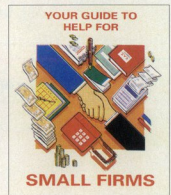
But you would be well advised to take out insurance for maintenance cover, and this could eat into the

you will never own it, but there are other advantages.

Is your business seen as a fairly enough risk by leasing companies, who may need convincing by two or three years of trading figures?

Do you really need to be able to claim capital allowances as deductible expenses on income tax? You can do it by buying through leasing, but if you're not in profit and so not paying tax do you want to be tied to an agreement which lasts for three years?

If your equipment turns from state-of-the-art to antique during the course of your agreement, how easy is it to upgrade? What if you have to pay up for early closure?



The Department of Trade and Industry has lots of encouragement for small businesses, some of it in the most practical form of all - grants!

be able to opt to return the goods to the leasing company or trade in the kit for new equipment and take out a new lease. Don't expect the trade-in value to be very high.

One firm I spoke to quoted a payment of £529.40 in advance, plus a further 12 quarterly payments of the same amount to lease £5,000 worth of equipment over three years. This gives a grand total of £6,882.20.

That's getting on for a couple of thousand more than the cost of equipment. You will need to invest in a full maintenance and service contract, too, which includes replacement equipment should the original kit go down. This cost can be included in the quarterly payments.

● Next month: The rental option, and how the various methods of financing affect your tax situation

A new product or service requiring investment in more computer equipment could lift you out of the recession.
This month and next, Richard Williams looks at ways of financing it

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Master blaster

While the Falcon has many more resolutions available than the ST or TT, it didn't take long for enterprising programmers to realise that the modes provided by Atari only just scratched the surface of the Falcon's capabilities.

While many are still little more than beta stage patch programs, Compo's Screenblaster is one of the first products to expand the resolution reliably, using a combination of hardware and software to do the job.

Screenblaster expands the Falcon's display to a staggering 1,280 by 960 pixels – over three times the size of the normal 640 by 480 maximum in VGA mode. The code was developed by the

authors of the hugely successful NVDI screen accelerator, which bodes well for Screenblaster's compatibility.

Installation is simple – the hardware is simply an extra lead that

sits between the Falcon and the monitor. There's no need to open the case at all and the software driver is equally simple to install and use.

It provides extra resolutions for any monitor, including Atari SM124 and SC1224 models, most VGA and Super VGA monitors and multisyncs like the NEC 3D. The only word of caution is that you must check your monitor's capabilities before trying to use some of the higher resolutions.

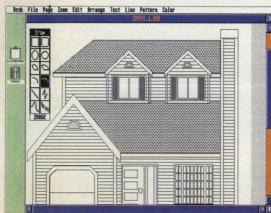
The main factors involved are the vertical refresh rate and the horizontal frequency and some monitors are more capable than others. Regardless, all SVGA computers should produce at least 800 by 600 resolution without interlacing.

Testing the Screenblaster on my VGA monitor, 1,152 by 832, provided a steady display with no flickering. If you're into DTP, high resolutions like these make screen displays more accurate and allow you to view more of the page at a given time.

Screenblaster is highly recommended for any Falcon owner and costs £79.99 from Compo on 0480 891819.



Normal 640 by 480 mode – needs a helping hand from Screenblaster



With Screenblaster installed resolution is expanded to 800 by 608 pixels

TOS bug alert

If I were to say there are a few bugs in the Falcon's operating system, I'd be seriously understating the situation. TOS 4.01 is the worst offender but even the next version, 4.02, has a few silly bugs and even 4.04 doesn't get rid of them all.

Some have been with us since STs first appeared – stupidities of all is the scroll bar bug whereby a single click on a GEM window's scroll bar is interpreted as two clicks.

To find that one appearing again in what is, as far as I can tell, the eleventh or twelfth incarnation of the Atari operating system, just defies belief.

Potentially far more serious, though, is a bug in GEMDOS, the Falcon's disk operating system. In certain circumstances, when writing to a full partition, the operating system will continue writing over the FAT table and root directory of the immediately following partition, causing it to disappear, along with

all the data in it. It happened to me very soon after I bought my Falcon, luckily with only minimal data loss, but the good news is that there is a fix. The latest version of the Atari hard disk utilities, v5.03C which includes new drivers and formatting utilities, claims to get rid of this bug.

The utilities, which replace those supplied with the Falcon, are available direct from Atari or can be downloaded from one of the online networks like CIX or CompuServe.

You may already have these, if you happen to have recent Falcon stock, but if you have experienced sudden loss of a partition, it's probably time to upgrade.

John Hetherington turns up the Falcon display with Screenblaster and looks at some interesting new Falcon-only software

Hi-res colour gaming

Pride of place this month has to go to a game that uses the Falcon's high resolution colour capabilities to full effect. The original Nethack was a character-based game played on Unix computers but it has undergone steady development, with input from scores of dedicated players. Version 3.1 is now available for Atari computers – courtesy of Eric Smith, the developer of MINT.

The public domain program is GEM-based and should run in several different resolutions but it works best in 16-colour VGA mode or better on the Falcon. It is a massive program running to well over a megabyte (2Mb RAM required) that includes over 850 colour icons representing objects, weapons and monsters, and dozens of levels and rooms to explore.

Basically you choose a character type – similar to

Dungeons and Dragons – and enter the dungeon. You are treated to a full colour scrolling map of the dungeon, viewed from above, and you move your character using the keyboard or mouse.

Dozens of actions are possible, from picking up objects to fighting, talking, casting

spells and searching for hidden objects. The further you go, the further you advance in terms of levels and the game is remarkably addictive and highly entertaining. Although not in PD libraries' catalogues at the time of writing, it should be available now.



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- ICD 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 rate detect. The scanning software included allows you to edit and manipulate any image you scan.

£99

floptical drive

The Floptical stores 20MB of data on a 3.5" disk. ICD 'Link' is required.

- Floptical drive£329
- Floptical disk£22 each

printer range

Huge range of printers available, Star, Citizen, Hewlett Packard and Epson. Please telephone for prices and your requirements.

miscellaneous products

- PowerMouse£15
- Power Clock£17.99
- Optical Mouse£29.95
- Replacement Optical Mat£10
- 100 Branded Disks + Box£49
- 10 Branded Disks£4.99
- Intruder 1 Joystick£29.99
- Maverick 1 Joystick£15.99
- Python 1 Joystick£9.99
- Apache 1 Joystick£7.99

All Power Computing Ltd products come with a back to base 12 month guarantee. Prices are valid for the month of publication only. Goods are sold subject to our standard terms and conditions of sale and are available on request. Specifications and prices are subject to change without notice. Trademarks are acknowledged. All prices include VAT. E & OE.

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-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

supra modems

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.

- Supra Fax Modem+£119
- Supra Fax Modem 32BIS£249

ring interruption

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.

- Ring Interruption£15

super mon

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.

- Ultimate Cartridge£25
- Including SuperMon£35

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.

£99

- 4MB RAM Expansion£169
- 1MB SIMM for STE£35
- 512K RAM STFM£45

order form



Return this order form to Power Computing Ltd, Unit 8, White Road, Wilburton Road Ind. Estate, Kempston, Bedford MK42 7PQ

Name _____

Telephone No. _____

Description _____

Address _____

System owned _____

I enclose a cheque/P.O for £ _____

Credit card No. _____

Expiry date _____

Signature _____

Make cheques payable to Power Computing Ltd

delivery next day £5.00 2-3 days £2.50 Saturday £10.00
 deliveries are subject to stock availability

More Good News from Microdeal



Music

Clarity Falcon

New

Clarity Falcon is based on our highly successful Replay 16 sound sampler and is our premier, professional, direct-to-hard disk sample editor system. The package includes extensive software; a memory-based & a disk-based editor with many editing and effects features, a Midiplay MIDI keyboard/sequencer controller, a Drumbeat sample sequencing program with MIDI synchronisation control and more. Extra hardware is also provided to handle CD (44.1kHz) and DAT (48kHz) sample rates and to allow line-level stereo signals to be connected to your Falcon. Sampling to disk permits rates of up to 50 kHz stereo!

Music MultiPack

Offer

An 8-bit stereo sound sampler? A 4-voice polyphonic music synthesiser? And a complete MIDI sequencer? In one package??

Yes! This pack contains *StereoMaster Quartet* and *Concerto* to give you a complete music solution at a tremendous price. With this pack you can compose and arrange your own music, choose from over 100 musical instruments & sounds or sample your own and, optionally, control the whole system from your favourite MIDI instrument. Everything is there, including over 200 pages of quality documentation.

General

Home Office Pack

Offer

Another brand-new package deal from Microdeal. A quality spreadsheet (*K-Spread 2*), a complete home finance package (*Personal Finance Manager Plus*) and the ultimate suite of essential utilities (*Harlekin 2*). All in one pack, with full documentation, at an incredible bargain price!

Prices

Clarity Falcon	£99.95
VideoMaster Falcon	£99.95
VideoMaster RGB	£139.95
ColourMaster	£69.95
Music MultiPack	£49.95
Home Office Pack	£49.95

Phone 0525 713671 to order any of these titles using your credit/debit card

VIDEOMASTER

Video

New



VideoMaster Falcon

VideoMaster combines the beauty of a video digitiser, the fun of a sound sampler and some superb sequencing software to provide a true *Multimedia* system that is a joy to use. This is the *one* package that you need for producing high quality stills & 25 frames/second movies with sound!

New Falcon030 version. Previously, VideoMaster was Falcon compatible - now we have enhanced the hardware and software so that Falcon owners can work with this amazing package and enjoy brand-new features such as superb True Colour 640x400 digitised stills together with 160x100 25 frames per second monochrome video with 16 bit stereo sound! VideoMaster Falcon is supplied with a brand-new manual, many example pictures/films and every copy comes with a free TruePaint package!

ColourMaster

New

To complement the VideoMaster system, we have developed a high quality RGB colour splitter which allows you to automatically digitise full colour movies/stills, directly from the VideoMaster software. The splitter is packaged with VideoMaster RGB.

The picture above is an un-retouched shot taken outside Microdeal's offices with a Panasonic camcorder and digitised with ColourMaster and VideoMaster Falcon, all within a few seconds!



microdeal

All Microdeal products should be available from your local Atari computer shop. In case of difficulty, you can order directly from Microdeal using your credit/debit card over the phone or by sending us a cheque/postal order. For more information on any of our products which includes HiSoft software (e.g. Deepac, Atari 3, TruePaint, Superbase Professional etc.), please call Microdeal on +44 (0) 525 713671, or fax us on +44 (0) 525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

