

ATARI ST USER

**COMPLETE!
MINI OFFICE
COMMUNICATIONS**
worth **£35**

SCANTASTIC!

*Tested: Hardware
and software
to match your
scanning needs*

Communications special

*Get on-line with our
guide to services,
CoverDisk give-away
and CompuServe offer*



ATARI ST March 1993

Teach your child to tell the time with our exclusive Fun School 3 module

Worth £35

Link up to the exciting world of comics with this fully working and feature-packed program

SuperBoot v8 - The latest version of this boot utility
PLUS - 10 more useful utilities for your ST

PLUS!



Tetris-style puzzle, SuperBoot v8 - the latest boot-up program - and ten more essential utilities for your ST

Education round-up

We say how you can give your kids a head start



GAMER

**Street Fighter II
Harrier Assault
Chaos Engine**



REVOLUTION NOT EVOLUTION



THE ATARI FALCON030

Power

- 68030 processor 32 bit architecture
- Digital Signal Processor DSP 56K
- Socket for Floating Point Co-Processor
- Graphics and DMA Co-Processor
- Expandable up to 14 Megs of RAM
- Versatile Internal expansion sockets

Graphics

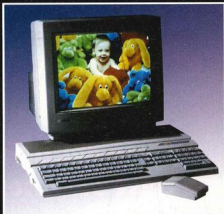
- 16 bit True Colour for quality animation
- 256 colours from palette of 262,144
- Resolutions up to 768 x 480
- Connects to TV, VGA or RGB monitors
- Selectable overscan and genlocking
- Hardware Scrolling

Data Storage

- 1.44 MByte floppy disk
- Optional internal IDE hard drive
- External SCSI CD-ROM and hard disks

Audio

- Stereo 16 bit input and output
- 8 track 16 bit DMA up to 50kHz sampling
- Flexible audio multiplexer to interconnect
- DMA, DSP, ADC and DAC
- External DSP connector
- Internal Speaker



Software

- Operating system in ROM ready to run
- Pre-emptive Multitasking Software
- NewDesk™ desktop

Connectivity

- SCSI II with DMA
- Serial, Parallel and LAN ports
- MIDI In and Out and Cartridge Port
- Stereo Microphone and Headphone
- 2 Enhanced Controller ports
- 2 Standard Controller ports

Which allows you to enjoy:

- Personal Interactive Media
- Voice and Data Communication
- CD Quality Audio
- Animation and Photographic Quality Graphics
- Movie Quality Desktop Video
- Extensive Connectivity
- User-friendliness
- Better than Arcade Quality Games

And with over 150 dedicated software titles in development...

ATARI®

Please send me more details about the Atari Falcon030 and other products

Name

Address

Postcode

Atari Corp UK Ltd, Atari House, Railway Terrace, Slough, Berks SL2 5BZ

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EUROPRESS
 ENTERPRISE

For over six years Atari ST User has been the leading magazine for ST enthusiasts. As a key member of the Europress magazine group, Atari ST User promises to inform, educate and entertain its readers each month with the most dedicated coverage of the ST available.

Atari ST User • Amiga Computing • PC Today
 Action Computing • Amiga Action • ST Action
 X-Force • Commodore Force • Sega Force •
 CD Action • Super Action • PC Power •
 Road Influence

Welcome to the latest issue of Britain's most complete ST magazine, again packed with informative and in-depth features and tutorials.

This month our theme is communications. We detail what's available online and explain just how much it will cost to log on to one of the larger systems.

You'll soon discover the benefits comms can bring, and to help you get hooked up, this month's CoverDisk contains the complete Mini Office Professional Communications package.

Inside the magazine you'll find some attractive reader offers including free CompuServe time and modems at knock-down prices.

There's also a line up of other articles to help you get the most from your ST. Our scanners round-up takes a look at the best models around and the software supplied with each.

And other specials include education software, General Midi and an unbiased comparison between the Falcon, Amiga 1200 and PC-compatibles.

I'm sure you'll agree there's plenty to help you get the most from your computer, so until next month - when Atari ST User gets a new look - enjoy your magazine.



John Butters

John Butters,
Editor

COVER
FEATURE

SCANTASTIC!

**A complete round-up
 of the best scanners
 and software you can
 use to get images into
 your ST documents**

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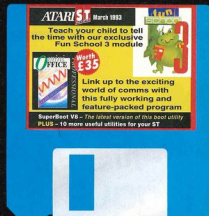
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The CoverDisk



Mini Office Professional Communications is the ideal package for anyone interested in exploring the world of comms – and it's yours for FREE!

PLUS:

- Fun School 3 – another complete module from this best selling educational series
- Chain Reaction – a brilliant and addictive game of fast thinking and fast reactions
- SuperBoot v8 – this outstanding boot utility has just been improved to include support for the STE's enhanced features
- Teradesk – a complete replacement for the ST's boring ol' Desktop. Very fast with improved file handling

ALSO – Rid your ST of those troublesome system bugs with a collection of nine TOS fixes

The DISK starts on page 10

Protext is Unbeatable Value!

Protext 5.5

*"If you need a professional word processor
Protext is perfect"* AMIGA COMPUTING

Amiga Format and ST Format Gold Awards

1Mb required (Amiga or ST). Free demo disk available.
Upgrade from any earlier version on same computer just £40.

previously £152.75

now just £80

previously £99.88

now just £40

Prodata

"...reliable, easy to use and excellent value"
AMIGA COMPUTING

Database manager. 1Mb required (Amiga or ST)

Exfile

The magazine for Protext users. Packed with information to help you make the most of Protext including mail merge and macros, printing solutions and tutorials.

6 issues for £15

Announcing Lapcat...

a new easy-to-use transfer solution for sending files between different types of computer.

Lapcat was designed for the NC100, Amstrad's new Notepad Computer. To make file transfer easy something new was needed; the difficulties in sending files via the serial port are well known – the problems of different connectors, different types of leads, baud rates and the software at the other end. Lapcat is a combined software/hardware package that transfers files quickly via the parallel port.

The Lapcat software is built into the Amstrad NC100. The standard package consists of the Lapcat lead plus software on disk for the computer of your choice. This will enable you to transfer files between an NC100 and your chosen computer. Lapcat is not just for NC100 owners because you can buy software to transfer between any two of the supported computers. No technical knowledge is needed.

Lapcat prices: (Please state clearly the type of computer you are using – PC, Atari, Amiga).

With software for one computer **£40**

Software for extra computers **£10 EACH**



Arnor Ltd (STU), 611 Lincoln Road, Peterborough PE1 3HA. Tel: (0733) 68909 Fax (0733) 67299



AS SPECULATION mounts that Atari have stopped production of the STE, key industry figures have promised to continue updating ST home productivity and utility software and hardware.

Most supporters are looking forward to mass availability of the Falcon, and even as the production rumours spread some firms announced new products for the 750,000 British ST users.

Compo Software (0480 891819) have, for example, just taken on distribution of five programs from US firm Gribnif - Arabesque, STalker, Convector, NeoDesk CLI and Card File.

A combined painting and vector drawing program, Arabesque's main features include a full range of editing tools for bitmap and vector drawing plus compatibility most file formats.

Claimed to be compatible with all STs, it requires 1Mb of memory and costs £129. Convector is an auto-trace program costing £99. It will compete against Silhouette and Compo boss Neal O'niens described it as a "pretty, neat and elegant package".

Running alongside replacement desktop NeoDesk - sold by Electric Distribution - NeoDesk CLI is a com-

mand line interface which can also be used as a standalone program. Price: £17.99.

Card File is a fact file database which has a built-in calendar that can be used as an accessory or application. It can export mail merge into wordprocessors and is priced at £24.99.

Details of STalker, meanwhile, can be found in the Communications Aspects on page 99.

Other companies including System Solutions, HiSoft, LCL and several games houses have also announced details of new ST products for release in the coming weeks.

And while stocks last, STEs will still be available from specialist computer dealers and High Street electrical chains. Atari were unavailable for comment.

New £200 console from Atari

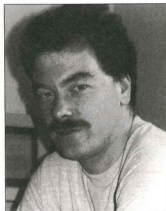
JAGUAR, the state-of-the-art games console under development by Atari, will go on sale this autumn for around £200, it has emerged.

Exact technical specifications remain unknown, but a industry sources hinted that the machine could be powered by a 68030 processor and a 32-bit graphics and sound processor.

As we went to press, the machine was due to be shown to prospective buyers and distributors behind closed doors at a German toy fair.

STE axed?

Industry pledges support



Support: New products from Compo boss Neal O'niens

More for colour

AIMING to make colour printing "within the reach of many more" Seikosha have launched what they claim to be the first sub-£250 24-pin colour printer.

The SL-95 prints at speeds up to 240 characters per second in super draft mode, offers Epson emulation and has a standard parallel interface.

A 43k buffer is supplied as standard and the printer contains nine fonts. An automatic cut sheet feeder is available for an extra £82.

"Seikosha aim to capture a large share of the buoyant entry-level colour market," said the firm's sales manager Gareth Cornish.

"We do see competition but in terms of price/performance, the SL-95 has significant advantages."

Double data

SAVING disk space is the aim of Datalight 2, a new on-line compression utility from German firm LogiLex (010 49 228 65 8346).

The firm claim that by automatically compressing data, the TSR-program doubles the capacity of floppy, hard and removable hard disks. Compressed or standard files can be read.

An extended GEM interface is also provided, giving the user keyboard short-cuts, window dialogues and so on.

It can be run as an Auto folder program or as a standalone application and is compatible with all STs, the TT and the Falcon.

More added to NeoDesk

AN IMPROVED version of NeoDesk, the leading ST replacement Desktop, is now available from Electric Distribution (0480 496789).

Added to v3.03 is the ability for NeoDesk desk accessories to be installed as applications and called up by macros at a single keystroke.

Other extras include a delete item menu, an improved control panel for sound chips on the TT and STE. Compatible with the Falcon's MultiTOS, the package costs £40.81. Upgrades are available for £4.95 by telephoning Softline on 0480 496575.



SL-95: Colour financially within reach of many more

News flashes

● **FOUR** new volumes have been added to Words and Music's collection of ST Classical Midi file format disks.

They can be loaded into any sequencer which supports standard Midi files, and are mapped to the GM/GS standard for instant playback.

Costing £10.95 each, all four can be ordered for £37.95. For more information on their contents telephone the company on 091-529 4788.

● **FROM** May's issue the quarterly direct debit charge for Atari ST User subscribers will rise to £7.99. This is due to an increase in production costs.

● **A SOURCE** close to Peterborough-based Aror claims the firm are set to start development on a new version of wordprocessor Protext.

It is unknown whether v6 of the program will be released on the ST, or indeed new features planned. Company boss Mark Tilly was unavailable for comment.

● **THE** price of Leadbroke Computing's (0772 561071) Midi Studio Master sequencing package has been slashed to £19.99, saving buyers a massive £80.

● **D & S Software** (0908 615104) have announced an addition to their Z80 software development system for the ST, Debug 80.

Existing users of the system can obtain the software for £13.50, while newcomers

can buy the complete package for £26.45.

● Following the success of last year's event, The Bournemouth & Poole Atari User Group (0202 842147) will be holding their second open evening at 7.45pm on March 3.

It will be held at the Kinison Community Centre, Pelham's Parl, Millhams Road, Kinison, Bournemouth. A range of serious and leisure ST activities will be covered.

● **Europress Software** (0425 859333) have just signed a deal with educational software publisher Davidson Associates for US distribution of the best-selling Fun School range.

● **Calamus User** is a new bi-monthly magazine devoted to the top ST desktop publishing software. For more information telephone 0304 369344.

● **ELECTRIC Distribution** (0480 496789) are just signed a bundle containing desktop publishing package Timeworks Publisher 2 and wordprocessor 1st Word Plus for £99.

Running until April 30, the offer enables buyers to save £110 on the combined recommended price.

● **DESKTOP** publishers are targeted for Turbo30, a Mega ST accelerator fitted with 4Mb of fast RAM and now available from System Solutions (081-493 3355).

Company boss Karl Brandt says that with a maths co-processor the computer out performs an Apple Macintosh IICX running at 40MHz. Cost: £1,199.

Greyscale monitor sells for £69

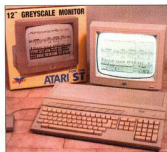
A LOW cost stereo greyscale monitor priced at just £69 has just been unveiled by ST dealer Silica Systems (081-309 1111).

The ViewTek VT12 greyscale screen works in low and medium resolutions, and a high resolution emulator is also provided.

Said spokesman Andy Leaning: "We've introduced this monitor to the ST market because we felt there was no low cost, entry level monitors available."

"While the ViewTek VT12 has a price of just £69, most compatible monitors start at around £140, more typically being around £200."

Meanwhile, Gasteiner Technologies (081-365 1151) say they are able to supply ST-compatible mono monitors. The version on sale rests on a swivel base and costs £149.



Cheap: Low-cost greyscale monitor for the ST

DIARY DATES

4 to 6 April 1993
European Computer Trade Show
Organiser: Blenheim (081-742 2828)
Venue: Business Design Centre, London
New software and hardware is previewed to the industry. No public admission.

20 to 23 April 1993
Which Computer? Show
Organiser: Reed Exhibitions (0810948 9837)
Venue: National Exhibition Centre, Birmingham
Mainly a PC event but occasionally something can be found for the ST.

23 to 25 April 1993
Midi Music Show
Organiser: Westminster Exhibitions (081-549 3444)
Venue: Wembley Exhibition Centre
Catch up with the latest ST Midi software.

OVERSEAS

24 to 31 March 1993
CeBit
Organiser: Deutsche Messe (010 49 511890)
Venue: Hannover, Germany
Massive electronics show. Atari usually have a large presence.

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

CoverDisk utility

WE would like to apologise to Mr Ofal Gal for including his copyrighted utility Alarm on our January CoverDisk without having permission to do so.

Psychologist raps epilepsy scaremongering

A BRITISH psychologist has hit out at tabloid newspapers which recently carried "scaremongering" headlines claiming computer and video game playing can trigger epileptic fits.

"Nintendo Killed My Son", screamed the front page of *The Sun*, about a boy with a previous history of fits who allegedly collapsed and died after playing a Super Mario game.

The boy's mother was quoted as saying: "If it can happen to my child it can happen to anyone."

The Daily Mail said games "should be redesigned to eliminate the risks of causing fits in children".

And even *The Sunday Times* reported City fears that health scares might cause the computer games bubble to burst.

But one person who suffered from the condition and who has researched its effects is psychologist Dr Cliff McKnight of the HUSAT Research Institute at Loughborough University.

"To suggest computer games cause epilepsy is nonsense - at best it indicates poor reporting and at worst it is simply scare-mongering," he said.

Dr McKnight says the games themselves are harmless but flickering TV screens used with computers and consoles could affect some of Britain's 20,000 photo-sensitive epilepsy sufferers.

It is only under this form of the condition that seizures are triggered by visual stimulation - such as TVs - and it can only affect those with an existing tendency or problem.

Fits can also be triggered by such things as the slow-down lights painted on roads before some roundabouts, tree-lined roads with the sun shining through trees and disco lights.

"Many hundreds of thousands of games computers were sold over Christmas - almost exclusively for use by children who tend to sit close to the TV when playing a game," Dr McKnight added.

"It's not surprising from a statistical point of view that some cases of epilepsy have become apparent, but this is certainly no excuse for the way certain tabloid newspapers have distorted the facts in order to create a more dramatic story."

And the British Epilepsy Association have also

slammed the newspapers' reports. Chief Executive Terry O'Leary says the "panic and fear is misplaced".

They have produced a leaflet on photo-sensitive epilepsy and an information sheet about televisions and computer displays which can be obtained from their helpline on 0345 089599.



Games: Epilepsy scares follow console boom



HCS

MEMORY UPGRADE SPECIALISTS

MEMORY UPGRADES

HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the amateur. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040	£13.99
To 2 Megabytes	£49.99
To 4 Megabytes	£94.99

ST(M) and Mega ST upgrade kits

Xirramor Deluxe plug to upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradable.

Marpet Xirramor Deluxe

(Formerly Frontair)

Quality SIMM Upgrading System

Upgrade from 520 to 1040	£49.99
To 2.5 Megabytes	£79.99
To 4 Megabytes	£119.99

Solder In Kit

Solder in kit upgrades 520ST to 1Mb 4 or 16 chips SMD or DIL types available. 16 chip c/w sockets. All c/w CAPS+ resistors + instructions.

Solder in kit (all versions)	£25.00
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REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply	£39.95
Double sided disk drive kit	£47.00

ACCELERATORS

ICD AD Speed uses 68000 switchable between 16MHz with cache and 8MHz 100% compatibility.

AD Speed ST	£145.00
AD Speed STE	£165.00

INTERFACES

The "AdSCSI ST" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Keyboard interface allows the use of PC compatible keyboards on the ST. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date with cartridge-through port.

AD SCSI	£69.99
AD SCSI with clock	£79.99
Keyboard Interface	£85.00
Multirez	£44.99
Forget Me Clock	£16.99

HCS ENGINEERING

SAME DAY FITTING AND REPAIRS TO COMPUTERS AND MONITORS - REPAIRS FROM £24.99

- * We offer a discount fitting service when your upgrade is purchased from us!
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- * Repairs charge includes labour and smaller items of repair * Atari registered
- * Ask for a TOS 1.4 upgrade at the same time as your repair for only £24.99, fitted
- * All repairs carry 90 day warranty * Next day courier collection/delivery £7.50 each way

MODEMS

The best data Smart One full featured modems have full industry standard compatibility including class II Fax protocol. All c/w PC software (fax software if applicable). 2400X gives V22bis, V22, V21. 9624 FX as 2400X + 9600 BPS fax + extra. Smart One 14400 comes with MNP level 1-5 and Fax capability. Using V42 bis gives a maximum effective throughput of 58000bps! All types come c/w cables. Straight fax supports most common graphic formats with fax drivers for Poststream and Calamus for immediate composition and send.

Straight Fax software	£39.99
Smart One™ 2400X	£59.99
Smart One™ 9624 Fax PC software only	£119.99
Smart One™ 9624 Fax with Fax software	£139.99
Smart One™ 14400 Fax MNP V32, V32bis, V42, V42bis etc	£269.99

MONITORS

14" Super high resolution 0.28mm dot pitch monitor is compatible with TT, PC, Falcon and Multirez. The new HCS MM140 Monochrome monitor has tilt/swivel base and 14" tube. Fully compatible with all monochrome ST software.

Multisync colour monitor	£280.00
MM140 Monochrome monitor	£115.00

PROTAR HARD DRIVES

Progate II 40DC	£349.99
Progate II 120DC	£469.00

SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms)	£300.00
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TOS UPGRADES

TOS 2.06 - TOS Upgrade allows your ST to run faster by using more efficient routines. Improved file selector and drive access. TOS 2.06 is switchable between your existing TOS.

TOS 2.06 - STFM/E	£49.95
TOS 1.4 FOR STFM	£24.99

HOW TO ORDER

Enquiries and credit card orders please Call on (071) 252 3113.

Please phone for enquiries between 10.30 to 6.00 Mon to Fri. 10.30 to 2.00 Saturday For mail order please send description of goods and cheque/PO to (sorry no postal enquiries)



HCS

Dept 9, 144 Tanner Street, London SE1 2HG

Prices include VAT and P&P. Goods normally dispatched within 2 working days.

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5
YEAR
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ON
MEMORY

14
DAY
NO QUIBBLE
MONEY BACK
GUARANTEE

SAME DAY REPAIRS IN LONDON

WORKSHOP ADDRESS:

HCS Engineering, 144 Tanner Street, London SE1

Repairs and service telephone numbers

071-252 3553 071-252 1551

Marpet No. 1 distributor - Exclusive Best data UK distributor - Exclusive Jappa Software UK distributor - Gadgets UK distributor

FEED YOUR ST!

ional Comms package, and another complete module from the hugely popular Fun School series

Fun School 3 offer

The full Fun School 3 for 5-7s package is available to all ST User readers at a discounted price of £13.95. Turn to page 17 for details on how to order.

SuperBoot v8

The latest version of this excellent boot utility which made its first magazine CoverDisk appearance in our June 1992 issue

Way back in June 92's issue, we featured a brilliantly useful program called SuperBoot. The program allowed you to specify which accessories and/or AUTO programs were loaded at boot up via the use of a friendly and easy to use menu system.

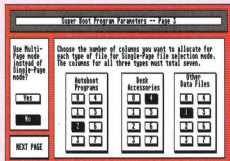
It banished the need for the clumsy method of renaming files in order to de-activate them so they didn't load at boot up.

Well, as with all good quality programs and equally good authors, SuperBoot has been improved by its programmer Gordon Moore, and makes another appearance in these hallowed pages.

This is a prime example of good shareware and shows just what shareware authors are prepared to do if enough people pay the registration fees.

If you use a shareware program regularly and pay the registration, then – as with SuperBoot – the program's development and improvement will continue.

Programmed by: Gordon W Moore
Configuration: All STs, med or hi-res
Filename: X_SUPB8T8.TOS
self-extracting archive



The fabulous SuperBoot makes another appearance on ST Users CoverDisk. This time it's v8, much improved, and with several extra features

Mini Office Pro Communications

Armed with a modem and this complete and powerful comms package, you will be able to access the vast world of telecommunications

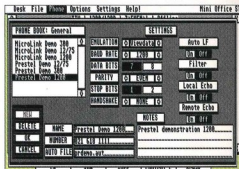
First format two blank disks and label them Program Disk and Utilities Disk. Then, copy X_COMM51.TOS to the Program disk and X_COMM52.TOS to the Utilities Disk and execute each one to start the extraction process. Once both files have been extracted, delete both X_COMM51 and 2 files and then execute COMMS.PRG on the Program Disk to get into the program.

Programmed by: Database Software
Configuration: All STs, med or hi-res
Filename: X_COMM51.TOS, X_COMM52.TOS
self-extracting archive

It's no good having a very expensive modem if the terminal software that controls and talks to it is not up to scratch. There are many terminal software packages that either just do not offer adequate features for the experienced user and are easy to use and understand for the beginner.

Mini Office Professional Communications (MOPC) offers the best of both worlds. It has an abundance of features and also has a built-in help function to aid the beginner.

If you find that MOPC is just the comms package you are looking for, turn to page 17 for details on how to obtaining a comprehensive manual on all of MOPC's abilities. The manual includes basic concepts, tutorial section and full reference to all of MOPC's functions and utilities.



Mini Office Professional Communications is a powerful and easy to use package with a built-in help facility and lots of features to get you on-line

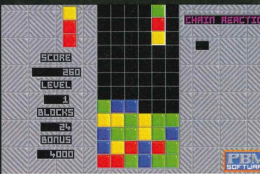
Chain Reaction

A brilliant Tetris-type puzzle game that will keep you coming back for just one more go

Chain Reaction is a one or two player game requiring quick thinking and equally quick reactions. Match three colours or more in a line either horizontally, diagonally or vertically and they will explode.

The object is to make sure you do not allow the blocks to build up to the top. If you do, it's game over, man. You score points for matching three or more colours and there's also a high score table to preserve your attempts for posterity.

Lots of fun with overtones of headaches in this game of quick thinking that will have you coming back for more



Programmed by: Paul Margison
Configuration: All STs, lo-res
Filename: X_CHAIN.TOS – self-extracting archive

Filemove

Useful utility for pre-TOS 1.4

Programmed by: Chris Robinson
Configuration: All STs – all resolutions
Filename: X_FILEMV.TOS – self-extracting archive

There was a problem with the self-extracting archive for Filemove on last month's CoverDisk which caused a jump back to the Desktop before it actually extracted any files.

So, here it is again for all you pre-TOS 1.4 owners who are fed up with not having a file move facility.



COVERDISK

Using 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: Make a backup of your original CoverDisk and put it in a safe place.

Using archived files

Note: When copying files or disks, 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 re-position it by moving the mouse to the required position (effectively dragging the icon) and releasing the mouse button.

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

Formatting a disk

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

Copying the CoverDisk

1. Open the disk B icon. A message appears saying "Please insert disk B into drive A".
2. Insert a (pre-formatted) disk which you wish to copy to and click on OK. A window should open.
3. Drag the disk A icon into disk B's open window. A message appears saying "Please insert disk A into drive A".
4. Remove the blank disk and put the CoverDisk in the drive and click on OK.
5. A box appears entitled COPY FILE(S). Click on OK and follow the on screen instructions exchanging disks as requested.

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.

TOS patches

A collection of various patch programs to help solve some of the often problems encountered with the differing versions of TOS

This file consists of numerous patches that fix various problems in the ST's operating system.

There is also a helpful and detailed text file from John Townsend of Atari Corporation giving useful advice and information on the differences between each TOS version. Who says Atari never help their users? Well done Mr Townsend.

Programmed by: Various authors
Configurations: All STs - all resolutions
Filenames: X_TOSFIX.TOS-self - extracting archive

Problems with your CoverDisk?

With thousands of disks being duplicated each month, a few will inevitably be faulty. Fortunately, we can help you. Send the faulty disk to: Stanley Precision, Unit F, Cavendish Courtyard, Sallow Road, Weldon North Industrial Estate, Corby NN1 1JX.

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

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. The Hotline number is only available within the times specified, so don't waste your time trying to ring outside them.

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- Colour Kit - Optional Extra (see Below)
- FREE Silica Printer Starter Kit

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RFP: £199
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- 2 Scalable Fonts in 40K
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- Auto Eject Facility
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CITIZEN Swift 9

- Citizen Swift 9 - 9 pin - 80 col
- 192cps Draft, 48cps N/A
- 8K Printer Buffer - 3 Fonts
- Parallel Interface
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- Epson and IBM Emulation
- Proportional Spacing
- FREE Colour Kit
- FREE Silica Printer Starter Kit

SWIFT 9

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- FREE Silica Printer Starter Kit

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- Optional HP Compatible Font cards
- Parallel Interface
- Graphics Resolution: 300x300dpi
- HP Desktop plot emulation
- HP Desktop plot emulation

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CITIZEN Project

- Citizen Project - 48 pin - 80 col
- 300cps Draft, 120cps N/A
- 32 Kbytes Buffer - 40K max
- 8K Printer Buffer - 3 Fonts
- Optional HP Compatible Font cards
- Parallel Interface
- Graphics Resolution: 300x300dpi
- HP Desktop plot emulation
- HP Desktop plot emulation

PROJECT

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TOTAL VALUE: £464
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Tel: 071-629 1234
Fax: No. 071-629 1234

SIDCUP SHOP:
1-4 The Mews, Hathery Rd, Sidcup, Kent, DA14 4DX
Tel: 081-309 1111
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NOTE: Advertised prices and specifications may change. Please return the coupon for the latest information.

Special offers – at knockdown prices!

Mini Office Communications Manual



This comprehensive reference manual which will help you make the most of the CoverDisk costs only £9.50 including VAT, postage and packaging.

ONLY
£9.50

Fill in the order form opposite and send it to: Manual Offer, Europress Enterprise, Europa House, Adlington Park, Macclesfield SK10 4NP, before April 1, 1993.

Mini Office Communications Order Form

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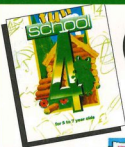


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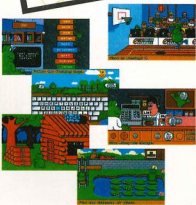


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There'll be more Fun School offers in next month's *Atari ST User*

Be a Mini Office Professional

You are about to enter one of the most fascinating worlds of computer technology - telecommunications. Armed with a modem and a good communications package, you can access a wealth of information, play against other players in multi-user games and download programs, all a mere phone call away.

You now have the first essential piece of equipment needed to get online, the comms software. So, having extracted the files from our CoverDisk (you have, haven't you?) I'll now take you through

Darren Evans guides you through the basics of using this month's full price and complete CoverDisk give-away, Mini Office Professional Communications, a powerful and easy to use terminal software program

Hayes standard, move up to the Settings menu item and select the Select modem menu option. A File selector box will appear and you should select HAYES and click on LOAD.

Once you have set the modem type, you now have to tell the software what speeds, terminal type and other settings, which will be explained later. Such information comes under the heading of Terminal settings and defines how the modem talks to other modems.

Move the mouse pointer up to the Settings menu item and select Configure Terminal. A dialogue box will appear with various buttons, some of which are already highlighted.

Depending upon what model of modem you have and the online service you will be calling, some of these default settings will need to be changed.

The first change should be to select the highest speed which the service you are about to call and your modem can operate at. The most common speed for

a modem is 2,400 (aka V22bis)

Most services that you will no doubt use will be bulletin board system, hence the term BBS. This is because they are generally run by enthusiasts and as such they do not require you to pay for access. Therefore you should set your terminal type to VT100.

Also, various services have differing protocols. A protocol defines the way data is transferred between you and the other modem you are calling.

The data bits, parity, stop bits and handshake buttons are used to change the protocol and for most BBSs, this can be set to eight data bits, no parity and one stop bit. This setting is usually referred to as 8N1. Once you have selected the required setup, click on OK.

Once you have Mini Office Comms set up for your modem, you will no doubt be eager to get online. One of Mini Office Comms's features is a software phone book in which you can store all the necessary information such as speed and terminal settings required to access it.

If you have a modem that has an auto-dial feature (most do), calling a service listed in Mini Office Comms's phone book is simplicity itself.

Simply move the mouse pointer up to the Phone menu item and select Dial. A list of all services currently in the phone



Here you set the terminal settings for the service that you wish to connect to. Most BBSs use eight bits, no parity and one stop bit

book will be displayed. Scroll through the list until you find the service you wish to access and click on the name.

Then click on Dial and Mini Office Comms will automatically set the terminal settings for that service and also instruct the modem to dial the number for you.

Adding a new service to the phone book is also extremely easy. Move the mouse up to the Phone menu item and select Phone Book.

Click on New and enter the name and number of the service. Then select the necessary terminal settings that the service uses and finally, you may enter any information in the Notes box that you wish such as the sysop's name and what hours the BBS is available.

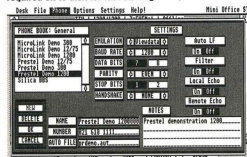
Phone book

When you click on OK, all the information you have entered will be permanently saved to the phone book on disk.

You should now be ready to get online with your new comms software - and remember, every month *Atari ST User* has a regular comms column where you can keep up to date with what's happening in the comms world.

If you are eager to try out a BBS, try Silica Systems' new board where you can find technical advice, software upgrades and public domain programs. The board operates 24 hours a day and is available on 081-309 5255. Set your terminal to 8 bits, no parity and 1 stop bit.

The phone book facility allows you to save all your favourite service numbers and the terminal settings required on disk for fast dialling



A built-in help facility is available at all times should you need information on any of Mini Office Comms's features



the basics of using Mini Office Professional Communications.

The first thing you must do is to tell the software what type of modem you will be using. This is because various modems require different commands for attempting such things as hanging up the line. Therefore, the software needs to know what command the modem accepts to do this so it can send it.

Thankfully, this potential nightmare of hundreds of varying commands between modems has been recognised and a standard has been adopted by the majority of modem manufacturers. This standard is called Hayes and all Hayes standard modems will use the same commands.

Since the majority of modems use the

Manual offer

The full manual for Mini Office Professional Comms is available to *Atari ST User* readers for £9.50. Look at page 16 for more information.

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REPLAY 8

Replay 8 features powerful sampling and playback commands such as Sample, Pre-Sample, Auto Record Trigger and more, as well as the usual editing commands. Replay 8 also contains some Special Effects software and a 2 voice programmable Drum Machine called Drumbeat 8.

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This system can record in high quality stereo from its twin phono input sockets, taking sounds from any suitable Stereo equipment such as a Portable Cassette or CD player. Editor features include Mark, Hide, Cut, Loop, Paste, Insert, Delete, Fill, Clear, Overlay, Reverse, Fade and many more.

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Factfiles are for use with the Answerback Junior Quiz only

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ADI is a friendly animal which appears on this latest range of educational software from Database (the manufacturers of Fun School).

Each package is designed to follow the National Curriculum for a particular school year.
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ADI - English for 12/13 years
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ADI - Maths for 12/13 years
ADI - Maths for 13/14 years
ADI - Maths for 14/15 years
ADI - French for 11/12 years
ADI - French for 12/13 years
ADI - French for 13/14 years
ADI - French for 14/15 years

£16.95 Each
or £32.00 for any two
or £47.00 for any three

COOMBE VALLEY SOFTWARE

Coombe Valley produce a range of educational adventure games which develop Reading, Keyboard Skills, Logical Thought and Planning. In addition, most of the games also improve specific skills in Maths, English etc.

Maths Dragons (5 to 12 years)
Gave Maze (8 to 13 years)
Reasoning with Trolls (5 to 12)
Faction Gobblins (8 to 13+)
Picture Fractions (7 to 10 years)
Tidy the House (5 to 9 years)
£12.95 Each
or £24.00 for any two
or £34.50 for any three

NODDY'S PLAYTIME

A complete entertainment and learning package for young children. Contains 10 exciting programs which include a full Junior Art Package, Noddy's Paint Pot, Post Office, Maze and many more.

MJC PRICE £18.95

PLAYDAYS

The popular Playdays television programme is now available as an educational computer game. Contains 13 different games. Includes some superb graphics and sound.

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OTHER PRODUCTS

GRAPHICS SOFTWARE

Deluxe Paint 5 £44.95
Spectrum 512 £22.95

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Tempus 2 £29.95
Hisoft C Interpreter £39.95
Lattice C version 5 £99.95
Nevada Cobol (inc. CPM emulator) £33.95
Hisoft High Speed Pascal V1.5 £69.95
Hisoft WERCS Plus (inc. GDO5) £33.95
NEW - Hisoft Devpak 3 £59.95

STOS PRODUCTS

STOS - Compiler £13.95
STOS - 3D £22.95
The Game Makers Manual CALL

DATABASES

SUPERBASE PROFESSIONAL
A fully relational database that can take graphic files as well as text.
91% Rating in ST Review October 1992
OUR PRICE £69.95

Data Manager Professional £29.95
Super Card 2 £24.95

COURIER DELIVERY SERVICE

A next day courier delivery service is available on all orders - Prices start from £3.00 - Please call for details

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Word Writer CALL
First Word VWS V3.1 £39.95

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Mini Office Communications £15.95
Harlekin £39.95
Hisoft Diamond Back £31.95
NEW - Hisoft Diamond Edge £31.95
NEW - True Paint for Falcon 030 CALL
Forget Me Clock 2 £17.95

NEW - ROBOSHIFT

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OUR PRICE £13.95

VIDI ST

Vidi-ST + Vidi-Chrome £84.95
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Vidi-ST Complete Colour Solution £129.95

★ NEW - VIDEOMASTER ★

VideoMaster combines a Video Digitizer and a Sound Sampler in one low cost unit. Can digitise in colour using the lifters supplied or an additional RGB Splitter (not supplied). Record sound tracks using the Sound Sampler to create your own short films or demos.
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Ladbroke Computing



33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP

Ladbroke Computing International are one of the longest established home computer dealers in the U.K. We have developed an extensive customer service policy which involves testing of all hardware prior to dispatch 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 25/1/93 (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.

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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 (£11 for Saturday delivery).

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Ladbroke Computing Ltd trading as Ladbroke Computing International.

Fax: (0772) 561071
Tel: 9.00am-5.30pm (5 Lines)
(0772) 203166

Golden Image Mouse



- Amiga Format Gold Award winner with 90%
- Switchable ST/Amiga
- High 290 Dots per inch resolution
- 2 Microswitched buttons for crisper response and higher reliability
- Opto/Mechanical Mechanism incorporating an anti-static silicone rubber coated ball.
- Mouse Mat included
- Ergonomic design

Golden Image Mouse £14.99

Joysticks

- Pro 5000 Black £7.00
- Zip Stick £11.99
- Pro Star £11.99
- Pro 5000 Mini (LED's) £14.99
- Navigator £14.99
- Quickjoy Turbo £6.99
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Hand Scanners



- 100, 200, 300, 400 dpi resolutions
- 1 letter mode, 3 photo modes
- 105mm scanning head
- Includes the excellent MIGRAPH TOUCH UP 1.8. This is the full package with manual
- Includes DELUXE PAINT ST, full package with animation and manual. One of the best available art packages for the ST
- MIGRAPH's OCR Package available as an upgrade to all Golden Image Scanner owners.

Golden Image Scanner £119.99

Scanlite

- For those times when all you want to do is quickly scan an image and not bother with a larger editing program
- Supports GOLDEN IMAGE, Migraph, Geniscan and Daatascan Hand Scanners
- Works in low, medium; high and BigScreen resolutions
- Instantly accessible from within programmes supporting accessories
- Scans directly into Silhouette, Megapaint II

Scanlite Accessory £20.00

Migraph OCR

We can now offer a TOUCH UP 1.8 Upgrade along with Migraph's OCR (Optical Character Recognition) Software to all owners of the Golden Image Hand Scanner for the ST. Requires at least 2Mb RAM and a hard disk.

Migraph OCR Upgrade £79.99

JIN Mouse



- Switchable ST/Amiga
- High 290 dots per inch resolution
- Opto/Mechanical Mechanism incorporating an anti-static silicone rubber coated ball
- Ergonomic design

JIN Mouse £7.99
Ladbroke's Mouse Mat £2.98

Silhouette

- Autotraces bit image graphics to resolution independent vector graphics
- Produces Beziers, B-Splines, High resolution grey scales
- Supplied with FontGDOS
- Supports FSM GDOS
- Imports IMG, DEGAS, TINY, MacPaint, GEM, SGF Bit image files
- Exports IMG, GEM (1.3), SGF, DXF, EPS (Postscript) files
- Supports direct scanning via Scanlite accessory
- Requires 1Mb ST, Hi-res monitor

Silhouette £60.00
Calamus Vector Graphics (CVG) support coming soon
Calamus V1.09N £124.99
That's Write 2 £109.99
1st WordPlus £39.99
Timeworks 2 DTP £49.99
Sigma's Script WP £79.99

GI Optical Mouse



- Switchable ST/Amiga
- High 250 dots per inch resolution
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- Fully optical mechanism with no moving parts for higher reliability
- Optical Mouse Mat included
- Very light, ergonomic design

GI Optical Mouse £24.99

Coalesce

- Allows A4 scanning with a hand scanner
- A Tray, guides two passes of the hand scanner
- Coalesce Software pieces the two images together
- Allows full page scanning, ideal for OCR work with a hand scanner
- Compatible with GOLDEN IMAGE Hand Scanner
- Compatible with Scanlite for direct scanning into Coalesce

Coalesce Software + Tray £60.00

3.5" Floppy Disks

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- 50 3.5" Disks £19.98
- 100 3.5" Disks £38.00
- 200 3.5" Disks £74.00
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- 20 Capacity Box £2.00
- 40 Capacity Box £4.99
- 80 Capacity Box £7.99
- 150 Capacity Drawer £17.99

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"The Natural way to draw"

- 150 dpi resolution
- Opto/Mechanical mechanism
- 500mm/SEC tracking speed
- Switchable between ST/Amiga
- Direct Mouse replacement
- Includes the exceptional DELUXE PAINT ST art package with full manual

GI Brush + Dpaint ST £24.99
GI Brush Mouse £19.99

Deluxe Paint ST

- Animation facilities including Tweening
- Colour printing
- Filter Smooth and Blend options
- Airbrush, Colour cycling
- Text and Stencil options
- Only available when bought with any other item from Ladbroke Computing

Deluxe Paint ST £19.99



Accessories

- Forget Me Clock II £17.99
- ST Dustcover £3.99
- Mouse/Joystick extension £5.99
- 3.5" Disk head Cleaner £3.99
- Monitor switch box £19.99

Floppy Drives



- 720K formatted capacity
 - Double sided, double density
 - Daisy chain through port for compatibility with older ST(M) machines
 - External Power Supply
 - Attractive case design
- GI External drive £54.99
ST Internal drive £39.99

Discovery Packs

- Includes Windowing GEM operating system. Stereo sound output
- Includes Mouse and built-in modulator to connect to TV
- 4 Great Games:** 9 Lives, Escape from the Planet of the Robot Monsters, Final Fight, Sim City.
- 1st Word Wordprocessor**, Neochrome Art & Ani ST
- Basic Language and tutorial software

520 STE	£219.00
1Mb STE	£229.00
2Mb STE	£275.00
4Mb STE	£239.00

Curriculum Packs



- Educational software catering for 5yrs to GCSE level
- 2 Great Games
- Creativity pack including Hyperpaint and Music Maker software

1040 STE	£289.00
2Mb 1040STE	£347.00
4Mb 1040STE	£402.00

Above Curriculum packs are special offers while stocks last

1040 Midi Master Pack	£289.00
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Falcon 030

- 16MHz 32 bit 68030 Central Processor
- 32MHz 56001 Digital Signal Processor
- 16MHz Blitter Chip
- 1.44Mb 3.5" Floppy, up to 14Mb RAM
- Up to 14Mb RAM
- Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel 16 bit, higher than CD quality stereo sound sampling
- Stereo sound sampling built-in
- Network port and internal IDE connection for hard drive
- Multi TOS MultiTasking Operating System

FALCON 1Mb No HD	£479.00
FALCON 4Mb 65Mb HD	£879.00

Mega STE

- Switchable 16/8MHz CPU
- 1.44Mb 3.5" floppy
- Network Port
- VME bus
- Maths Co-processor socket
- TT Styling

Mega 2 STE	£459.00
Mega 2 STE 52Mb HD	£699.00
Mega 2 STE 127Mb HD	£809.00

Printers



Star		
Star LC100 Colour	£165.00	
Star LC20	£124.00	
Star LC24/100	£179.00	
Star LC24/200 Colour	£259.00	

All Star Dot Matrix printers include 12 months on-site warranty.

Starjet SJ48 Bubblejet	£210.00
SJ48 Sheetfeeder	£69.00



Citizen		
Citizen 120D+	£119.00	
Citizen Swift 240 Colour	£270.00	

Hewlett Packard		
HP Deskjet 500	£339.00	
HP Deskjet 550 Colour	£449.00	
HP Deskjet 550 Colour	£580.00	

Triumph Adler		
JPR7825 Bubblejet	£224.00	

- HP Deskjet + emulation
- 300 Dpi
- 50 Nozzle print head

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	£79.00
Ricoh LP1200	£759.00

- Fully HP III compatible
- 400Dpi resolution
- 2Mb RAM on board
- Serial & Parallel ports
- 12 months on-site warranty

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



Atari Portfolio

Portfolio	£129.00
-----------	---------

- 128K RAM
- Expandable to 640K
- MS-DOS 2.11 compatible operating system
- 5 built-in applications including Lotus 123 compatible Spreadsheet, Calculator, Text Editor, Address Book, Dialler and Time Manager.

Pocket Modem	£219.00
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1200 Baud Hayes compatible modem. Auto answer and wake up. Telephone line supplied.

Serial RS-232C i/face	£55.00
Parallel interface	£39.00
Portfolio PSU	£11.00
64k Memory Card	£84.00
128k Memory Card	£129.00

PC Emulators



- Run PC Software on your ST
- Full installation instructions
- XT or AT Emulation

PC Speed STFM (XT)	£79.00
PC Speed STE (XT)	£79.00
AT Speed STFM (8MHz)	£129.00
AT Speed STE (8MHz)	£139.00
AT Speed C16 STFM	£189.00
AT Speed C16 STE	£199.00
AT Speed C16 Mega STE	£219.00

Psion Series 3



Psion 3 128K	£189.00
Psion 3 256K	£234.00

- 16 Bit Processor
- Graphical Windowing, Multi-tasking OS
- 128K or 256K RAM
- Up to 4Mb Card storage
- Built-in Wordprocessor, Database, Calculator, To Do manager and OPL programming language

Parallel interface	£28.00
Serial RS232C i/face	£64.00
Psion 3 PSU	£14.00
Spreadsheet 256K only	£62.99
128K RAM SSD	£74.00
512K RAM SSD	£184.00
1Mb RAM SSD	£274.00
256K Flash SSD	£64.00
512K Flash SSD	£109.00
1Mb Flash SSD	£184.00

Monitors



Atari SC1435	£179.99
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The SC1435 comes complete with cable and tilt/swivel stand

Atari SM146 Mono mon	POA
Philips 8833 MkII	£219.99

This best selling colour, stereo monitor comes complete with 12 months on-site warranty and free Lotus Turbo Challenge II.

Philips 15" FST TV	£219.99
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- SCART input TV
- 39 channel remote control
- Flat Screen



Philips 15" Cube Teletext	£259.99
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- SCART input TV
- 60 channel remote control
- Fastest teletext
- Flat Screen
- 3 Speaker sound

8833 Mk II Amiga Cable	£9.99
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Philips SCART to ST/STE	£9.99
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8833 Mk II dustcover	£7.99
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14" Monitor stand	£9.99
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Atari Lynx 2



Lynx 2 Batman Pack	£89.00
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- 16 Bit Processor
- Full Colour Games
- 4096 Colours
- Stereo Sound
- Headphone Socket

Lynx 2 Console only	£79.00
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Lynx Soft case	£9.00
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Comlynx cable	£7.00
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Lynx 2 Survivor	£6.00
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Battery Pack	£9.00
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In stock: Shadow of the Beast, Batman, Shanghai, Chips Challenge, Xybots, Roadblasters, Chequered Flag, Ninja Gaiden, Paperboy, Turbo Bus, Xenophobe, Qix, Robo Squash, Ms Pacman, APB, Warbirds, Scarydog Dog, Shun Runner, Hard Drivin', Slime World, Electroop.

DataPulse Plus



Hard Drives

- All Data-Pulse Plus Hard Drives are formatted, partitioned and tested before despatch, ready to "plug in and go"
- Extremely low noise output due to case design
- Fully Autoboosting and Autoparking
- DMA device selector & on/off switch on front of case for ease of access
- DMA Out port for daisy chaining extra drives or Atari Laser printers
- Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand
- We use only high quality ICD controller boards including on-board clock and controller utilities software
- Only Highest Quality Quantum or Maxtor mechanisms used
- All drives come with full 12 months warranty and free expert help and advice over the phone
- All drives include Vault archiver, Backup software, Virus killer, MCP shell program, Midstudio Master demo
- Full Midstudio Junior Midi Sequencer package

Data-Pulse + 42Mb	£319.99
Data-Pulse + 85Mb	£379.99
Data-Pulse + 127Mb	£429.99
Data-Pulse + 170Mb	£499.99
Data-Pulse + 213Mb	£579.99

Diamond Back II

- Extremely Fast backup to floppy or hard drive with optional compression and encryption
- On Line help facility makes it very easy to use
- Load/Save Custom backup configurations
- Incremental backups by date/time or Archive bit (TOS 1.4)
- Backup and restore Spectre partitions

Diamond Back II £29.99

HD TurboKit

- De-Fragmentation Utility optimises the speed of your hard drive by moving all data blocks into contiguous data areas
- Can Optimise for reading or writing
- Gerdos file backup or image copy backup

HD TurboKit £4.99

Floptical Drives

- Capable of storing over 20Mb of uncompressed data on a single 3.5" Floptical disk
- Can read and write 720K and 1.44Mb 3.5" Floppy disks
- Average access time 65ms
- Data transfer rate of 200K per sec (6 times faster than Floppy disk)
- 3.5" SCSI mechanism
- Utilises only high quality ICD host adaptors
- High quality Case and PSU as used in all Data-Pulse Plus Hard Drives (see opposite for details)
- Available as a stand alone unit, an upgrade to existing Data-Pulse (Plus) drives or as a combination unit with Hard drive mechanisms from 42Mb to 213Mb
- Ideal for fast data backup from hard drive
- Low cost removable media



21Mb Floptical Drive	£399.99
DataPulse upgrade	£299.99
42Mb HD+21Mb Floptical	£609.99
85Mb HD+21Mb Floptical	£669.99
127Mb HD+21Mb Floptical	£719.99
170Mb HD+21Mb Floptical	£789.99
213Mb HD+21Mb Floptical	£869.99

All the Above drives include one 21Mb 3.5" Floptical Disk

21Mb 3.5" Floptical Disk	£24.99
5 x 21Mb Floptical Disks	£114.95
10 x 21Mb Floptical Disks	£199.99

ICD's LINK

- Adapts the ST's DMA port to a 50 way SCSI Connector
- Allows connector direct to SCSI hardware including Hard Drive Mechanisms, Floptical Mechanisms, Optical Drives, CD ROM's

ICD LINK £69.99

Image CAT

- Catalogue all image files on your hard disk. Prints titled display with path names

Image CAT £24.99

STACY Batteries

- Complete re-chargeable battery upgrade kit for STACY
- Up to 2 Hours running time
- Weights 2.2 pounds
- Slow charge in 14 hours
- Fast charge in under 4 Hours (with optional fast charger)
- Fits into STACY's battery compartment and is charged by the STACY's power supply
- Full fitting instructions

STACY Battery Upgrade £49.99
Fitting Service £10.00

ST Networks



Datanet Network Hardware

- Cartridge based high speed network solution
- Compatible with ST (F)(M), Mega ST, STE, Mega STE
- Connects via Coax and BNC connectors

Powernet Network Software

- MultiTasking Network software allows applications to run on the server while drive and printer accesses take place in the background
- Allows the mixing of Network types, ie DataNet, LanNet and MidiNet devices
- Full Falcon compatibility with LanNet device
- Ethernet compatibility and E-Mail coming soon

DataNet with PowerNet	£99.99
LanNet with PowerNet	£89.99
MidiNet with PowerNet	£99.99

Prices quoted are for 1 Node. Each computer attached to a Network requires 1 Node. A LanNet device is required to Utilise the Lan Port on a Mega STE, TT or Falcon.

STE Packs

- Includes Mouse and built in modulator to connect to TV
- 4 Great games, 9 Lives, Escape from the Planet of the Robot Monsters, Final Fight, Sim City
- 1st Word wordprocessor, Neochrome Art & AniST

520 STE	£219.00
1MbSTE	£229.00
2Mb STE	£264.00
4Mb STE	£310.00
1040 STE Curriculum 2	£289.00

Aries Upgrades

- Will fit any ST(F)(M) or Mega ST
- Will not obstruct or interfere with any other known internal upgrade, ie PC emulators, processor accelerators etc
- Extremely compact in house designed Multi-layer circuit board smaller than a credit card
- Upgradeable in stages for the base 512K to 2Mb then 4Mb
- Solder in design for greater reliability
- Fully tested prior to despatch
- All Aries RAM upgrade boards come packaged in a 10 capacity disk box, complete with full fitting instructions and memory test disk.

512K Board	£39.99
2Mb Board	£79.99
4Mb Board	£129.99
512K SIMM's STE	£7.99
2Mb SIMM's STE	£57.99
4Mb SIMM's	£109.99
2 x SIPP to SIMM adaptors	£3.00
Fitting Charge	£15.00
Same day service	£15.00
Courier Pickup	£11.00
Courier Return	£6.00

Repair Services

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

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	£6.00

Phone for price and availability of ST spares

This Month's Special Offers

- Highly specified 300, 1200, 2400 Baud Modem, MNP 5, CCITT V.42/V.42bis
- Includes Junior Office Fax Modem SEND Software
- SEND ASCII and Image information to Group 3 FAX machines
- Compatible with ST/STE/TT and FSM GDOS

FAX MODEM £144.99
Special Offer while stocks last

Ladbroke Computing



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PR1 2QP

Fax: (0772) 561071
Tel: 9.00am-5.30pm (5 Lines)
(0772) 203166

One-to-one learn

The ST, perhaps more so than several other home computers, is very much a "family machine". Atari themselves have encouraged this perception with their Family Curriculum pack.

If you're a parent who bought an ST at Christmas, or even one who made the hardware investment some time ago, you may be wondering what else, apart from the obvious games which more than likely came with machine, you can buy in the way of software that will keep your children entertained - and maybe help them learn new skills at the same time. You've

more than likely heard of educational software, but is it really worth the money? Could it possibly even harm children who are learning in a particular way at school?

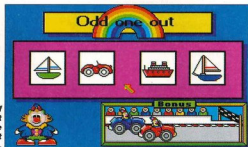
Brilliant

Well, the good news is that educational software has been constantly improving. There are very few packages which could accurately be described as useless, and some are positively brilliant in the way they teach what, to children, can be very complex concepts, in a thoroughly entertaining manner. Many, if not most, educa-

tional packages are now geared to the national curriculum, so while a child can have plenty of fun, there is always a major plus side to their use of the packages, and what they learn is entirely in keeping with their school

lessons. And let's face it, there are plenty of adults (I'm definitely one of them!) who could do with brushing up on, say, French or maths. And many of the programs which work well for ordinary children can also be extremely

Early Learning Early Learning Early Learning Early Learning



Shapes and Colours

Age range: under 5s

Rainbow Educational Software

£7.99

Designed to help children develop colour and shape recognition, an awareness of size and the concept of grouping objects into sets, Shapes and Colours is a collection of six programs which fits the bill admirably.

Bobby the Clown, a colourful, animated character who, features in four of the six games and, together with some basic music and sound effects, makes a good job of encouraging children to learn.

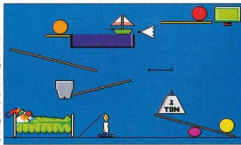
The games are all mouse-driven for simplicity. Four of them each have three levels of difficulty which can easily be set at any time during a game by hitting the Escape key.

The games are Snap, a variation on the traditional card game featuring very simple shapes and colours; Painting, in which the child can colour six different scenes using a palette of 12 colours; Sets, where the young student places items which are similar into groups; Big and Small, which develops awareness of differences in the size of objects; and the Shape game, which is based on the old wheel of fortune.

Shapes and Colours will help to prepare the way for learning letters and numbers. There are plenty of "reward" animations which encourage children to succeed in the games.

● Child's view: Louise (5) - "It's good fun and you don't get bored. I like it when the clown in the Snap game gets a pie in the face."

The candle burns through the rope, the one ton weight falls and a chain of events is set in motion when you successfully complete the Shapes and Colours Sets activity



Richard Williams goes back to school to see what software is really worth your money

Learning

beneficial for those – children and adults – with learning difficulties. Although learning from a computer will never entirely replace more traditional teaching methods, there are many advantages. Apart from the obvi-

ous fact that the computer never tires like human teachers can, students are able to study when they want, at their own pace, with no end-of-period bell

ringing just as they're getting into the subject. And there's no embarrassment if they get something wrong – in most cases, just some friendly help to make sure they get it right next time.

Experts

Because they're usually based on the experience of experts, virtually every likely learning problem has been thought of and taken into account in the programming.

There is one important word of advice for parents – don't just let younger children get on with it. Talk to them about what they are doing, and help them if they fail to understand anything. Leave them on their own with the computer when they're proficient enough to know what

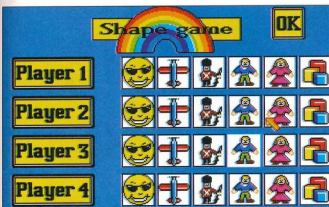
they're doing by all means, but the more help you can give in the initial stages, the better.

Read the instructions that accompany the software carefully and make sure, if there are various levels of difficulty or other settings, that the lessons or games are set up properly for your child. Where do you start your quest for the right software? You can begin right here with our guide to some of the impressive packages currently available.

After the reviews, there's a short resume of other educational software currently available for the ST.

As you'll see there's plenty of decent software available but whatever software you choose, we hope your children – and you! – enjoy and benefit from it.

Early Learning Early Learning Early Learning Early Learning



Up to four children can play the Shape game. This game is just for fun, and is rather like the old wheel of fortune on which we've all "gambled" at garden fetes, Christmas fairs and the like



The wheel spins, and eventually stops against a player's chosen shape. First player whose shape is honoured in this way four times is the winner

First Letters

Age range: under 5s
Rainbow Educational Software
£7.99

A truly fun program for children with a reading age of three to five, it has been designed to enhance learning of phonetically hard (that is hard-sounding) letters.

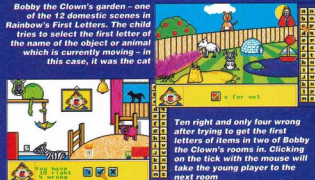
The action is based on Bobby the Clown's house and garden. Objects in each room move, one at a time, in a random order. The child is asked to indicate the first letter of the currently moving object.

This can be done in three ways – by pointing and clicking on a letter of the alphabet using the mouse; by pressing a letter key on the keyboard; or by pressing the spacebar repeatedly until the desired letter appears, then pressing the Return key. When five correct answers have been given in a particular room, the child can move on to another. A bonus screen is displayed after five rooms have been completed.

All in all, a simple, colourful program, with good help facility. Use of sound is tends towards the minimal, however.

● Child's view: Helen (4) – "Sometimes I didn't know what the object was that was moving – I said one was "b" for boat, but it was "y" for yacht, and I said "h" for hand but it was "f" for finger. But I did like it and I want to play it again soon."

Bobby the Clown's garden – one of the 12 domestic scenes in Rainbow's First Letters. The child tries to select the first letter of the name of the object or animal which is currently moving – in this case, it was the cat



Ten right and only four wrong after trying to get the first letters of items in two of Bobby the Clown's rooms in. Clicking on the tick with the mouse will take the young player to the next room

Number skills Number skills Number skills Number skills

Count and Add

Age range: under 7s

Lander Software

£25.99

"Great fun with numbers" is Lander's proud claim for Count and Add, and it's certainly no exaggeration.

It comprises five games: Sets 1 and 2 – matching and counting objects; Animals – counting; Train – counting and simple adding; and Spider – more advanced counting and adding, and the only game in this package which you play against the clock.

If you don't beat the time limit, a butterfly is eaten by a spider which creeps up on it as the game progresses.

The child's friendly host is Shades the Dog, who is gifted with a limited amount of audible speech through his speech bubbles – he even addresses the child by his or her name, once this has been typed in at the start of the session.

A very useful feature is the parent/teacher section in which settings such as the speed of the Spider, number of questions in a round, number of attempts allowed, highest number allowed (up to 20) and symbols to be used for addition and equals can be made. Recording of results of a session can be switched on or off here.

A variety of colourful objects and animals are used as the items to be counted and added. These programs are very well thought out and bring what could otherwise be boring, repetitive lessons to life.

The parent/teacher booklet is excellent, as with all Lander products. There's a free colour badge with this one, too, featuring Shades – of course.

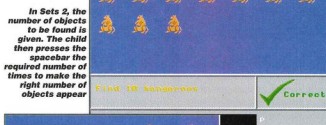
● *Child's view:* Louise (5) – "My teacher told my mum and dad that I'm good at number work, but I need to get a bit faster. That's why the butterfly keeps getting gobbled up when I play the Spider game. But I am getting a bit faster now."

Parent/Teacher Section	
Spider speed	MLL ON
Number of questions	5
Number of attempts	2
Lowest number	1
Highest number	10
Addition bond	+
Equals	=
Record results	YES
Hide this section	NO
<input type="button" value="Help"/> <input type="button" value="View results"/> <input type="button" value="Save defaults"/> <input type="button" value="Quit"/>	

The parent/teacher screen, which is used by the tutor to set up parameters according to the child's developing level of competence. The default settings are shown here



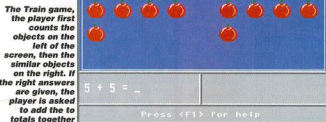
In the Sets 1 game, a set of objects or animals have to be counted. Here we have a pride of lions



In Sets 2, the number of objects to be found is given. The child then presses the spacebar the required number of times to make the right number of objects appear



Animals requires the player to type in the number of animals displayed using the keyboard



The Train game, the player first counts the objects on the left of the screen, then the similar objects on the right. If the right answers are given, the player is asked to add the totals together

Fractions Goblins

Age range: 8 to GCSE age and even older

Coombe Valley Software

£14.99

Fraction Goblins is very similar to Maths Dragons, but gives practice in the four rules of arithmetic as applied to fractions.

At its simplest, the game allows those starting fraction work to make progress, while at its most difficult even good GCSE level pupils may find a pencil and paper useful. The Fraction Goblins will tell the player the correct answer

if they get a question wrong and will even deal with partially correct answers, where a player does not cancel his or her answer down to its lowest



You have met a Divide Goblin.

What is

$\frac{1}{2} \times \frac{2}{3}$

Enter your answer for the top part of the fraction.

Moving through the rooms in Fraction Goblins, we've encountered a Divide Goblin. Answer correctly to earn points

terms. The program takes the form of an adventure in the caves of the Fraction Goblins. You've been invited to go and play with their young ones.

You took your writing set there and while you were out of the room for a few minutes, the young goblins took the opportunity to catch up on their homework.

Nothing wrong with that, you might think. But the problem is that today's homework was "Borrowing". "Returning" is not on the goblins' list of subjects yet, so you are going to have to find things for yourself.

You will find yourself hindered by other Fraction Goblins, who have a habit of asking you to solve fractions problems.

● *Child's view:* Katie (8) – "It would be easier just to teach the little Goblins about returning things! My mum helps me with the fractions and she says I'm getting better. You hardly realise you're learning anything, but really you are."



Murrah! In the Fraction Goblin's Larder, we've just recovered a nicely sharpened lead pencil that the Goblins "borrowed"

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Number skills Number skills Number skills Number skills Number skills

Target Maths

Age range: 6 to 13

TCA

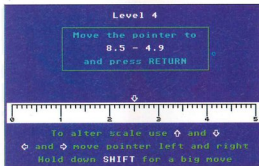
£19.99

This suite of four programs is aimed at specific National Curriculum targets. Eliminator has three levels of play and is a unique way to practise multiplication tables.

Your aim is to eliminate 16 different numbers displayed in a rectangle – it's a little bit like a bingo card. You achieve this by changing one or other of the two digits in a multiplication sum until the product (which is not displayed) is the same as one of the numbers on your "card".

Number Facts is in two parts – an open-ended investigation of numbers from 0 to 99 revealing characteristics such as even, odd, triangular, square and prime, and the factors of each number in pairs; and a two-player game which allows you to demonstrate all of the knowledge you gained in the first part.

If the player is alone, he or she can be both players – but favouritism is strictly forbidden, d'ya hear? Scale Factor, with four levels, involves the positioning of an



On level 4 of The Scale Factor in Target Maths, life gets a fair bit harder. The student is asked to add or subtract decimal numbers before arriving at the point on the scale to which the pointer should be moved.

0	1	2	3	4	5	6	7	8	9	even
10	11	12	13	14	15	16	17	18	19	square
20	21	22	23	24	25	26	27	28	29	triangular
30	31	32	33	34	35	36	37	38	39	Factor 5
40	41	42	43	44	45	46	47	48	49	1 x 36
50	51	52	53	54	55	56	57	58	59	2 x 18
60	61	62	63	64	65	66	67	68	69	3 x 12
70	71	72	73	74	75	76	77	78	79	4 x 9
80	81	82	83	84	85	86	87	88	89	6 x 6
90	91	92	93	94	95	96	97	98	99	

Number Facts, part of TCA's Target Maths, is in two parts. This is part one – an investigation program which allows the student to examine all numbers from 0 to 99 for their particular characteristics.

arrow on a scale or ruler. The computer gives out decimal numbers, and the student moves the arrow to the appropriate point.

Complexity increases, of course, as the player moves up the levels, with extra difficulties like having to select your own scale for the ruler and doing decimal addition or subtraction to reveal the required point on the scale.

Sliders is a kind of computer version of Snakes and Ladders. The player has to find which numbers on a grid take you up several places, and which take you down.

The idea is to move from 0 to 99 in as few goes as possible – and it really is good fun.

● Child's view: (Sian, 13) – "I'm not very good at maths, so the thing I really liked was that with two of the programs, you can learn while you're playing, and with the other two, you have easy levels before moving on to the more difficult stuff. I've learnt a lot about numbers with Target Maths – and I've only used it three times so far."

Money Matters

Age range: 6 to 13

TCA

£19.95

If like me you're a bit of a clown at maths, you'll be in good company here, with Cozmo, Fizzy, Toothy and Boingy, your respective hosts in four games that will help children of all ages who want to learn or improve their knowledge of British coinage.

All four programs are used with a unique key-

board overlay which comes as part of the package and replaces the keyboard's letters and numbers with pictures of coins.

Cozmo's Coins has three levels. In the first, children press any coin and Cozmo tells them what it is.

In level two, it's Cozmo's turn to think of coin. He gives the coin's value, and the child is asked to press the right coin on the overlay.

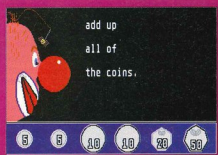
Level 3 is similar to level 2, but this time Cozmo has a timer running, so speed and accuracy are essential.

Money

Boingy is an expert at adding coin values together. He chooses several coins which add up to 5p, 10p, 20p, 50p, £1 or £2. Children must work out which individual coin is equal to the value of the ones Boingy has displayed. Varying degrees of difficulty can be set.

Fizzy sells chews, drinks (non-alcoholic, of course) and ice cream. He's always changing the prices of things and often gives the wrong change to his customers.

In Fizzy's Pop, children help him to work out the total cost of items, and the change to be given. Children can "earn" money by giving right answers, but have some deducted if they get one wrong. Again, different levels of difficulty can be



In Boingy Boingy, part of TCA's Money Matters, Boingy tries to make sure that everyone is as good at adding the values of coins as he is.

set. In Piggy Bank, Toothy thinks of a number of pence and knows exactly which coins to add together to make that amount. He reveals how many coins are needed and asks children to find them.

As in Fizzy Pop, children can "earn" money, but if a wrong answer is given, Fizzy has to be paid.

● Child's view: Emma (9) – "The sheet with the coins on that goes over the keyboard makes it very easy to use. I'm much better at checking my change now. My older sister says the clowns are boring, but I think they're fun."



In level 1 of Cozmo's coins, part of TCA's Money Matters, Cozmo invites the child to press any coin on the special keyboard overlay provided. Cozmo then tells the child, in large text beneath his face, what the coin is. It can be anything from a 1p up to a £2 coin.

er skills Number skills Number

Maths Dragons

Age range: 8 to 13

Coombe Valley Software

£14.95

Coombe Valley's programs are written using Sean Ellis's ST Adventure Creator. There is no mouse support or animation, and the fun takes the form of a text-based adventure supported by some very colourful, but static, graphics.

Compared with many educational programs on the market day, it has to be said that they do appear a little dated. But on investigation (and rigorous "testing" by several children) the conclusion is that inquisitive kids actually love these programs!

And apart from learning maths, they also benefit from having to type in text, and there's much logic to be learned in the search for whatever items Ian Lycett-King, the mastermind behind Coombe Valley, has strewn around various rooms or other locations.

Maths Dragons is designed to give practice in the rules of arithmetic, mainly for primary age children.

The type of sum and degree of difficulty may be selected, so that a wide range of ability and experience is catered for. On the hardest settings, even mums and dads may find themselves tested.

The program takes the form of an adventure in the caves of the Maths Dragons. These are friendly creatures who have invited you to play with the younger ones.

You took your toy train set there and while you were out of the room for a few minutes, the baby dragons decided to have a different sort of game and hid the pieces of the train set.

What you have to do is find all the bits and pieces and put things back together again.

You will find yourself hindered by adult Maths Dragons who have a habit of asking you to solve maths problems when they meet you.

You need to collect the track, train, a key to wind up the engine, and the station and signal box. You will need to build the last two from their kits. All of these items must be put in the playground in order to complete the game.

Objects can be taken using either TAKE or GET, followed by the object's name.

You move around by using the instructions North, South, East or West, and you can cheat a little bit by typing HELP.

● Child's view: Lesley-Anne (12) - "It was great fun trying to work out what to type in to make things happen and score points. You can get quite good at it after some practice. Solving the maths seemed easy until an interfering adult set it to a really hard level that even he couldn't do!"

We tried to go north, but couldn't, so went east and met a Multiply Dragon. If only I'd practised my times tables more all those years ago...



What now? north
You can't do that!
What now? east

You have met a Multiply Dragon, what is 7 x 9?

Wowee! We've just recovered two shiny pieces of railway track from the Divide Dragon's Den in Maths Dragons.

Much more of this and we'll have a complete set before the day's out...



lives. There are exits to the north, south, east and west. You can also see Curves, straight, what now? take a curve, straight, a shiny piece of railway track. What now?

And there's more...

So far we have concentrated on the newest educational programs, but we now take a quick look at the many decent packages that have been around for a while.

Letter and word skills

Spellbound (Lander Software, £25.99, 7-16): A brilliant adventure game which has you, among other things, flying a helicopter and steering a submarine in pursuit of letters that make up a word.

Trouble is, you usually find them in the wrong order, some are superfluous to requirements, and a mad professor has loads of disguised monsters under his control, all of whom are out to get you. Make sure you shoot them first!

The Prof Series (Prisma Software): Prof is a colourful cartoon character who helps children learn while having fun. The series includes Prof Plays a New Game (£31.86, 4-6), Prof Looks at Words (£25.99, 4-6), Prof Makes Sentences (£25.99, 4-6) and Prof Hunts for Words (£25.99, 4-8).

Thomas the Tank Engine's Fun With Words (Alternative Software, £20.42, 4-8): Six programs which are very easy to use. Pictures and special effects teach younger children about the formation and spelling of words.

The Let's Spell Series (Softstuff): Let's Spell at Home, Let's Spell at the Shops and Let's Spell Out and About (each £19.95, 4-9) each feature four levels of play, mouse control and print-out option, and conform to the National Curriculum.

The graphics are very colourful, and the programs very easy to use. Watch out for Softstuff's Spellbook, too - it's become a bestseller.

Henrietta's Book of Spells (Lander Software, £25.99, 7-14): Improves spelling, vocabulary and language skills, with five sections and three skill levels. Word lists can easily be changed - even to foreign words, if you like. A great game - and great learning.

Micro English (LCL Software, £28.20, 8-adult): Comprehensive English Language GCSE-level course of 24 programs which are very easy to use. Some of the programs are used along with an audio tape (supplied) for lessons which involve speech.

The rules of English are explained,

with plenty of practical application. Comes complete with a book, as well as a manual

Better Spelling (School Software, £22.95, 9-adult): This bestseller is one of the best spelling tutors currently available. It had a gamesy feel, with plenty of sound effects. It concentrates on all the key areas of English spelling, and has 16 menu options.

Early learning packages

Picture Book (TCA, £19.95, 2-5): An ideal first software package for children. This one will take them from pressing their first key to find out what happens through to simple spelling and counting. Features two free keyboard overlays which make matters much simpler for little ones.

Noddy's Playtime (Jumping Bean Company, £24.99, 3-7): Graded creativity and entertainment package in which children drive with Noddy through Toytown, exploring the local community. There's a choice of three levels, and besides excellent graphics, there are some first-rate sound effects.

Which, Where, What (Kid's Academy, £19.99, 4-6 years): Blobs teaches shape recognition, Mouse House teaches reading using the "Play and Read" method and Runabout improves spelling. Developed with the National Curriculum in mind, these games of discovery fit the bill admirably.

Pep's Garden (Prisma Software, £25.99, 3-7): Five games covering pre-reading skills, simple maths, creativity and reading. Multiple ability levels ensure the games can be used repeatedly and yet still be a fresh challenge.

Maths skills

Sooty's Fun with Numbers (Alternative Software, £20.42, 3-7): Sooty, Sweep and Soo in six programs with graphics and special effects. The programs feature win or lose sequences, which help maintain interest.

GASTEINER

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Magic Maths (*School Software*, £22.95, 4-8): Main emphasis here is on addition and subtraction. Various difficulty levels can be set. Clear documentation on screen makes it very easy to use

Mathtalk (*First Byte*, £14.94, 6-10): One of First Byte's Talking Notebook Series, this features built-in speech which enables Professor Matt A Maths to talk to children. Comprises two learning modules, a talking tutorial and two maths games.

Maths Adventure (*Kosmos Software*, £25.99, 6-14): Helps children revise and check their progress in National Curriculum maths in an entertaining way. Problems are graded into four difficulty levels – which the computer constantly adjusts! The fun

learning starts in the land of the cave-man. Children also help a wizard with his spells, guide a Red Indian and save a city of the future from destruction.

Foreign language

Micro German (*LCL Software*, £28.20, 11-adult): This recently introduced package takes beginners up to GCSE standard in both spoken and written German. It also covers German for business people. The course makes learning the language fun by means of adventure games and puzzles. Features superb graphics and music.

Micro French (*LCL Software*, £28.20, 11-adult): A bestseller, similar to the

Micro German course described above.

The educational software market is growing all the time. Other categories include typing tutors, quizzes and puzzles, science, history, natural history and geography.

Simulations and adventures, although not strictly educational packages, also teach a variety of skills such as forward planning, strategy development and, in some cases, finance.

Multi topic

The Fun School series (*Europress Software*): Britain's best-selling range of education software comprises many packages to suit various age ranges from as young as two up to 12. Fun School, with its very easy to

use interface and colourful, attractive graphics, set the standard for this kind of software.

Designed to teach children a whole range of skills, and with individual package prices from £7.99 up to £24.99, these programs are well worth a look.

First Class with the Shoe People (*Gremlin Graphics*, £25.99, 4-6): Gremlin are better known as a games software company, and this was their first venture into the educational market.

It was an excellent start, using the stars of an award-winning TV cartoon series in six activities to teach shape, colour, letter, word and number recognition, simple addition and much more. Also features a simple paint program which children will love.

Languages Languages Languages Languages Languages

ADI French

Age range: 11-12; 12-13; 13-14; 14-15

Europress Software

£25.95 for each age grouping

ADI is a friendly, three million years old extra-terrestrial who provides a most inventive and entertaining interface for children of secondary school age who want to practise and improve one or several of their subjects.

This friendly and instructive little character occasionally gets angry if you click your mouse pointer on him too many times, falls asleep if he gets no input for a while, and ticks you off if he suspects you're being really sloppy in your response to his questions. But most of the time, he's very helpful and informative.

When you buy an ADI application – and the range, incidentally, also includes English and Maths for similar age groupings – you get much more than the average education package offers.

Environment

There are two disks – one containing the ADI "environment" and the other the application, or lessons. First, you load the environment. This in itself provides many facilities, including a pop-up calculator, notebook and diary, and facilities to write a letter to disk for a friend who also has ADI, or to read a letter from a friend, using passwords for secrecy.

There are also several documents that can be brought to the screen, complete with animations, on a variety of subjects like computing, proverbs and sayings, the water cycle and volcanoes, and, initially, one game that you can play purely for entertainment.

The number of games from which you can choose increases as you earn points during application work, up to a maximum of nine.

The ADI environment features a very easy to use control strip of icons across the bottom of the screen, through which everything can be accessed. For those who prefer, function keys can be used instead.

If you click on the first icon, or press F1, you will be asked if you want an existing application, or if a new one – unless you're using ADI for the first time and you haven't installed an application yet, in which case the only option is a new applica-

tion. You're then prompted to change to your application disk – though hard drive users will not have this inconvenience once applications are installed.

So, we've chatted and played with ADI, read a few documents, done some calculations and perhaps written and read a secret letter or two – but what are the educational programs like?

Well, there's no disappointment here, either. I dipped into French for all four age groupings and found the programs remarkably good.

Not being noted for my linguistic ability, I made rather heavy use of the help system (as ADI kept telling me, that's what it's there for) and was soon able to answer "vrai" or "faux" (true or false) to English translations of French sentences, move parts of sentences around to form proper sentences, choose correct sentence endings and click correct meanings of given words.

Each application is divided into chapters, which in turn are divided into sub-chapters. For instance, on the French 13/14 disk, Chapter 2: Restaurant is divided into Get a Table, Order a Meal and Give Compliments and Make Complaints.

The lessons are comprehensive and easy to follow, and well-gearred to the National Curriculum for the years they are aimed at.

Cursor

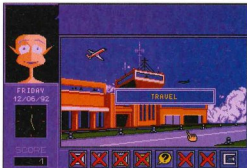
One slight problem I noticed – there is an exercise which involves typing letters missing from certain words in a series of sentences, and I expected the cursor to move to the next blank space each time I entered a letter.

But the cursor must be moved along with an arrow key or by clicking the relevant position with the mouse, so all I ended up doing was over-writing the first letter with subsequent letters. This does take some getting used to – perhaps we'll see an improvement in future versions.

Sound is not a particularly strong point – there's little apart from the odd whistle from ADI – though that's hardly important in an educational program for older children.

However, one would have thought a subject like French would lend itself to some sampled or recorded speech. Perhaps this will come in time, as computers become better able to cope with the reproduction of the human voice.

● **Child's view:** Sarah (15) – "Very good educationally but some of it was a bit repetitive. The ADI character might be OK for younger children, but he doesn't do much for me. But it's better than most programs of this type."



Taking pictures

Scanners are still one of the most sought after add-ons. Andrew Wright looks at some of the current models on offer

Image scanners remain high on many users' wanted lists. Even if you haven't got a printer, scanning an image and manipulating it on screen can be tremendous fun.

You can edit it at will, stretch it, flip it and even add colour, using it as the basis for a computer masterpiece. If you've got a printer, of course, you can print it out too.

If you haven't come across them before, scanners are a way of getting images such as drawings and photographs into your ST in a format it can understand. You can then save them as graphics files and import them into desktop publishing or graphics packages or even many wordprocessors.

For many users they represent the easiest way of using graphics – far easier than searching through disks of clip art. Tumbling prices have meant that virtually anyone can afford a simple hand-held model (prices start at just under £100, the price of three or four games).

In basic terms, a scanner consists of a charge-coupled device or CCD. This is a photosensitive silicon chip made up of many hundreds of tiny elements that measure the intensity of the light reflected from the surface beneath and convert it into an electronic signal.

The circuitry in the scanner sends the information to the controlling software in your ST which then translates this electronic signal into a standard bitmap image, such as a IMG file, which can be imported into most graphics-based software.

Mono scanners still dominate the ST market. They look at the paper beneath each element and "read" it as either black or white.

However, photographs present them with a problem. An original black and white photograph is in reality not black and white at all but a continuous tone image, made up of an almost infinite range of shades of grey. What does the scanner register when the paper beneath is 50 per cent grey?

Most use a method known as dithering in which they try to represent the image by using ordered dot patterns of black and white dots to represent the grey tones. The dithering is built in to the scanner's circuitry but most models offer two or three different patterns of varying detail which can be selected by a switch.

The alternative is a scanner capable of reading the level of grey beneath each element on the scanner's CCD, rather than whether it is just black or white. These true greyscale scanners can differentiate between different shades of grey but they are much more expensive.

The only real option for ST owners at present is one of the Epson GT series colour/greyscale flatbed scanners – hand-held greyscale and colour models are available for the PC and Mac from makers like Logitech but no ST interfaces are available as yet.

Actually, there is a third option – a mono scanner with some clever software capable of converting single bit images into greyscales, such as the Power scanner reviewed later.

The hand-held scanner consists of a lightweight head which is physically moved over the image by the user. It is around four inches (105 mm) wide so it isn't suitable for capturing large images and it is the least accurate method, requiring a steady hand.

Another alternative is an interesting piece of kit from Ladbroke Computing which allows hand held scanners to scan A4 sheets without effort. Called Coalesce, it comprises a tray to guide two passes of the hand scanner and dedicated software to join the two images. It costs £60.

At the other end of the price range are the flatbed scanners which look very like small desktop photocopiers. They work in a similar way – the image or photograph is placed on a glass plate, the lid is closed and the scanner goes to work.



The small section of the original greyscale shows how a scanner uses dither patterns to represent grey tones





The Handy Scanner

The Evesham Micros Handy Scanner has always been a good buy although the competition appears to have overtaken it, certainly in terms of extra features like conversion from bitmap to greyscale format.

The Handy Scanner is based on the Marstek M105 Plus scanner head. It has four mode switches on the left-hand side – one for line art and three for halftones. It also has brightness control wheel and four resolution switches on the opposite side from 100 to 400 dpi.

The scanner plugs into the ST's high speed cartridge port via a small interface the size of a pack of cards which also has a connector for the external power supply. The leads from the power unit and the head are both long enough for the most awkward



Power's impressive "greyscale" scanning software

Aren't windows wonderful? PowerScan certainly makes life easy



desktop arrangements – your ST's cartridge port to – eight feet away from the power socket.

To scan an image, you hold down the button on the left-hand side and watch the red light on top. If it flickers, you're scanning too fast. The scanner head could do with more solid rollers at the back and tends to be a little wobbly unless a lot of care is taken.

The Daatascan software supplied with the scanner is easy to use and set up. It isn't a new program but it still deserves praise for its simplicity. It is a GDOS-based program which means that printer drivers for the more common printers are widely available (Epson FX80, IQ, Atari dot matrix and laser drivers are provided).

An icon bar on the left-hand side of the screen makes most operations classically simple and there are facilities for rotating through various multiples of 90 degrees, flipping in two planes and inverting the entire image.

It works on any ST/E. Including 512k models, in med or hi-res. Files can be loaded or saved in either IMG or Degas format and can be edited at up to 32 times normal magnification if needed.

The Handy Scanner provides a good entry point for new users or desktop publishers with only occasional need for the technology.

Product: Handy Scanner
Supplier: Evesham Micros, Unit 9,
 St Richards Road, Evesham
 WR11 6TD
Telephone: 0386 765500
Price: £99.99
Configuration: Any ST/STE



Power Scanner

The Power Scanner is a new product with some unique features, including a limited form of real-time greyscale scanning. The scanner head is the same as used in the Handy Scanner model with identical switches and controls, although the power-to-port distance is less at six feet.

One odd problem arises – the scanner light is always on when the computer is running, necessitating use of a small switch on the interface port to save it burning out.

The Power Scanner's innovative features are found in the software. As with the Handy Scanner, the Power Scanner's head is only capable of mono scanning and has three different dither patterns for continuous tone images.

However, in ST lo-res which supports 16 colours on-screen at once, the software converts these dither patterns back into 16 different colours in real time so that to all intents and purposes, it is scanning shades of grey.

BOTTOM LINE

FEATURES

Scans line art at 400dpi with a fun greyscale capability.

Excellent
 Load
 Average
 Bad
 Repelling

EASE OF USE

Simple and straight forward despite the odd file formats.

Excellent
 Load
 Average
 Bad
 Repelling

VALUE FOR MONEY

Can't be beaten on price.

Excellent
 Load
 Average
 Bad
 Repelling

Well, not grey exactly. The ST uses some green and blue shades to simulate greys as only eight shades of what we would actually called grey are available.

The PowerScan software starts up to display a GEM-style desktop and three open windows for the main scan area, the clipboard and the 16 icon toolbox. It works on a 520ST/STE and supports all three screen resolutions.

Scanned images can be saved in a variety of formats, including IMG, Degas, NEO, C source code and PowerScan's own PWS format, although IMG files can't be reloaded for some reason. The latest release of the software (v1.3) also has a facility for joining several small scans together to provide up to A4 size capability and beyond.

There are two minor problems with the scanner's method of producing greyscales, quite apart from the loss of resolution involved (a 300dpi scan is reduced to an effective resolution of 75dpi if the greyscale option is selected).

Firstly owners of Mega ST/386/STE systems using mono monitors can't use the feature unless they happen to have a colour monitor too. The images can at least be viewed as greyscales, however, something that's normally only possible with a greyscale monitor.

The second problem is that as the resulting greyscales are stored as Degas format files in lo-res, they are difficult to use in some DTP packages like Didot Professional and Timeworks.

However, if you're into art, the Power Scanner is a good way of getting colour pictures and designs into your ST for you to change pallets and manipulate them at your leisure.

Product: Power Scanner/
 PowerScan software
Supplier: Power Computing, Unit 8,
 Raiton Road, Woburn Road Industrial
 Estate, Kempston, Bedford MK42 7PN
Telephone: 0234 843388
Price: £99.95
Configuration: Any ST/STE

BOTTOM LINE

FEATURES

Daatascan software is easily outclassed by TouchUp.

Excellent
 Load
 Average
 Bad
 Repelling

EASE OF USE

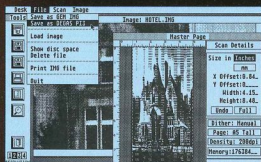
Dead simple to use, even for the beginner.

Excellent
 Load
 Average
 Bad
 Repelling

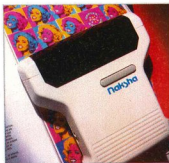
VALUE FOR MONEY

Less value than it used to be.

Excellent
 Load
 Average
 Bad
 Repelling



Daatascan - simple but effective with useful GEM software



Naksha

The latest entry onto the market goes up another level in greyscales, to provide up to 256 using similar but even better software conversion techniques.

The new Naksha scanner beats the opposition in virtually every area. The scanner head is a joy to use – it has the same overall shape as the others but it feels much smoother and steadier in action due to a wide roller at the back end.

In contrast, the other three have only two small wheels at the back. It is also very comfortable and provides a marked improvement in accuracy when carrying out scans.

It interfaces via the cartridge port but has slightly different controls to the others. A four-way switch offers four dithering methods including one for line art. A second set of switches selects 200, 300 or 400dpi resolution (note there is no 1000dpi option) and there is the usual wheel controlling brightness.

The best part of the deal is the software, which is the latest version of the highly respected Touch-Up (now v1.8x) which will actually convert dithered mono scans into 256-greyscale TIFF (for DTP work) or 16 greyscale IFF (for use in Deluxe Paint or other art packages) formats, with fairly respectable results.

It comes on two disks with a good sized manual and output is via GDOS.

Touch-Up can't yet import or manipulate the greyscale images directly,



The toolbars and menu bars conceal a wealth of features

Saving a greyscale in Touchup

unfortunately, so you will still need to buy either ReproStudio or Retouch, if you want to go further.

It is a pity that TouchUp couldn't offer more greyscale TIFF options such as 64 and 16 greyscales which would make life a little easier for desktop publishers, but this is still better than anything that they've had before.

Touch-Up can also create Bezier curves, B-Splines, lasso, mask and rotate of images in tenth of a degree increments. It has a very good cleanup tool which eliminates stray black or white dots from the image such as those produced by most image backgrounds and a virtual page facility allows large images to be scanned in strips and then joined together.

The quality of the resulting 256 greyscale images is excellent particularly when viewed on a greyscale monitor or resized and converted to a halftone using a good DTP package such as Didot.

Obviously the resolution is much lower and the picture does look blurred but continuous tone images look far smoother as low resolution greyscales than as high resolution dithers. Another bonus is that the corrugated plastic packaging converts into a disk box that holds up to 200 disks!

Product: Naksha hand scanner/
Touchup 1.8

Supplier: Naksha UK Ltd, 29 The Wharf,
Warrington WA1 2HT

Telephone: 0925 56398

Price: £116.32

Configuration: Any ST/STE with
1Mb or more

Epson GT6500

The Epson GT6500 is a brand new version of the best-selling GT6000 which we reviewed late last year, and comes with an equally new version of the first rate driver software from CGS. This improved version offers effective scanning resolutions of up to 1,200dpi in full 24-bit colour or 256 greyscales.

The GT6500 is a little larger than an inkjet printer at 22.4in (568mm) deep, 13.1in (333mm) wide and 5in (125mm) high. It weighs 20lbs (9kg) and the control panel is at the front with a lid, just like a small photocopier, which opens to reveal a glass plate.

The scanner is connected via a customised cable running from both Midi Out and parallel ports on the ST to an interface at the rear of the scanner.

Unfortunately it means you can't use a printer at the same time. The mains socket is at the rear too and the on/off switch is now on the front.

The scanning speed does drop a little when larger files are scanned as they are saved directly to disk, but the new version of the software has speeded this up considerably. Of course, TT owners will be able to benefit from the optional SCSI connection for faster scans.

The software, Look II, runs on any ST, although at least 2Mb of RAM will be needed for serious colour work or large greyscales. Large images are captured directly to the hard disk which makes it possible to use a 1Mb ST but you won't be able to view them or use them in editing or DTP software.

Look II offers access to all the scan-



Look II on a big screen

BOTTOM LINE

FEATURES

Superb greyscales can be created for DTP.

Excellent
Good
Average
Bad
Appalling

EASE OF USE

Touchup isn't for beginners but the scanner is a delight in action.

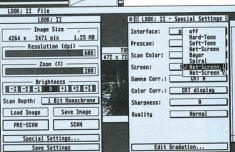
Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

Disturbing good value – especially when you look closely at Touchup.

Excellent
Good
Average
Bad
Appalling

Look II - various halftone options



Dealing with images

There are various types of image, each calling for different treatment when scanning and manipulating them.

Greyscale images

To get the most from greyscale images, a greyscale editing program is required. There are two available as standalone packages – Repstudio from System Solutions and Retouche, reviewed on page 51 this issue.

The value of a greyscale editor is that you can adjust the brightness and contrast from software while viewing the results on-screen, rather than repeatedly scanning the photograph with different settings.

You can also "tweak" greyscale pictures much more easily than you can alter dithered bitmap images. All kinds of surgery is possible – you can remove warts from people's faces, inconvenient signs from buildings and even redesign buildings completely!

Repstudio runs on any ST/TT with 1Mb of RAM or more and will import almost any ST graphics files, including TIFF, Degas, IMG, Art Director, Neochrome, Paintworks, Doodle and STAD. It has a nicely written manual, highly



Before and after – all you need is Repstudio or Retouche. Note the whole image has been brightened and the contrast has been reduced



DTP document, scanning at 200 or even 100dpi will save space without drastically affecting the quality of the final image.

The easiest drawings to scan are those containing curves and solid areas. The hardest ones, surprisingly enough, are straight line drawings and those which include text. It is very hard to get the lines truly vertical or horizontal and the image will often need re-aligning afterwards.

Text in diagrams never reproduces as well as the original. The best option is to remove it using a paint or image processing package and then add fresh text.

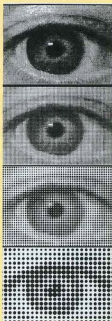
Halftone images

A black and white picture in a newspaper or magazine is made up of thousands of tiny dots – an effect known as halftoning. In commercial printing, a halftone is created by re-photographing the original through a fine screen which transforms the image into a pattern of tiny dots of varying sizes. The dots blend together to fool the naked eye into believing that it can see continuous grey tones.

Using a true greyscale scanner, you need only scan at 1.5 times the intended screening resolution. Let's say your artwork is being printed at 300dpi for photocopying – a 50dpi screen will work well, so that you need only scan at around 75dpi. You could also use a 100dpi screen and double the scanning resolution to 150dpi but the resulting image would appear to be made up of far fewer greys.

Of course, the scanners which convert the dithered images back into greyscales will have to scan at higher resolutions still to obtain the same image resolution after conversion – a 300dpi scan will usually translate into a 75dpi greyscale.

If, on the other hand, you intend using the mono dithered image directly in your publication, then you should scan at or close to your printer's highest resolution.



A selection of halftone images in various resolutions



Repstudio in action

suitable for beginners with a short tutorial for those unfamiliar with greyscales.

Repstudio works in two distinct modes. In black and white mode it offers a range of sophisticated tools for editing bitmaps, from line, square and circle drawing to air-brushing and patterned fills. It also has a number of additional tools for creating special effects or tidying up scanned line art.

Lines can be strengthened (thickened by a pixel), creating much blacker images from weak, faded ones. The image itself can also be reduced to outlines by altering lines of three pixels or more in width to a single pixel outline. The effects can be quite dramatic and can be carried out globally or in blocks.

Ordinary mono images can even be converted to greyscales with either 2, 8, 16 or 32 greys (choosing two greyscales does not alter the image but it lets you use the greyscale tools on a mono image).

In greyscale mode, the editing facilities are extremely comprehensive including halftoning, contrast and brightness, masks and various tools for blending one part of a picture into another.

Line art

Line art is the easiest type of image to deal with. It is either black or white, with no grey shades. It isn't necessary to scan at 300dpi simply because you plan to output at this resolution, unless you intend using the image at the same size.

If you plan to reduce the image later for inclusion in a

BOTTOM LINE

FEATURES	<div style="display: flex; justify-content: space-between;"> The scanning quality is great and the possibilities are astonishing. <div style="border: 1px solid black; padding: 2px;"> Excellent Good Average Bad Appalling </div> </div>
EASE OF USE	<div style="display: flex; justify-content: space-between;"> Easier to use than a hand scanner. <div style="border: 1px solid black; padding: 2px;"> Excellent Good Average Bad Appalling </div> </div>
VALUE FOR MONEY	<div style="display: flex; justify-content: space-between;"> Not expensive for what you get. <div style="border: 1px solid black; padding: 2px;"> Excellent Good Average Bad Appalling </div> </div>

ner's feature and makes full use of GEM's multiple windows – up to seven can be open at once. Large screens are also supported, including all TT resolutions. The developers also claim to have tested it with development versions of the Falcon.

Images can be saved in a wider range of formats than the first version of the software, including mono IMG files, Targa, Calamus Raster Graphics and several forms of TIFF file including those directly compatible with Didot Professional and other computers such as the PC and Mac.

It can also load and view files in Degas and NEO formats among others. Unfortunately it won't save in Retouche-compatible TIFF format which is a great pity. Interestingly, though, the scanner can be hooked directly to a colour printer such as an Epson-compatible 24-pin and used as a colour photocopyier! Using the scanner and software

couldn't be easier. First, the original is placed on the glass plate and pre-scanned in the software. Then the colour depth and size are selected, either by mouse or keyboard input, and any other factors altered as necessary.

Then it's simply a case of adjusting the area to be scanned in relation to the actual image, pressing "Scan" and waiting for the image to appear in its own GEM window.

The combination of quality scanner and superb software is unbeatable for the serious user and it remains right at the top of my wish list.

Product: Epson GT6500/

Look II software

Supplier: CGS, 19 Ledbury Place,

Croydon CRO 1ET

Telephone: 081-686 8121

Price: £865

Configuration: Any ST/STE



Golden Image

The Golden Image scanner uses the same scanning head as the Power and Handy scanners with a six-foot power lead. The power supply itself is the two-prong pin variety so Ladbroke have included a converter, making things a little messy but it shouldn't bother most people. The goodies inside the pack more than make up for it.

The Ladbroke Golden Image package is strong on software, packaging and

Scanning tips

With a good understanding of the scanning process, you are all set to scan an image into your ST. One thing you must bear in mind is to start with a good quality original.

If a photograph is blurred or the contrast is wrong, there is very little to be done – the scanner and its software cannot work with information that isn't there. Colour photographs do not scan quite as well as black and whites – there is far less contrast which is reflected in the resulting image.

A common mistake is scanning photographs from books or magazines. These have already been converted into halftones and the result of your scan will be a dithered image likely to display distinct Moire patterns.

Perhaps more importantly you leave yourself open to actions for breach of copyright – remember, somebody owns the copyright to virtually every picture or illustration that is ever published. The safest way is to take the picture or draw the graphic yourself, then scan it.

documentation. All the components are neatly bundled inside the strong cardboard box in moulded plastic trays – this was the only box that didn't require several attempts to get the equipment back inside after the review!

The software supplied with the scanner is a newer version of Touchup than that supplied with the Naksha – v1.84 – but the additional minor features are not documented in the manual yet. The manual is one of the most comprehensive yet, comprising over 200 pages on image editing and conversion.

There is also a small manual dedicated entirely to the hardware, which makes a change for hand scanners, and while not exactly comprehensive, it tells beginners all they need to know.

Deluxe Paint ST is also bundled with the scanner and while it is a rather ageing product in the face of the newer paint packages, there are still plenty of good features and another good 200-page manual. It also covers animation and there are plenty of examples and tutorials on the three disk set.

Product: Golden Image scanner/

TouchUp 1.8/Deluxe Paint

Supplier: Ladbroke Computing,

33 Ormskirk Road, Preston PR1 2QP

Telephone: 0772 203166

Price: £119.99

Configuration: Any ST/STE

with 1Mb or more

Know the jargon

bitmap Also known as a raster image or a paint-type graphic, a bitmap is a pixel by pixel description of an image. Commonly used bitmap graphic formats on the ST are IMG, Degas and NEO.

CCD Charge-coupled device. The part of the scanner that reads the image into the scanner's circuits to be passed to the controlling software.

continuous tone Continuous tone images, typically photographs, have an almost infinite range of grey shades in them.

cropping Removing the unwanted parts of a picture such as excessive areas of sky or a dark background.

dithering A technique used to simulate greyscales in a black and white image. This is done by grouping pixels together to form a larger one, giving the overall impression of being a shade of grey.

greyscale The level of greyness (rather than whether it is black or white) of any part of an image.

halftone The result of re-photographing a continuous tone image such as a photograph through a glass or plastic screen to break up the grey areas into patterns of tiny dots. This is the only way of printing such photographs using commercial methods.

IMG One of the most widely used ST graphics formats, it supports images larger than the ST's screen area and the files are automatically compressed to save disk space. Can only be mono.

TIFF Tagged Image File Format. It is becoming much more widely used on the ST as it is an industry standard in the PC and Mac worlds. TIFFs can be mono, greyscale or colour.

vector graphics Mathematical descriptions of illustrations that can be readily scaled to the required size and tend to take up much less disk space. Scanned bitmap graphics can be converted to vector format using software such as Avant Trace or Silhouette.



BOTTOM LINE

FEATURES

A worthwhile bundle for amateur DTP or fun.

Excellent
Good
Average
Bad
Appalling

EASE OF USE

Good for beginners, despite the complexity.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

Touchup and Deluxe Paint make it a good buy.

Excellent
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The nice thing about synthesis is that they can make so many different sounds – far more than you can store in their on-board memory. You can buy a wide range of off-the-shelf sounds for virtually every synth but most often you'll want to mix 'n' match sounds from one set with those from another.

If you get adventurous and start programming your own sounds, the chances are you'll discover that the benefits of digital synthesis (as most synths use nowadays) are countered by the unfriendliness of the numeric LCD displays in the editing department.

So, you need a librarian to store your sounds and a graphic editor to help you create new ones. There are standalone editors for most popular synths but many cost well over £100 and can only handle one instrument.

As soon as you acquire more than one synth, a universal editor becomes an attractive proposition. They use a standard shell into which you load a different driver for each synth.

Lizard (review v1.00) is a new universal editor/librarian. It uses a key card for copy-protection, runs in hi and med-tes and is compatible with C-Lab's Softlink environment.

Lizard can handle up to ten synthesizers at a time (memory permitting), each of which is controlled by a separate Driver. A single driver disk contains drivers for several synths and there are drivers available for most popular instruments from Korg, Roland, Yamaha, EMU, Waldorf, Ensoniq, Sequential and Kawai.

A single driver may contain up to 20 modules which are the individual sound units a synthesiser uses to create its sounds. For example, the Roland D110 driver has 11 modules – one multi, eight tones, one rhythm and one performance.

Before you begin you need to set up the program to suit your equipment. This involves showing the program where the drivers are and selecting suitable Midi channels on which the voice data will be transmitted.

If you have a programmable Midi patch bay, you can select a program to call up a



You can make up to ten instrument drivers load automatically when the program boots

patch which will let you edit all your instruments.

There are also a number of terms you have to understand. A Configuration includes all modules for the current instrument. A device is essentially an instrument and devices appear as icons on the left of the main Configuration screen. To the right are the modules

inconsistencies. For example, some windows close via a Return button (in different places on different pages), others by clicking on the top left of the window. While there are keyboard short-cuts, some functions can only be accomplished with the help of the keyboard.

There is no provision for creating your own modules as in some universal editors but this is so specialised very, very people are likely to want to do it.

If you only have one or two synths you can save a few pounds with Lizard Single. This works in exactly the same way except it has no library, no sequencer menu and it only works with one driver at a time.

A dedicated editor/librarian will always be able to offer more specific functions for any particular synthesiser but a universal program has the benefits of a standard interface and when you buy a new synth you only have to pay a nominal sum for a new driver rather than a whole new program.

Karma Chameleon

Does Lizard, an editor and librarian that can change its spots to suit many synths, offer the ideal solution for the value-seeking multi-synthesist? Ian Waugh investigates...

BOTTOM LINE

FEATURES

All the basic editing features but misses out on specialised functions as found in dedicated programs such as voice randomisation, sorting and so on.

Excellent
Good
Average
Bad
Reprising

EASE OF USE

You'll need to read the manual carefully and it could be a little more explanatory. You're expected to know what all your instrument parameters do.

Excellent
Good
Average
Bad
Reprising

VALUE FOR MONEY

The more instruments, the more cost-effective Lizard is. Lizard Single is a good option if you have one or two instruments.

Excellent
Good
Average
Bad
Reprising

Product: Lizard

Price: £189

Product: Drivers

Price: £35 per disk

Product: Lizard Single

Price: £35 (+£35 for a

Drivers disk)

Supplier: Zone Distribution,

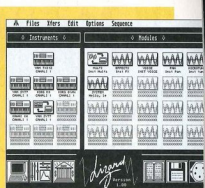
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Effra Road, London SW2 1BZ.

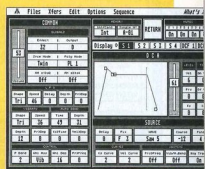
Telephone: 071-738 5444.

Configuration: All STs, 1Mb,

med or hi-res



Lizard's main Configuration Page



A typical Module page holding voice data for editing



A Bank page showing a list of multis



A Library window

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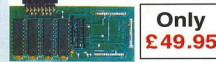
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Losing a library

When I first heard about the Falcon I was very interested in upgrading to one from my 4Mb 520STE.

Now I am not so sure, as it appears that the Falcon will be mostly incompatible with ST software.

Is anyone working on an ST emulator for the Falcon? I'm sure it would be a bigger seller than the PC emulators and would boost sales in the Falcon, as ST owners would be more inclined to upgrade and keep their software libraries.

People will not want to risk having to make do with a limited number of Falcon programs and having lost a lot of money on an obsolete ST library.

R Underwood, Cumbria

I am told that an ST emulator would not make too much difference to the incompatibility.

Atari say the Falcon is compatible with the ST and that problems arise when software has not been written to their guidelines.

You are right to say that there are only a limited number of Falcon titles at the moment, but it is claimed that there are more than 150 projects under development.

Not just the same

A lot of Atari users blame Atari for not developing machines with new features such as graphics and sound.

Atari have made some mistakes in recent years but now there is the Falcon and I hope things are going to change for the better.

When I look at an 80x86 DOS computer, a Macintosh or an Amiga they are all the same. They all have 8, 16 or even 24-bit video modes. The Amiga has great sound, the PC has its sound blaster and the Mac is a little behind. They all have fast processors and a Windows-like shell.

When you compare them, there are some differences but overall they are all based on the same idea – sound, graphics, a Window-shell and a fast processor.

For example, take the new Amiga 1200. It is just some more of the same. Some more colours, the same sound, a faster – but not state-of-the-art – 68020 processor.

Then we take a Falcon – DSP, 68030 processor, a lot of ports including SCSI-2, Midi, microphone, DSP and a co-processor socket. Atari have loaded the Falcon with high-tech.

Demos I have seen on a Falcon make the Amiga 1200 look like a ZX Spectrum. The strength of the Falcon is that you can manipulate sound as you want. One program turns the computer

Got anything to say to the ST community? Send your scribbles to:



The Editor

Write Now!, Atari ST User,
Europa House, Adlington Park,
Macclesfield SK10 4NP

into a music studio with six channels, hard disk recording and master quality sound – your own studio at home.

I have also seen graphics and sound demos working together. Everyone who saw these thought it was a trick and tried to find a video recorder or CD under the table!

The Falcon is not a computer with just more of the same. It gives a new

meaning to your computer hobby. The things you can do with just the DSP and DSP port are enormous.

When it appears on the market, DTP, wordprocessing and spreadsheet software will still be available, but there will also be totally new software never seen before.

I have seen the computer at parties in Germany and Holland and everyone

was very impressed. It's now up to Atari to sell and make it a success.

Peter Oort, The Netherlands

Other people who have visited the Falcon parties share your enthusiasm.

Atari have promised to show us the latest demos in the next few weeks and it is hoped that we'll be able to carry a full report next month.

Top marketing

I am fed up with people who don't know what they are talking about knocking Atari's marketing. Let's look at the facts.

We all know they produce great machines and the Falcon is the latest in the line. The ST was very well marketed and for the first four years of its life was the number one.

Yes, it was overtaken by the Amiga but what computer historically has ever had longer than five years on top?

"Why are Atari not advertising the Falcon?" people moan and in the next sentence complain that they want one and cannot get it. Precisely.

What would you do if you were let down by production and could not get enough machines to supply demand? You would certainly not waste good money advertising it and whipping up more demand that you cannot supply.

I suggest that when Atari has quantity of Falcons – in the consumer case – they will advertise as much as they did in the early days of the ST. Then watch it fly. In the meantime they will continue to sell all they can get in

International shareware sorrows

I read with great interest Richard William article on shareware and was glad to note that he was pleased with his shareware registrations.

However, life does not appear to be as simple when trying to register software from abroad. I tried to register two programs, both from America. One was Picswitch and the other Disk chart.

First of all I set about finding a method of payment. I asked about international money orders and was told that they would cost £8 each – nearly as much as the cost of the shareware itself.

Secondly, I asked the bank if one of their cheques could be cashed in an American bank. This they couldn't be sure about.

Finally, I phoned a public domain library to ask their advice and was told to send my credit card details along with my letter of registration. This I did.

I also sent a stamped addressed envelope and a letter which stated that if they wrote to say that this method of payment was unsatisfactory I would send dollar bills through the post instead.

I posted these letters at the beginning of August and I have still not received a reply from either. My credit card has not been debited for the registration fees.

It seems sad that in the present climate where shareware registration is being encouraged that anyone who makes so much effort to register software fails so miserably.

Peter Williams, Livingston

The method you used was probably unsatisfactory but nevertheless I am surprised that the programmers did not reply.

Shareware programmers seldom operate as companies and so they are unlikely to be set up for credit card transactions. A British stamped addressed envelope cannot be sent from the US.

Your bank should have been able to arrange for a cheque to be paid in dollars, although there would almost certainly have been a charge for the service.

The lack of response is not encouraging but I suggest you try registering for another program – this is the first complaint I've seen compared to many praising shareware.

Why not use your prize money to register for a British program? I'm sure you'll be pleased with the result.



the old case to enthusiasts like me.

What a move that is eh? They either wait until the middle of this year to get any income from Falcon or they sell x,000 in an old case to people who can't wait - making money out of something that is in reality not finished.

Far from being bad at marketing, that type of slick move shows me just why Atari are still in business almost 20 years after starting this industry while hundreds of other hardware companies have gone bust.

I am a lecturer in marketing and would recommend that anybody look at the way Atari is run as a prime example of how to stay in business.

Derek Whitley BA (Hons),
Buckinghamshire

Now that was an unusual letter!

CoverDisk fun

I have been impressed with the various full price software titles you have been giving away with on your recent CoverDisks. They make the magazine real value for money.

Do you have any plans to include a decent adventure game or flight simulator? I don't think any ST magazine has given this type of program away and I am sure it would go down well with many of your readers.

Adrian Grey, Birmingham

I would love to include a flight simulator or adventure game on a future CoverDisk, although a long-standing industry agreement restricts me from doing so.

Software houses and magazine publishers agreed that computer publications would not include full price leisure software on their CoverDisks.



We can be contacted on several bulletin boards and conferencing systems. If you have anything to say, why not get it off your chest online?

Speak to John Butters on the following services:

CIX.....stuser
Compuserve.....75300,1505
Prestel.....999900386



The decision was taken to protect the sales of games which, it was felt, would fall if £25 titles were included with £3 magazines each month.

We can, however, include demos of new releases but we don't do this too often because readers are likely to get more enjoyment from a decent public domain game.

If anyone would like to see demos rather than PD, then let us know and we'll try to include a few.

Driving a Canon

I recently bought a Canon BJ10ex printer from Dixons and when I got it home I was dismayed to find it wouldn't work with either Protex or Timeworks.

I telephoned the authors of Timeworks, GST Software, and explained the situation. A member of staff there said they could sell me a printer driver for £11.99 but also said that if I phoned Canon they would probably give me a driver free of charge - how's that for honesty!

I phoned Canon and they told me to phone Working Title, authors of Calligrapher. When I explained the situation to Working Title they were very helpful.

They said that they would supply me with a suitable driver and explained how to install it in my programs - and all this was free of charge.

The phone call to Working Title was made 11.30am on the Thursday, and the disk arrived at 7am on the following morning. That's what I call service. Well done everyone involved.

I would also like to take this opportunity to say keep up the good work with the magazine - I've been reading it since day one when it used to come as part of the 8-bit magazine Atari User.

R Dean, Glos

Despite the complaints we often read about there are many decent firms around.



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Enter competitions using the details on the form. If you have any enquiries connected with our competitions, contact Lucy Oliver on 0625 878888.

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SOFTWARE - PRODUCTIVITY:

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1st Word - Word processor £39.99

First BASIC - Programming lang. £19.99

ST Tutor - Tutorial Disk FREE

ANI ST - Animation Package £29.95

PLUS FREE FROM SILICA:

Productivity Pack £14.95

TenStar Games Pack £21.75

Total Value: £785.59

Less Pack Savings: £250.52

SILICA PRICE: £249.00

520 ST £249.95

Mini 16-bit 68000 CPU, 128K RAM, 1MB Disk Drive

Software - Arcade Games:

Final Fight - Street fighting game £25.99

9 Lives - Help save Claudio! £24.99

Robot Monsters - Arcade Shoot Up £19.99

Sea City - Control your own city £29.95

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PLUS FREE FROM SILICA:

Action Paks

Calligrapher can be extended by means of add-on "paks" which supplement the standard features. If you get the "Gold" version, these are all included – otherwise, they can be bought separately.

Calligrapher has been around since the early days of the ST, winning loyal users who swear that it's miles better than any other wordprocessor, whether on the ST, PC, Macintosh or any other line.

Sporting a phenomenal range of features, early versions suffered from persistent bugs, but a re-launch a couple of years back changed all that.

Developers Working Title have been hard at work supporting and upgrading the product, and have just released v3.0, which includes some major



Barcode

Ever wanted a wordprocessor able to produce 14 varieties of barcodes? OK, so it's not that likely. Just in case, Calligrapher will do it all – plus a special option for video codes.



Formula Editor

Type in something like:

~root(-over(8,7))

Then, select the expression and choose "Make a formula" from the "Misc" menu. Lo and behold, Calligrapher converts it to an elegant mathematical expression – in this

case, a square root symbol followed by a fraction.

All this is made even easier with the Interactive Formula Editor available as a pak. Formulae can be built up by clicking on symbols. A range of new symbols have been added in v3.0, making a truly comprehensive utility.

Calligrapher

enhancements. To call Calligrapher a wordprocessor hardly seems adequate. The subtitle in the manual states "first perception to final print", and in fact Calligrapher will assist with every stage of producing a document.

You can plan your masterpiece using the superb graphical outline, type it in using a full range of fonts in whatever size you require, check the spelling and grammar, import pictures or even create graphics from within the program, preview the finished document on-screen, and finally print it out to dot matrix, inkjet or laser printers.

Oh, and it also supports PostScript making professional typeset output a possibility through firms who can accept PostScript files and print them out at 1,200 dots per inch or more on a typesetting machine.

So what's new in version 3? The first thing you notice is that Calligrapher no longer uses GDOS, Atari's dated system for printing graphics and graphical fonts.

All the necessary code has been integrated into the program itself – no more messing with ASSIGN.SYS. This makes installation far easier and means you don't need to reboot to run other programs such as Timeworks Publisher which need different GDOS setups.

The second major change is internal – Calligrapher has been rewritten so that it will work under a multitasking operating system such as that in the new Falcon.

Other enhancements include the facility to install two printers, choosing between them at print time. Another

Working Title's respected wordprocessor has been upgraded to v3. Does that make it the best around? Tim Anderson investigates

new feature is provision for "template" documents which contain formatting information such as ruler settings.

There are some new formula commands which mathematicians will enjoy. Finally, documents can now be imported and exported in RTF format.

Invented by Microsoft, RTF stands for "Rich Text Format", and enables documents to be transferred between wordprocessors while keeping all the formatting, layout and styles – unlike ASCII files, which only preserve the raw

text. Unusually, some options have disappeared in the new version. You can no longer print to disk (except for PostScript output), and Calligrapher can no longer use bitmap fonts – in other words, GDOS fonts cannot be used in Calligrapher.

This means that to get new fonts into Calligrapher you need to buy official add-on fonts from Working Title – and there are plenty available, at a reasonable price (£18 per font family).

Unfortunately, there are no font converters around which support

Calligrapher, so if you already have a good collection of Calamus, PostScript, or GDOS fonts that's just tough.

So what's Calligrapher like in use and is it worth the hefty £99 asking price (£139 if you want all the extra "paks" – see box)?

If your work is just a matter of plain letter writing, or long text-only reports, don't bother. Amor's Protext or the ST Club's Redactor are character-based wordprocessors which are far quicker and more responsive in use.

But let's face it, text-only wordprocessing is a thing of the past. There aren't many documents which can't be improved by using one or two different font sizes, or inserting a small graphic or logo.

Business writing needs graphs and

Indexer

Calligrapher's Indexer pak is something special. This program is the only wordprocessor on the ST to handle indexing in a truly flexible way. To create an index entry, you follow two steps:

1. Mark the points in the document which you want included in the index, by inserting "handle" codes. You can give these codes names, like "Printing with Calligrapher".

2. When you have finished inserting handles, choose "Copy index to clipboard". Then, you can insert the index where you want it by using "Paste" from the Edit menu.

The great thing about Calligrapher indexes is that you can update them automatically. If you make a change which alters all the page numbers, select "Update links" and Calligrapher

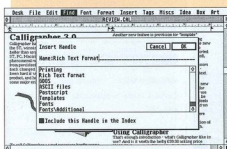
updates all the page numbers automatically.

Index entries can also be nested, with a number of sub-entries under the main index entry. The same system is used for cross-referencing. For example, on page 21 of your document, you may wish to say "See page 32 for a full explanation."

Using the "handle" technique, you can make this page number a hotlink which will change automatically if further editing alters the pagination.

Grammar checker

It's a nice idea – a little utility which actually tells you how to write well. Trouble is, language is so complex that



FlexText

Calligrapher is a wordprocessor, not a DTP program. It's surprising, then, that Calligrapher has facilities which many DTP programs cannot match.

FlexText is a good example. An amazing little program for bending text into weird and wonderful shapes,

it's well beyond the capacities of PageStream or Timeworks – you would need the likes of the expensive Calamus add-on Outline Art, or Didot Line Art.

Jazz up your documents with FlexText – it's almost worth getting Calligrapher just for this, especially as you can export the results into any program which will accept a standard GEM graphic.

Labels

Most databases can print labels – but you'll be hard pushed to find another one which can include graphics, different fonts and styles, and even offer the facility to put a unique serial number on each label.

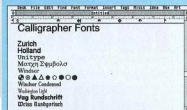
Calligrapher can, with the add-on

Labels pak. It's a neat facility, and indicative of the thought that has gone into the package – although if you do regular, extensive mailshots you might be better off with the speed and efficiency of a traditional database.

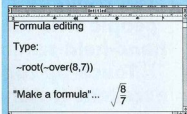
As always, it's a case of comparing what you need with what's on offer.



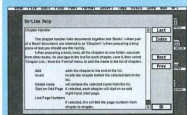
Calligrapher can easily do multi-column layouts, including graphics, complete with wysiwyg display



Working Title can supply nearly 100 font families, more on the way



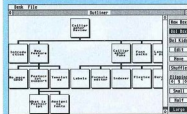
Using the formula mini-language, elegant maths expressions can be created



Calligrapher has an excellent online help facility



The main Calligrapher editing screen. Several documents can be open together if required



The graphical outline can be linked with the document itself, so you can shuffle your text around by moving these little boxes



is this the ultimate document maker?

tables; students and academics need footnotes and indexing facilities. And what about small posters, or party invitations? This is where Calligrapher comes into its own. If you want to produce documents that are technical, academic, or just plain fun, it has all the tools you need.

Calligrapher supports three different kinds of paragraph numbering – ideal for business or academic writing. Another excellent facility is the chapter handler – longer documents can be split into "chapters", and Calligrapher will keep control of page numbers and even indexing as if it were one file.

Not to mention the thesaurus, the spelling checker (with foreign language options available as extras), and the neat page preview feature. Unfortunately,

Product: Calligrapher 3
Supplier: Working Title, PO Box 4, Eynsham OX8 1UD
Telephone: 0865 883592
Price: £99, or £139 with Gold extensions
Configuration: ST, STE or TT with 1MB RAM or more.

Calligrapher does have its frustrations. The worst of these is its sluggish screen update – on a standard ST there is often a pause between typing a character and seeing it appear on the screen.

Scrolling is slow as well, far slower than That's Write for example, which also uses graphical fonts. On a long and

complex document this tardy response is not just inconvenient, but adds considerably to the time taken to prepare it.

There are other aspects of Calligrapher that are not quite right. For example, most wordprocessors allow you to centre text very easily.

In Calligrapher, any change in justification requires a new ruler to be inserted. If your layout is at all complex, the screen is soon covered in rulers – especially as headers and footers require their own rulers as well. You can hide the rulers from view, but that makes it very difficult to edit the document.

Finally, it's a shame that paragraph tags are not better implemented. Using tags in Calligrapher tends to be frustrating and difficult – and again, results in a multitude of rulers appearing.

If Working Title could sort out these one or two niggles, they would have a document processor to match the best available on any platform.



electronic grammar checkers are not very useful, not yet anyway.

Calligrapher's grammar checker compares your text with a set of rules, and picks out anything that does not match. If you choose the full set of

rules, it is annoyingly over-cautious, questioning every single use of "that", "your", and "its", for example.

The grammar checker isn't a complete waste of time. It works out how readable your document is, based on factors such as word

length and sentence length, and also displays a list of your most frequently used words so that you can avoid too much repetition. Calligrapher's thesaurus will soon identify some suitable alternatives.

BOTTOM LINE

FEATURES

Superb range of features, well ahead of anything else on the ST.

Excellent
 Good
 Average
 Bad
 Appalling

EASE OF USE

This excellent interface is spoiled by slow scrolling and screen update.

Excellent
 Good
 Average
 Bad
 Appalling

VALUE FOR MONEY

So feature-packed it just has to be good value.

Excellent
 Good
 Average
 Bad
 Appalling

Four superb scanners and mouse packages must be won!

You could be one of four lucky people who must win a Naksha hand-held scanner with Migraph Touch-Up together with an excellent Naksha mouse worth a total of £150. The perfect combination to enhance your presentations!

A scanner and mouse package can be yours for a quick telephone call that should cost you under £1* at cheap rate

* This applies if background noise does not necessitate the repetition of answers

£600
worth of prizes

Naksha

The Naksha scanner with Touch-Up...

- Produces high quality professional images for newsletters, reports and brochures
- Has an easy to use editing feature
- Provides four zoom modes
- Has an on-screen locator and magnifier

The unbeatable Naksha mouse comes with an excellent hard mouse mat, a mouse holder, an Electronic Arts discount voucher and Operation Stealth, the completely mouse-driven adventure spy thriller.

It offers 280dpi resolution, microswitch operation and no driver is necessary.

At least 1mb of RAM is required to run a fully featured scanner package

HOW TO ENTER

Decide the correct answer to the questions:

- 1** What resolution is the Naksha mouse? **2** How many zoom modes does the scanner software, Migraph Touch-Up, have?

- | | |
|------------------|---------------|
| a 210 dpi | a one |
| b 250 dpi | b two |
| c 280 dpi | c four |

You can enter by phone as many times as you wish. Please try to avoid background noise. The winner will be drawn from all the correct entries received.

You will be asked to give your answers together with your name and full postal address, including your postcode. Please speak clearly, spelling out any difficult words.

If you are under the age of 18 years old please ask your parents for permission.

Calls are charged at 36p per minute cheap rate and 46p per minute at all other times

The lucky winner of January's £300 shopping spree competition was John Kayton of Essex.



0891
543311

Expanding your horizons

One of the main attractions of the ST for serious work has always been the crisp mono screen with its rock steady, sharp display of text and graphics.

This is certainly what made me buy my first ST many years ago, but even then I was puzzled when I first looked at my newly-acquired outfit. Why was there such a large border around the actual screen area?

I soon discovered that it was possible to stretch the main display a little, but only at the expense of some distortion around the edges. The fact was that 640 by 400 pixels was all that the mono resolution could deliver.

By today's standards, when every common-or-garden PC comes with a 640 by 480 VGA monitor, this is often downright inadequate.

Improved

So when Atari designed the TT, intended as a kind of "Super ST" for upmarket, professional purposes, they gave it not only a very fast Motorola 68030 processor, but improved video modes.

Besides the three ST resolutions, retained for software compatibility reasons, and the rarely used but colourful TT Low mode, they added a TT med-res of 640 x 480 and TT High at a very impressive 1,280 x 960.

The trouble with TT High is that it requires a special, large-screen monitor, which few people can afford.

The 80 extra horizontal lines of pixels provided by TT med-res are not to be sniffed at, of course, since with the kind of application mentioned above every little bit counts – just one or two more spreadsheet rows or text lines in your field of vision can make all the difference by making another time-consuming screen redraw unnecessary.

Most infuriatingly, however, the large margin is still there. A couple of years or so ago a German firm came up with a hardware modification, Overscan, which eliminated this waste from ST screens.

Sooner or later, many TT owners hoped, this neat little trick would make an appearance on the more upmarket machine, too.

And so it has, at last. Overcan TT is a combined hardware and software pack-

Günter Minnerup struggles with his TT's metalwork to bring you news of a screen enhancer for Atari's top-end machine

age which expands the usable screen area by quite a significant amount: 61 per cent in the three ST-compatible modes, and 34 per cent in the TT modes.

It works by intercepting the "Display Enable" signal generated by the TT's video chip and replacing it with its own, thus fooling the machine into the new resolutions.

All properly written software should be able to take advantage of the larger display area, and those that cannot are taken care of by a CPX module for the extensible Control Panel – you enter the names of the rogue programs and, when they are called, Overcan TT switches into the normal TT resolutions without a reboot! Neat indeed.

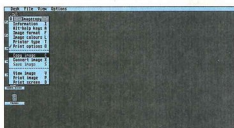
The hardware bit of Overcan TT consists of a card that slots into the VME bus and three wires which are connected to the video chip, the ST RAM expansion socket, and of course the Overcan card itself. Sounds easy, but isn't.

If you decide to have a go at fitting it yourself, it's definitely a case of removing everything until you stare down onto the bare motherboard. I even had to remove the power supply unit – the manual mentions a new version which makes this superfluous, but the review model supplied must have been an old one.

There are various things to watch out for when dismantling a TT in this fashion, especially the hard disk. Once the single screw fixing it in place is removed, it seems to feel free to realise a long-held ambition to turn itself into an ejector seat, so hold on to it tight! The power

supply to the hard drive is ridiculously difficult to disconnect due to an idiotic design decision to wedge it into the most cramped corner available. All in all, it took me a good hour just to get to the point where I could begin to install Overcan.

Then there is a final problem – extreme care must be taken when



This is what you gain in terms of usable extra screen area

inserting the two contacts into the video chip. The gap between chip and socket is so tight, and the contact wires so flimsy, that the slightest carelessness will leave you with bent or even broken contacts.

Once you have negotiated the trials and tribulations of hardware installation successfully, installing the software is simplicity itself. Just copy OSCAN TT.PRGM into the AUTO folder and OSCAN TT.CPX to wherever you

Product: Overcan TT

Supplier: Atari Workshop, The Desktop Centre, 17-19 Blackwater Street, East Dulwich, London SE22 8RS

Telephone: 081-693 3355

Price: £149.95 (fitted)

£ on request (unfitted)

keep your other CPXs.

So is it worth it? As I have already remarked, every little bit counts in some applications. Overcan does not really replace a large-screen monitor for serious desktop publishing or spreadsheeting, but it certainly makes for more comfortable work.

The screen redraws are slowed down only insignificantly by it, least of all in mono mode. ST High is probably the most useful mode with Overcan: the 832 x 496 resolution obtained is the same as

with TT Medium, but it represents a 61 per cent rather than a "mere" 34 per cent increase and is quite a bit faster because there is no colour data to be shifted around.

And yes, I nearly forgot – the documentation supplied, while admirably clear and concise to me, may be considerably less so to those whose German is a little rusty.

There are apparently no plans to translate the manual, so you will have to rely on the Atari Workshop.

BOTTOM LINE

FEATURES

A modest but significant increase in the usable screen area.

Excellent

Good
Average
Bad
Appalling

EASE OF USE

Tricky to install, but once inside your TT you can almost forget about it.

Excellent

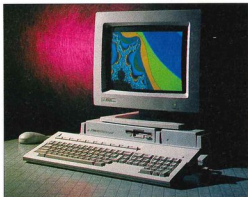
Good
Average
Bad
Appalling

VALUE FOR MONEY

If you need the extra display then Overcan certainly offers good value for money.

Excellent

Good
Average
Bad
Appalling



TTowners can now use the full width of their screen

You already know how exhilarating computing is as a hobby. Whatever your interest, be it games, productivity, music, graphics, DTP or any of the other myriad of uses your ST can be put to, there is as wide a range of applications as there are people to use them.

Probably the only thing all these uses have in common, however, is a full dose of isolation. Sure, you can play some games against another human being,

puter to communicate with other computer users. This is usually done over the telephone network – although this need not necessarily be the case.

Many universities have their own inter-departmental computer networks, and plugging a number of computers together in the same location to play multi-user games could also be classed as comms, but for the vast majority of users, it involves contact with other people in other locations via the telephone.

In order to allow your ST access to the phone network, you will need a modem.

Although some computers – especially those at the portable end of the PC market – can be plugged directly into a telephone, thus being ideal for people who need to transfer data back to a

"base" machine from a

remote location, for

the vast majority of

home computers –

the ST included – a

modem is an

essential requirement.

A modem is a combined device for modulation and demodulation,

hence its name, which basically

means it "modulates" information

from your ST into a form which

can be sent across a telephone line,

which is then "demodulated" into a

form which the computer at the other

end can understand.

Unintelligible

Modems tend to be small boxes which sit beside your computer, and comes complete with a screeching speaker and a plethora of unintelligible flashing lights labelled with helpful information like "HS", "OH" and "SD" – just a small example of how unintelligible comms can be to the uninitiated.

The good news is that although comms is undoubtedly a complex sub-

More addictive than any game, comms could be just the ticket to put some zest back into your computing life. Phil Morse presents our definitive guide to getting on-line

HOO

but by and large it's just you, your ST, plenty of coffee and... well, that's about it.

Many users will eventually become interested in communications (from here on, comms) in order to replace an element of the real world lost when the inevitable addiction to spending dimly lit late nights hunched over a flickering monitor began to bite deep.

Comms involves using your com-

puter, you don't need to understand all the ins and outs to reach a level of proficiency which will allow you to do all the things you want to and more.

As any seasoned comms user will tell you, for everything you find out... there are always two things you didn't realise you didn't know which come to light!

If you're starting out in comms, the modem will probably be your first investment, and about £150 will get you a model which will certainly reach the nowadays accepted minimum baud rate of 2,400 – maybe even 9,600 if you shop around or are prepared to pay a bit more.

There are various standards, but if you ensure that the modem you buy is clearly stated as being "Hayes compatible", you can't go far wrong.

Incidentally, you can get modems nowadays which have built-in fax capabilities, which would be especially useful for the small business which has yet to buy a separate fax machine, but such facilities are beyond the scope of this

article. The diagram below shows how a modem fits into a basic ST setup. It plugs between your telephone and your phone line, a little like a video recorder plugs between your aerial and your television set. This means that the tele-

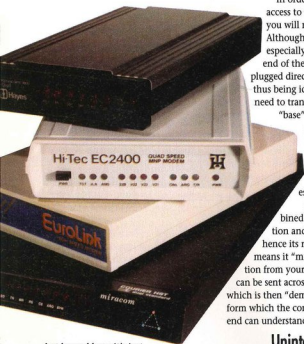
A global stage

In the comms world, CompuServe is the giant. With more than 850,000 subscribers worldwide and over 1,400 on-line information services, it's a far cry from the BBS run by the kid at the end of the street.

Mailing other users is the same as with any BBS – except your audience is just a little bigger! – but the "feel" of the board is very commercial and organised. It can also be very expensive – Prestel's 31p a minute is dwarfed by some of the charges imposed on CompuServe. You have to pay in dollars so credit cards are the order of the day, and costs of over £15 an hour are quite common.

In the CompuServe "forums", you can chat – in real time – with users from all over the world, on any of a huge number of subjects. However, it must be noted that the board's main group of subscribers are American, where the board is based.

Luckily, transatlantic phone calls are not necessary, as CompuServe can be accessed through various points in the UK, such as CIX, or BT's PPS Dialplus system. It's one to know about, but the expense and nature of the board mean that it is a better suited to professional users... or those with a lot of money!



Connecting a modem into your ST setup. Note that as the telephone plugs "through" the modem, it will be unusable when the modem is in operation

Communications jargon

- **Explanations of some of the most-heard phrases in the often confusing world of comms**

Archiving – Squashing programs or files down to fit in the smallest space possible. Archivers work by trying to get the computer to “say” the same thing in a smaller space. De-archivers reverse this process.

Baud rate – This is a measurement used to express the speed at which a modem transfers its data. A rate of ten baud means that the modem transfers one character per second. Luckily, modems operate somewhat faster than this, and the lowest rate you should aspire to is 2,400 baud.

A rate of 9,600 baud is becoming more common, and modems which race along at 19,200 baud are also available. It is worth remembering that your modem will only operate as fast as the one at the other end of the phone, so if the services you wish to use run at 2,400 baud, a 19,200 baud modem will be of little use to you.

De-archiving – See archiving.

Download – The process by which you take information “down” a phone line from a remote computer and bring it into your machine. For instance, you may hear people speak of “downloading games” from a BBS, which simply means fetching them from afar.

OLR – or Off-Line Reader. An OLR is a money-saving program which is designed to minimise your time on-line. It will place your messages on a BBS, download any messages for you from the BBS, transfer any other files to and fro as specified, and then let you do your reading and replying at leisure, long after the modem has been disconnected from the telephone.

On-line – A term used to describe any time when your computer is actually hooked up to another machine, usually via the telephone.

Sysop – SYStem OPERator. The person who controls a BBS is the sysop. It is him or her that you will come into contact with when having problems on a board, and often when first logging on.

Note that on some larger boards, the sysop is available at certain times on a “voice line” – you know, one of those old-fashioned phones where you actually speak to the other person! Seriously though, this can be useful if you are struggling and desperately need someone to talk you through something.

Upload – the opposite of a download, you upload a program when you send it from your machine to another computer or BBS via the phone line.

KED!

phone itself is effectively under the modem's control, and so will obviously be unusable when the modem is in operation.

So, you've bought your modem, battled to set up the software and finally

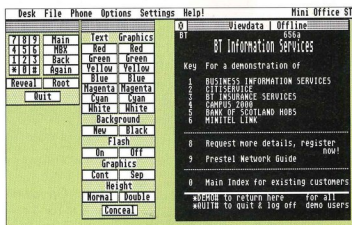
got everything connected (see the tutorial on page 17 of this issue for help) and are all ready to make your first call.

You'll probably begin by dialling a local bulletin board, or BBS – there are a few listed on these pages to get you started. A bulletin board is generally run by an enthusiast (with a very large hard drive!) and will contain text messages between its users, along with a selection of files, which you can download. Use of BBSs is usually free – apart from the cost of the call, of course.

Register

Before you get far, you will, as a new user, be asked to register. This is to let the sysop know who you are and to give you the opportunity to choose a secret password. This will help to keep messages meant for you safe until you want to read them – maybe not over-important to you, but it has definite advantages.

For instance, Atari ST User uses the CIX BBS to download articles from freelancers – and we wouldn't want the



Prestel's main Viewdata menu, accessed with the Mini Office Communications package

competition getting to them first, would we?

Most boards make no charge for using their services, although the larger systems, such as Prestel, CompuServe and CIX, do charge you – but they offer a much wider range of services too.

However, the BBS comms scene has a very communal, almost “underground” feel to it, where hard currency is replaced by good, old-fashioned consideration and barter.

So if you download some files from a BBS, upload anything you might have that the particular board you're using hasn't. The general rule is to give and take – and always stay courteous. Once

logged on and registered, it's time to start the fun!

There are various “conferences” on most BBSs, which involve a number of people discussing whatever subject the conference covers. Believe me when I tell you that if a subject exists, there will be a conference on a BBS somewhere to cover it. You read other people's messages, reply to them, read your replies, and so on, sometimes in real time.

Messages for other users can be left and you can pick up any which have been left for you, just like the postal service – which is why this is called E-mail.



The connections on a typical modem. Note that you'll need a new-style phone socket and lead to get connected

short for electronic mail. Seasoned comms hacks seem to take great pleasure in referring to the paper-and-envelope Post Office services as "snail mail!"

The same PD software which you've no doubt been sending off from available magazine advertisements is often available immediately – and totally for free – from BBSs.

It's the quickest and cheapest way of getting PD, but as mentioned, try and give something back to boards you take from – without this attitude, the scene will quickly die. Remember that running a BBS costs most sysops money, so there's no incentive to carry on if users just take and don't give back in return.

Adventures

You can play games with users from all over the world. Adventures especially take on a whole new dimension when, as you wander around a beautifully-painted (with words, of course) fantasy world, you bump into characters who are as real as you are, playing the same game from somewhere miles away! Be careful though – here's where phone charges can really build up!

With the right modem, software and phone numbers, you can access estab-

lished services such as Prestel. Shopping from home is already becoming a reality, choosing products on-screen – a bit like the computer systems they have in travel agents, for example, which use Prestel for this very purpose to access information about, and then book, your holidays.

Boards rarely exist in isolation, and messages and files from boards in all corners of the globe find their way across the world by boards phoning each other up and block transferring information. It's a cliché, but comms really is a gateway to the world!

Without a shadow of a doubt, comms can become a very expensive hobby indeed. As well as paying initially for the modem and software, the real cost begins to show when you become hopelessly addicted to the hobby and find yourself spending more and more time clocking up on-line charges.

You'll find the urge to dial an exotic bulletin board or play a little longer on that multi-user adventure game becomes hard to resist... until the first phone bill arrives.

But all is not doom, as expensive as it may be, there are ways of reducing considerably the cost of "doing" comms and so ensure that you'll remain financially able to continue with your new-found pastime.

Giveaway

Use the excellent Mini Office Comms package which is free with this issue of *ST User* – this is an immediate saving, as by buying this magazine you've saved yourself the cost of having to buy a comms package to use with your modem.

It is a classic false economy to buy a slow, outdated modem. Although disreputable dealers and "honest Jim's"-style second-hand electronic emporia will be more than happy to push such models on you at hard-to-resist prices, you will find that the extra on-line time required to send and receive information over the telephone will soon result in much higher bills.

This is a cost that will not reduce until you admit your error and buy a modem which runs at the fastest speed possible.

So, buy a 2,400 or 9,600 baud modem to start with. Then, consider the best times to use the phone line. Both British Telecom and Mercury charge different rates at different times of the day and week.

For BT, between 9am and 1pm is the peak time and to be avoided at all costs unless you're more money than sense. From 1pm to 6pm is the standard charge rate, but between

6pm and 9am the next morning, the telephone equivalent of electricity's "Economy 7" is in operation. If possible, you should try to limit your comms activity to this time period.

It is an often overlooked fact that from 6pm on Friday to 9am on Monday – ie all weekend – the rate stays cheap, so if comms by daylight is your penchant, Saturday and Sunday are the days to do it!

You would also do well to check whether a Mercury system is in operation in your area. Mercury, as BT's competition, offer a slightly cheaper set of rates, and using a Mercury line usually involves buying a telephone with a simple switch built in.

Mercury has the added advantage of charging you in parts of units instead of whole units, so their charges more accurately reflect the length of time you've been on the phone.

Make sure you are aware of any on-line charges, when you are incurring them and how much you are "spending". There can come as a nasty shock if you let them build up unchecked, and remember they are charged on top of telephone costs!

Compression

Archiving files is another way of cutting your on-line time, sometimes by half or more. It is standard comms practice to archive any sizeable files which can then be de-archived at the other end, the idea being that the smaller a file, the less time it takes to send it across a phone line, and so the less you spend in doing so.

Software to archive and de-archive files is available in the public domain, and most decent BBSs will have a selection of the top archivers for you to download. A worthy investment!

Finally, judicious use of an off-line reader wherever possible will help to reduce the cost further by allowing you to do all the time-consuming typing of replies to messages, reading other people's messages to you and so on at your leisure, going on-line only when everything is ready to be sent.

Some bulletin boards

● Most BBSs carry a list of boards which you can dial at your leisure. This is, therefore, just a tiny selection, intended above all else to get you started, and to give you some idea of the sheer variety – serious and otherwise – of boards available to you.

BOARD NAME	LOCATION	SYSP	PHONE
Barney's Rubble	Birmingham	Jon Morby	021-441 1801
Datastream BBS	Jersey	Paul Crick	0534 64090
Dead On Arrival	Manchester	Christopher Seeley	061-707 2008
Disu PC	Sheffield	Phil Green	0742 729621
DTP User	Croydon	Steve Dick	081-656 5190
Jolly Roger BBS	London	Roger Seaward	081-742 1640
Liberal Leanings	Farnborough	Martyn Wilson	0252 375227
M-G-M	Oxford	Nik Garfield-Middleton	0865 882872
Packet BBS	Kingston-U-Thames	Ted Batts	081-547 1479
Phantom BBS	Aberdeen	Iain Sherrit	0224 709883
PMI Data Plastics	Wokingham	John Shepherd	0734 891355
Severn Side BBS	Gloucester	John Sangwin	0452 611342
Sphere BBS	Irvine	Iain Paton	0294 221350
The Caravan	East Sussex	Mark Cole	0435 872288
The Owl Service	Leeds	Malcolm Arnold	0532 636037

Keeping the cost down

The commercial boards

● Prestel, CompuServe and CIX are the giants, but you pay for the privilege of using them. Telephone the "voice lines" below for details on how you can access these services. Should you decide to give them a go, why not leave a message for *ST User*? The essential names and numbers are on page 38 of this issue. Have fun...

CIX – 081-390 8446

CompuServe – 0734 391064

Prestel – 0800 200700

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Until now, all our examples have been restricted to simple demos. This month, we'll be progressing to a full blown space simulation!

We'll begin by defining a few objectives. What we are aiming for is a movable "viewpoint" which can be controlled directly by the joystick or mouse. You can see the idea from Figure 1.

In order to meet these objectives, we'll have to solve three main problems.

1. How can we read the joystick, mouse, and keyboard for STOS Basic?
2. How can we move the viewpoint through our 3D game world?
3. How can we steer our spaceship in a believable way?

Once we've found answers to these questions, we'll be well on our way to creating the finished program.

The first bit is easy, as STOS Basic provides us with a vast range of commands for reading the various controls. The keyboard, for instance, can be checked using the INKEY\$ and SCANCODE functions.

The INKEY\$ function just reads a keypress from the user, and places the appropriate character into a string variable. Unlike the familiar INPUT command, INKEY\$ doesn't display the new character on the screen and it doesn't wait for a keypress.

So we can check the keyboard at any time, without interfering with the rest of our program.

```
$(INKEY$;REM Load a keypress into variable C
```

\$ INKEY\$ is great for entering letters or numbers, but it only works with keys which have an equivalent ASCII value. Some keys, such as Help, and the cursor arrows, require special treatment, and

STOS 3D Made Easy

Stephen Hill continues his guide to this powerful but simple programming package

should be checked using a separate SCANCODE function instead.

SCANCODE returns the "scancode" of the last key which was entered using INKEY\$. This code is a simple number, ranging from 0 to 255. Here's a crude test program which will allow you to try out the various keys:

```
10 key off:scars off:loc off: mode 0
20 print "Hit a key"
30 $(SCANCODE;SCANCODE
40 if $(SCANCODE then print "Character:";$(SCANCODE
50 if $(SCANCODE then print "Scancode:";SCANCODE
60 goto 30
```

We'll now have a brief look at the STOS Basic joystick commands. There are four key functions we'll need to

examine:

```
=LEFT - checks if the joystick has been dragged left
=RIGHT - checks if the joystick has been pulled right
=UP - tests for an upward push of the joystick
=DOWN - tests for a downward pull
```

These functions return a value of either -1 (TRUE) or 0 (FALSE). If we get a value of -1, then the test has been successful, and the joystick has been moved in the selected direction. If not, we'll get a zero instead.

Try out the following example:

```
10 key off:scars off:loc off: mode 0
20 centre "Pull the joystick"
30 if left then locate 8,12:print "Left"
40 if right then locate 26,12:print "Right"
50 if up then locate 19,8:print "Up"
60 if down then locate 18,16:print "Down"
70 goto 30
```

The final control option is via the mouse. This can be tested using the X MOUSE and Y MOUSE functions:

```
=X MOUSE - returns or changes the X co-ordinate of the mouse pointer
=Y MOUSE - reads or modifies its Y co-ordinate
```

On the face of it, these functions seem pretty useless, as they only return the physical co-ordinates of the mouse pointer on the screen.

However, with a bit of cunning, we can easily trick them into returning a

relative movement rather than an absolute screen position. This data can then be used to control our spaceship, in a similar way to the previous joystick commands.

Our first job is to remove the mouse pointer from the screen using HIDE, so that it won't interfere with our game:

```
10 Hide
```

Next, we initialise the mouse by moving it to the centre of the screen using the X MOUSE and Y MOUSE functions:

```
20 X Mouse=160:Y Mouse=100
```

We can now read our mouse with:

```
30 XC=X Mouse-160:YC=Y Mouse-100
```

Line 30 works out the distance the mouse has been moved from the centre point, and loads the results into the variables XC, and YC.

Finally, we replace the mouse back at its original position like so:

```
40 X Mouse=160:Y Mouse=100
```

Here's the finished demo:

```
10 clskey off:hide
20 DAMP=15:x mouse=160:y mouse=100:rem 1'll be explaining DAMP in a moment
30 XM=x mouse-160:YM=y mouse-100
40 x mouse=160:y mouse=100
50 XC=XM/2:YC=YM/2
60 rem if XM then XC=C+sgn(XM)*DAMP:YC=Y+sgn(YM)*DAMP
70 if XC/2 then print "Mouse has moved right"
80 if YC/2 then print "Mouse has moved down"
110 rem XC=X/2:YC=Y/2
120 wait 10
130 goto 30
```

This routine requires a separate copy of the mouse for each and any every response. If you'd prefer to use an "inertial" system, you'll find the appropriate code in the REM statements in lines 60 and 110. Simply remove line 50, and add the following lines:

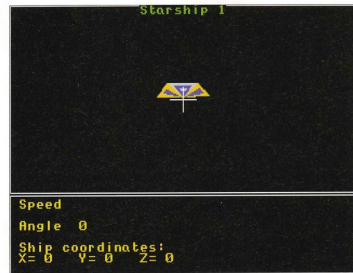
```
60 if XM then XC=X+sgn(XM)*DAMP:YC=Y+sgn(YM)*DAMP
110 XC=X/2:YC=Y/2
```

These instructions remember the present control setting until the user changes direction. Line 110 sets up a damping factor which stops the mouse in its tracks after a few seconds. The higher the value of DAMP, the longer the effect will last.

We're now in a position to tackle the second part of our problem. How can we move our cockpit realistically through our 3D world?

Well, if you've been following the series carefully, you'll remember that STOS 3D draws all our objects from a specific viewpoint assigned to object zero.

So all we have to do is move object zero, and the cockpit will automatically



Looking out of the cockpit, the ship object is some distance from us and directly ahead

Starship 1



Speed
Angle 0

Ship coordinates:
X= 0 Y= 6 Z= 4057

Pressing the + key increases our forward speed and as a result, the ship object draws closer

move in step.

One obvious approach would be to move the viewpoint directly using TD MOVE. This would lead to a line such as:

```
500 Td Move 0,VX,VY,VZ
```

Where VX, VY, and VZ are assumed to hold the new world co-ordinates of our spaceship. We could now change these co-ordinates using any one of the control systems we've just been examining.

While there's nothing inherently wrong with this system, it's worth noting that there are several alternative options:

```
TD MOVE REL n,dx,dy,dz
```

This command moves an object relative to its present location. The new world co-ordinates will be immediately increased by DX,DY,DZ units respectively.

```
500 Td Move Rel 0,-100,50,200
```

moves the viewpoint 100 units left, 50 units up, and 200 units forward from the original position.

There's also the TD FORWARD command we looked at earlier:

```
TD FORWARD n,dist
```

TD FORWARD moves our object DIST units forward in the current direction:

```
500 Td Forward 0,SPEED:ren Moves the ship  
SPEED units forward
```

The speed can be controlled in a number of ways, depending the game. For now, we'll allow the user to increase or decrease the speed directly from the keyboard.

```
240 CS=inkey:s=scancode  
250 if CS="+" and SPEED=0 then dec SPEED
```

With the aid of TD MOVE REL, or TD FORWARD, the ship can now be moved at will. However, we've still not decided on the direction!

There are lots of possible approaches we can take to this problem, but it's easiest to use the following procedure.

Assign one control for changing the angle of the cockpit. Depending on the angle we've chosen, the ship will appear to turn, dive, or twist in space.

```
500 Ren rotate ship around the X axis  
generating a dive/climb effect  
510 if JUP then LA=LA+182: Td Angle 0,LA,0,0  
520 if JDOWN then LA=LA-182: Td Angle 0,LA,0,0  
530 return  
  
400 Ren rotate ship around the Y axis,  
turning the cockpit left or right  
410 if JLEFT then LB=LB+182: Td Angle 0,0,LB,0  
420 if JDOWN then LB=LB-182: Td Angle 0,0,LB,0  
430 return
```

These modules rotate the cockpit by 182 VRUs (approx 1 degree).

```
10 ren Starship 1  
20 ren Initialisation  
30 curs offkey:offhidemode:Doclick  
offscreen 13,10000  
40 set mark 2,30:ren Try marks 3 to 4  
50 td init 100000  
60 ren load up object definitions  
70 input "Insert copy of the 3D  
installation disc into drive A: and press  
Return":$A  
80 td dir "A:\DEMOS\OBJECTS"  
90 td load "game_shi"  
100 td load "dice"  
110 ren initialise objects  
120 palette  
130,4777,4700,470,47,4770,477,4707,4777,455  
5,4226,4741,4744,4622,4500,4727  
140 td init "game_shi",0,0,5000,0,0,0  
5000,0,162490,0  
150 LogicBack  
160 ren Main loop
```

Here's a completed example for you to play around with. Notice how we've positioned the status display just below the drawing area used by STOS 3D. The size of this area can be changed by calling the TD SCREEN HEIGHT command near the start of your program

Starship 1



Speed
Angle 354

Ship coordinates:
X= 464 Y=-9 Z= 3637

Moving the joystick alters the view from the cockpit and the ship object changes position

Next, use the second control to shift the position of the ship. The direction of this movement will naturally depend on the angle we've previously chosen to rotate.

So if the first control generates a dive, the second should move the ship horizontally. And if we're already able to turn the ship, we'll need some way of shifting the cockpit up or down:

```
700 Ren Move ship Left. Use if JUP and  
JDOWN handle dives or climbs  
710 if JRIGHT then td move rel 0,100,0,0  
720 if JLEFT then td move rel 0,-100,0,0  
730 return  
  
800 Ren Move ship up/down. Use if JLEFT and  
JRIGHT turns the cockpit sideways  
810 if JUP then td move rel 0,0,100,0 420  
14 down then td move rel 0,-100,0 430  
return
```

The advantage of this technique is that it's both fast, and simple to program. If we tried to turn the cockpit in any direction, like Elite, we'd be faced with lots of extra complications, which

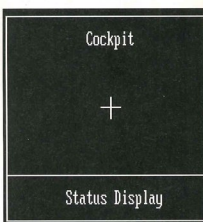


Figure 1 - the movable viewpoint

would dramatically slow down our game.

● Next month, we'll be taking our new ship, and adding in the laser and the targeting systems. See you then!

```
170 cls logic:ren Clear screen  
180 $IDE=0:ren Set horizontal flight flag  
190 ren draw joystick  
200 if JRIGHT then td move rel  
0,100,0,0:$IDE=1  
210 if JLEFT then td move rel 0,-  
100,0,0:$IDE=1  
215 ren MOD cycles LA from 0 to 65535  
220 10 JUP then LA=(LA+182%5) mod 65535  
230 14 JDOWN then LA=(LA-182%5) mod 65535  
240 CS=inkey:s=scancode:ren read keyboard  
250 if CS="+" and SPEED=0 then  
SPEED=SPEED+4  
270 if CS="+" then SPEED=0  
280 ren check help key  
290 if S=9 then td move 0,0,0,0:td angle  
0,0,0,0:SPEED=0:LA=0  
300 clear key:ren Clear existing keypresses  
310 ren move ship forward  
320 if $IDE=0 then td forward 0,SPEED  
330 td angle 0,LA,0,0:ren handle dive  
340 ren sound effects
```

```
350 volume SPEED/3:if SPEED=0 then noise  
20  
360 td redraw logic:ren draw 3D  
370 ren display cockpit on top of 3D  
380 ink 1:box 0,0 to 319,139:pen 3:locate  
0,0:centre "Starship 1":pen 5  
390 polyark 160,70:box 0,141 to 319,199  
400 locate 1,18:print "Speed":if SPEED=0  
then ink 5:bar 64,144 to SPEED+64,152  
410 locate 1,20:print "Angle"  
"LA/182:locate 1,22:print "Ship  
coordinates:"  
415 Ren TD POSITION reads the coordinates  
of an object. See next month  
420 locate 1,23:print "X":td position  
x(0):" Y":td position y(0):" Z":td  
position z(0)  
430 screen swap:wait vbl:ren flick  
display onto screen  
440 goto 160
```

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Until recently, 3K's professional greyscale image editing program, Retouche, was well out of the average ST user's reach. Now, at £99, it looks pretty tempting, especially as so many people are starting to buy scanners with greyscale capability.

Retouche is supplied in a plain but sturdy plastic box with two disks and a 110-page manual. The last 20 pages are given over to printer and scanner driver information but the manual itself is easily readable and not aimed at experienced professionals.

The master disk contains two versions of Retouche, one for the ST and another for the TT. The rest of the disk is used for various accessories, all of which drive various scanners and printers including the Epson GT series flatbeds, Atari Laser, HP Laserjet and 9 and 24-pin printers. Two sample 256-greyscale TIFF format images are also included.

Retouche requires a minimum of 1Mb of RAM but even then you won't have access to all the features. It only works in mono on an ST (although the TT version runs in colour) and it uses some pretty clever dithering techniques to represent the greyscales on-screen.

It will handle images with up to 256 greyscales and show them on-screen



A poor quality colour picture had to be transformed for inclusion in a newsletter. Note the unattractive shadows behind the head and the tacky background which needs removing. It's also too pale



Using Retouche's powerful tools, the changes took me less than 15 minutes - all it needs is saving in TIFF format and laying out in a DTP program

time! Retouche will load files in its own format, RTC, as well as its own version of TIFF block format files.

Unfortunately, I tried TIFFs from a wide range of sources including Reprostudio and Touch-up as well as

those from a PC and a Mac. None of them would load. As this is the only way to get 256-greyscale images into the program, it's not a good start. Anyone sending original photos off to a bureau for high resolution scanning will invariably get their work back as a TIFF file.

A small undocumented utility on the second disk provides an answer, though it's a less than perfect one. It will load a mono IMG file, produced on most popular hand scanners, and turn it into a TIFF block usable by Retouche.

Any number of greyscales can be decided upon but the more greyscales the smaller the image will end up. I found that choosing 64 greyscales was the best but the image was still reduced to an eighth of the original size.

This compares poorly with Touch-up 1.8 which can very cleverly knock out a 256 greyscale image at only a quarter of the original size.

Retouche can import colour files in Degas low and medium resolutions, Neo or Art Director formats and mono images in Degas high resolution, STAD and DOODLE formats.

This makes it particularly good for use with the Power scanner which can produce pseudo-greyscale images containing 16 different colours in Degas low

resolution format. It is a crying shame that Touch-up TIFF files can't be imported into Retouche as combination of Naksha hand scanner, Touchup 1.8 and Retouche for around £200 would be unbeatable.

It is clearly the best greyscale editor around on the ST and it now commands a very reasonable price. However a big question mark remains over its ability to handle the right files.

BOTTOM LINE

FEATURES Very powerful array of editing tools	Excellent Good Average Bad Appalling
EASE OF USE Nice tool to it but there are some doubts over file imports	Excellent Good Average Bad Appalling
VALUE FOR MONEY Good price for a professional tool of this quality.	Excellent Good Average Bad Appalling

Product: Retouche v1.1
Supplier: CGS, 19 Ledbury Place, Croydon CR0 1ET
Telephone: 081-686 8121
Price: £99
Configuration: All ST/STE/TT models with mono monitor and 1Mb RAM

Retouche revisited

using 64 different dithered patterns (Atari monitors won't support true greyscales as they can only display black or white in any given pixel).

Retouche loads fairly quickly and the opening screen is an impressive example of what can be achieved.

The user interface consists of a standard GEM menu bar along the top of the screen and an on-screen toolbox at the bottom. The menus are slightly non-standard as they only drop down when you move the pointer into the top half of the bar.

This is very useful when editing close to the top of the screen - we all bring down unwanted menus from time to

After a massive drop in price, 3K's greyscale editor Retouche appears to be a real bargain. Paddy McCarthy takes a look

Retouching with some fine editing tools

The real power of Retouche lies in its excellent editing tools. Areas can be masked off so they can't be affected by the current operation and there are eight different instruments.

Pencil, brush, charcoal and stamp are used for the standard painting methods with two ingenious features, finger and waver for blending shades and smoothing contrasting areas. There are also box and fill tools.

Each tool has a parameter box from which the settings can be altered. Most of the tools are pressure sensitive so that holding a brush over an area might paint light grey to start with but it will gradually darken unless you move it.

It takes some getting used to as it streets ahead of the average paint package but there is no reason why Retouche couldn't be used to create artwork from scratch for DTP applications, especially with the excellent gradient fill facilities.

Retouche can also produce four levels of rasterisation which

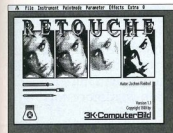
can be used as halftones and placed directly into DTP applications that will be reproduced by photocopying.

There are also countless special effects that can be applied to images from sharpen, soften, blur and roughen to lighten, darken and structure (applies a canvas effect to the image).

The brightness and contrast can also be subtly altered - something very useful for poor photographs.



Retouche's brush parameters



Retouche's opening screen - looking good

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Archive heartache

Having recently moved to England from "down under" and being an ST owner, I came across *Atari ST User* for the first time in December. I am interested in graphics, so I was extremely pleased to see the full version of Quantum Paint given away on the CoverDisk.

After flipping through the pages (with a disgruntled newsgate looking at me) I decided that this was the sort of mag that I needed.

I was also impressed by the cost of your mag compared to other ST magazines which, although they have two disks as opposed to your one (even though the second disk generally contains rubbish), were much more expensive.

After paying the mere £2.99 I rushed home, eager to get Quantum Paint up and running. Once home, I placed the CoverDisk into my ST and double clicked on X_PAINT.TOS.

Strange things began to appear on my screen and after a while, I got an error message saying "Write error". My heart sank as I found I was unable to use Quantum Paint.

Thinking it may be my computer that was at fault, I tried it on my friend's machine. Unfortunately the same thing happened on his too. Is my disk faulty or am I doing something wrong? I am new to the ST so any help would be appreciated.

G Meyers, Cheshire

Unfortunately, the December issue's CoverDisk pages had the instructions on using the CoverDisk missing due to a slip up on our part.

Regular readers would not have had a problem as they would have been familiar with using the CoverDisk but readers new to the ST and our magazine would have experienced difficulties.

To provide good value for money we employ file compression techniques when placing large programs on the CoverDisk to fit as many programs as possible onto the limited disk space.

Such files are termed "archived files" and are recognised on our CoverDisk by their names beginning with X. (as with X_PAINT.TOS).

When a file is archived, it squashes all specified files into one file. For example, say you have a calculator accessory comprising of the files CALC.ACC, CALC.DOC and CALC.RSC.

When archived to a file called X_CALC.TOS, X_CALC.TOS will contain all three of these files which must be "extracted" from it in order to use the accessory.

To extract files from our CoverDisk,



you must first copy an archived file to its own blank formatted disk and then execute the program on the blank disk.

When an archived file extracts, it reads the archived file (X_CALC.TOS in our example) and copies the files within it to the disk the archived file was run from.

This means that there should be enough space on the disk for the archived files to extract and our CoverDisk is almost always full to the brim, hence the need to copy an archived file to a blank disk first.

The "write error" is a result of running the archived file from the CoverDisk which does not have enough space for a successful extraction.

So copy your X_PAINT.TOS file to a blank disk and run it from there. When done, you should have all the files needed for the program to run.

Apologies to anyone else who has had difficulty extracting CoverDisk files.

Files and folders

I hope you can help me with a problem which I have with my 520STFM.

I can open files and folders but cannot put anything into them as the mouse will not change to the cursor.

I can make new folders but not put anything into them. Games are fine and I can copy and format OK.

B Proudfoot, Suffolk

I assume you are a new user and are having difficulty with what is termed

"dragging files". To put a file into a folder, you need to move the mouse pointer to the required icon or name of the file, then click and hold down the left mouse button.

You should then see a dotted outline of the icon or name appear, which you can then move with the mouse. Keeping the button held down, move the mouse pointer to the folder you wish to put the file in.

The folder icon or name should turn black, at which point you should release the mouse button. You should then be presented with the COPY FILE(S) instructions on the screen. Click on OK and the file will be copied to the folder.

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, take a deep breath, 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've 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.

Mad about Maddog

After receiving the computer program Maddog Williams, we find we cannot get the program to load Chapter 2, the Introduction and Chapter 1.

Is it something we are doing wrong or does the computer need an upgrade? We have a Atari 520STFM.

Mrs M Melling, Shropshire

After conferring with the omnipresent Biffa (staff writer extraordinaire in ST Users' Gamer section) it seems that Maddog Williams requires 1Mb to run.

Therefore you will need to upgrade your ST's memory with a RAM expansion board. Check out the adverts in this issue for a supplier.

F-16 Falcon flops

I have an Atari Mega STE with the TOS 2.05 operating system and I hope you can help me. I bought the flight simulator game Falcon from Spectrum

Holobyte and I'm having problems running it. The only way I get it to boot is to bypass the hard drive and boot off the floppy disk.

However, when the program is running, if I don't hurry through the setup, selecting name, armament, flight and so on, it freezes, the arrow cursor locks up and I am forced to reboot.

If I do make it to Flight and then exit to select any setups or options from the menu, the same thing will immediately occur.

I've contacted Spectrum Holobyte and they have sent me new disks and given advice such as removing all cartridges and setting different speeds (8MHz or

16MHz, no cache and so on). Please help.

K Korsgaard, Canada

After a good rummage through the *Gamer cupboard*, I managed to find both a copy of the original *Falcon* and a budget version from Action Sixteen.

I promptly trundled over to a Mega STE and tried to load it. Everything seemed OK up to selecting armaments. As soon as *Take Off* was selected I got the same problem as you.

After lots of experimenting with cache and speed settings, I am convinced that the game just is not compatible with TOS 2.05.

I have tried it on 1 and 4Mb STEs and it works fine. I suggest you contact Spectrum Holobyte again explaining that the game does not seem to be compatible with TOS 2.05.

They are a reputable company and will probably sort something out in the way of an alternative product or a refund.

Display dilemma

A couple of months ago I bought an Atari 520STE Discovery Xtra Pack. I am a complete novice and didn't even know about single and double sided drives.

While waiting for a Scart lead to be delivered, I had the computer connected to the aerial socket of my 14in Samsung portable TV and it was working quite well.

On connecting my Scart lead and using my language disk which came with the pack, the picture became bright and blurred and could not be focused - yet my friend's language disk gave a very good picture.

So, now I have some disks that can only be used with the Scart lead and some disks that only show with the aerial cable. Any suggestions?

J Lewis, Roxburghshire

The only ways in which a program on a disk can change the display on your monitor or TV is by either changing the scan rate from 50Hz to 60Hz or by a control program such as Atari's CONTROLACC which sets the initial colours of the ST's Desktop.

The scan rate change program may result in an unstable picture if your monitor is not capable of operating at this speed. However, the language disk that comes with your Discovery Pack should not change the scan rate.

I suggest you use a normal disk to get to the ST's Desktop and then put the disk that's causing the problem into the drive. Look for a folder called AUTO

Converting from Amiga to Atari STE

Please could you tell me what is involved in converting an Amiga game to an Atari STE version? Is it just a case of importing the Amiga assembler source code over to the ST and converting the picture and sprite files into an ST acceptable form?

I program the STE and probably could make any minor adjustments to source code.

Gavis Longeraft-Wheaton, Hampshire

Converting a game from one computer to another is, I'm afraid, not a simple task. Converting sprites

and pictures wouldn't be too difficult but the main code would be written to take full advantage of the hardware only found in the Amiga and the same code that calls the Amiga hardware would have to be totally re-written for the ST.

Of course, converting a game written on one computer is a lot easier than actually writing a game from scratch because the basic data structures and algorithms would have already been designed.

But merely porting the source code from one machine to the other and expecting minor adjustments are all that are required to make the game

run is not realistic.

For example, there will be instances where certain routines that use hardware found in the Amiga will require custom software alternatives to be written for the ST.

An example would be that the Amiga may scroll the background using its specific hardware scrolling ability, whereas the ST would have to have to scroll the background entirely through software means.

Of course the STE machines have hardware scrolling but it will not be accessed in the same way as the Amiga so the code will have to be rewritten to use it.

and see what's inside it. Look for a file like *SO_60HZ.PRG* or something similar and change its name to *SO_60HZ.PRX* (or you could simply delete it).

Alternatively, the CONTROLACC on your language disk may be causing the problem. This program loads automatically when you boot the disk and enables you to change the colours of the ST's Desktop to your own preferences.

Any changes to the colours are saved to disk so that when you reboot the ST with the same disk, the Desktop takes on the new colours.

Obviously, some colour arrangements are not very suitable. As an extreme example, black writing on a black background is not very visible.

Also, some TV displays do not like blue text and may seem blurred. I suggest that you use the CONTROLACC and alter the colour slider bars until you get a decent picture.



now on the phone to Dacom and will soon have his modem up and running.

Midi formats answered

My problem is that I am trying to get into Midi music but while hearing all about standard Midi format, I can not find any information on what this format is.

Basically, I would like to find out what is saved and in what order, and so on. If you could let me have details, or point me in the right direction (books?) I would be most grateful.

J Bishop, Lincolnshire

Not being very expert in the Midi field, I'll turn this one over to our Midi guru, Ian Waugh. Take it away Ian...

All programs - sequencers included - save their data in their own special format. This allows them to incorporate specialised data which other similar programs may not support.

This may be a notepad area, lyrics, extended track names and so on. However, this does not make each program's files incompatible with those from other programs.

The Midi File Standard was devel-

oped to allow music to be ported from one sequencer to another, even to a sequencer on another computer.

It allows people to create off-the-shelf arrangements which can be loaded into any sequencer which supports Standard Midi files.

There are three formats - 0, 1 and 2. Format 0 saves all the Midi channels on one track. This format is most commonly used by Midi Data files such as Yamaha's MDF2.

It's a good format for simply playing back files, but unless you separate the Midi channels, it's not easy to edit.

Some sequencers have a de-mix by channel function which helps if you want to edit Format 0 files.

Format 1 has separate Midi channels on separate tracks, which makes it easy to edit. This is the most common computer-based sequencer format and the one used by most Midi file producers.

Format 2 allows each track to be completely independent of the others. It's rarely supported by anything and not worth worrying about.

As with all "standards", there are anomalies between sequencers, particularly with some budget programs or early versions of sequencers.

Some may refuse to load a file if it contains an item of data it doesn't recognise. Others will load it but ignore unrecognised data.

One problem is the recognition of tempo data. Unbelievable as it may sound, this is not a mandatory part of the Standard Midi File specification. Consequently, not all sequencers will load tempo change instructions.

That's the essentials. If you want to know which bits and bytes go where, you need a detailed copy of the spec. Contact UKMA on 081-368 3667.

If you want to know more about Midi, one of the best and cheapest books is *What's MIDI?* which is £5.50 incl p&p from Making Music on 071-251 2622.

Manual help

In response to M Blurton's request for information on the Datacom DSL modem, the model in question could be a Dacom DSL 12123AD - the number refers to the speeds supported (v21/v23).

If this is indeed the case, then further advice can be obtained from the following address - Dacom Systems Ltd, Sunrise Parkway, Linford Wood, Milton Keynes MK14 6LU, tel 0908 322322.

W Michael, Suffolk

I knew someone would be able to help. It's gratifying that we have such a helpful and knowledgeable readership out there.

Many thanks for your help Mr Carmichael. I'm sure Mr Blurton is by

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ADV 01 DDST, DUNGEONS & DRAGONS, Role playing adventure. PARANOIA, ENCHANTED REALM and ELBOZO CITY. 3 more good adventures also on this disk.

ARC 50 HACMAN, superb pacman clone. MR PACKY, another super pacman. SOCCER brilliant 3D football game 2 players. MUTANT WIPEOUT aniel shoot em up. INVADERS needs no description.

BRD 04 CHESS, superb chess game. DECODER, excellent mastermind. SUPER SIMON, computer version of hand held game. DOMINOES, puzzle game. GOLF card game. Also on this disk DRAGON MAZE. 2 game. SENSORI BACKGAMMON, BRIDGIT, ST ARTREK, BATTLESHIPS.

ARC 14 HOME, and L'ORB 2 super pinball games. GALTIC RANGER, unusual shoot em up. MONKIES & BALLOONS, bounce the clown and burst the balloons. FIRESTORM, another good arcade game rescue the humans. LAZERBAL, super game and interesting version on the pinball theme. Also on this disk LOST TREASURE, WIDOW MAKER, SLALOM & BREAK OUT.

AST 01 PLANETARIUM simply the best PD Astronomy program. SKYMAP another great Astronomy program plus aStronomer.

BRD01 MONOPOLY, LAZERCHESN, OTHELLO, CHECKERS, WHEEL OF FORTUNE and more. A superb collection of BOARD GAMES.

WPR01 ST WRITER V4.2 and FIRSTWORD. The best word processors for the ST(IE) plus a spell checker, print spooler and a selection of ready to use letters.

ODD07 THE WORLD OF STARTREK. Over 300K of text interviews and biographies from the original STARTREK and NEXT GENERATION plus loads of

pictures from both series. A must for all TREKKIES!!!

ARC04 TETRIS, superb Tetris game. KLAX TRIX, WELTRIS & TETSID, 3 more good games on the Tetris theme. MR DICE, COLLAPSE & BURGER, 3 more good games to fill this super value disk.

WPR02 IDEALIST, Super multi column text printer. EX COLUMN, DUAL COLUMN, 2 COLUMN. 3 more good multi column text printers. DOUBLE PAGE. Print 2 pages at once on A4 on your SLM 804.

WPR03 ALICE, Super text editor up to 10 docs. In memory at once. EDITEXT, Super little text editor. Ideal for beginners. NEWORD 400v3. Easy to use text editor, again good for beginners. NOTEPAD. Make temporary notes from within any gem program. PHONEPAD. Pop up telephone book. FLOFAX and ORGANISER. Everything a paper filofax would have and much more in these two programs. TYPEWRITE - Turn your ST into a typewriter.

WPR09 LEXICON. A pure word list containing 46,209 words without slang, americanisms or other rubbish. Needs 1Mb to run with SPELLONE (spellchecker) also provided on this disk.

ART01 ARTUTOR. For budding artist. Includes its own package.

BRD05 AMERICAN FOOTBALL. DALEKS. START REK. DELTA 3. CELESTIAL CEASERS (versions 1 and 2). SPACE WARS. RED ALERT. MATCH. HANOI. OGRE. 11 Board and Strategy Games. SPLENDID SELECTION!!

ARC12 BELUM INTERACTUM - Good galaxians like game. BLOCKADE. HAUNTED HOUSE. AMORTRACK. BOING. INVADERS. MANIA. Another superb selection of arcade games.

ARC13 VIOLENCE. Superb scrolling shoot em DROID - Excellent platform game.

ADV03 CONQUEST. Graphic adventure. Should take weeks to complete! (Shareware).

ADV06 BLACKDWN. Good text adventure with excellent graphics. DUNGEON MASTER NEW LEVELS. Needs original DM disk to play.

UTL73 GEMCALC. Best German spreadsheet now translated to English. Both 0.5 and 1Mb versions.

UTL134 SAGROTAN. Must be the best virus killer around. V.KILLER v3.84. Another excellent virus killer. EXORCIST. The latest version of this V.Killer. HD RESTORE. Repairs hard drive boot sector. RIPPER and PROBE. Two programs to grab music and graphics from disks and more...

UTL139 DESK PACK PLUS. This superb integrated accessory tool has now been released as Shareware. GET IT!! DOSS ACC v2.8 + THE ACC - Super multi function accessories. M DISK v4.3. Multi function ramdisk, disk copy, hard disk, cache and more. NEWBELL and SIREN.

UTL120 ZX SPECTRUM EMULATOR. Needs 1Mb SPECTRUM to ST DOWNLOADER. Gives details on how to transfer Spectrum games from tape to disk for the above emulator. ZX81 EMULATOR and 89 PROGRAMS.

ARC15 CYBERTECHNICS Fast & furious arcade game. CRAZY ERBERT fast Q'bert clone. SLUG to fill the disk.

BRD09 MILE Excellent board game. D FISSION. Super Othello type game. TUNNEL VISION Excellent maze game. 3 jigsaw puzzle games. ST TIC TAC TOE, HIGH-LOW, BLACKJACK and more on this disk.

BRD12 TOWER POWER Super strategy game runs on 512K, 1Mb and 2Mb machine. Optional data disk available as BRD13.

ARC37 LLAMATRON and REVENGE OF THE MUTANT CAMELS. 2 superb games from Jeff Minter. These are a must for any game collection.

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Mini Jumble

Programmed by: Shoestring Software
Available from: Most PD libraries

Shoestring Software are one of the most prolific software groups, producing some very good educational programs.

Their latest release, Mini Jumble, is another example of the quality of their current range of licenceware products.

The object of the game is to make as many words as possible from a randomly chosen set of nine letters within a specified time limit.

After the limit has expired, the words entered are checked to see if

they are valid and to whether they have been entered twice. Also, Mini Jumble has an extensive dictionary of 1,000 words from which to check your entries.

There are two levels of difficulty as well as three time limits to choose from (one, three and five minutes).

The idea is very simple, yet it's one of those games that has you coming back to get your name at the top of the high score table. It has all the elements found in that TV game show - Countdown - where the contestants keep asking Carol Vorderman for consonants and vowels and then have to make up a word from them.

I recommend this to anyone who enjoys a good word challenge.



It's a frantic race against the clock to think of as many words as you can



Choose the difficulty level and the time limit, then off you go

bonus boxes with different rewards for each one. Some have bonus points (up to a maximum of 9,000) and some have sub games such as Super Snatch. When the spacebar is pressed, the rapidly moving light eventually stops on one of the boxes and the reward in that box is your prize.

This is a brilliant game, one which kept me coming back for more. Those who manage to get a decent score have the chance of getting their names on the high score table, but be warned that a minimum score of 10,000 points is required.

There are a 1,000 questions of a general knowledge nature, so it should keep you occupied for ages.

MT Software are alive and kicking

Contrary to rumours that seem to be finding their way to PD punters that MT Software are to close down, proprietor Mark Thompson would like to assure everyone that this simply isn't the case.

Mark was totally surprised by the rumours and was unsure as to why and where they originated. So, if you are a MT Software customer, fear not.

Expansion and improvement are the order of the day at the MT Software stable.

Shoestring Software authorised PD distributors

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- ST Club, 2 Broadway (Dept STU), Nottingham NG1 1PS. Tel: 0602 410241
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Colour Clash

Programmed by: Animal Soft
Available from: Animal Soft

Colour Clash is a puzzle game that is not like the usual PD puzzle games are merely re-hashes of older ideas. The idea is quite original and fiendishly puzzling.

The story goes thus - Antonio, the friendly Chameleon and star of the game, is the subject of scientific interest sourced from one mad professor.

This professor decides to conduct an experiment to test the endurance of our hapless hero, so he decides to subject Antonio to an obstacle course in which he must make his way out.

Now Antonio is none too pleased about being taken out of his cage and placed in a maze of obstacles. This displeasure is mainly due to that fact that he was involved in intimate acts that only male chameleons and female chameleons get up to.

So, fuelled by the desire for revenge for the mad professor's interruption, he will require your assistance in guiding him out of the obstacle course.

Now most of you will realise that chameleons are good at changing colour and changing colour in this game gives Antonio various abilities.

When yellow, Antonio can jump, when blue, he can move blocks using his sticky tongue, when green, he can destroy other creatures and blocks with his tail and when red, he can inflate himself, enabling him to float.

To complete the various levels of the obstacle course, Antonio must eat all of the flies on the level. However, some of the flies are in awkward places and will involve Antonio changing colour to reach them.

Unfortunately, Antonio can't change colour until he eats the appropriately coloured block.

This is the crux of this excellent puzzle game. The skill lies in planning your route to the various coloured blocks and flies and to ensure that you use Antonio's abilities in the correct order to reach all of the flies.

I was playing this game for hours and almost forgot that I was supposed to be writing these PD pages before the day was out. The game is shareware and for the measly sum of £5 (along with the disks required for copying the game onto) you will get one of the four other Animal Soft games. I rate this as one of the most

addictive shareware games I have yet played and those who like the puzzling fun that games such as Lemmings provides should send off for this straight away.



One of the many fiendishly puzzling levels that Antonio is faced with. Can you solve it?

Where to get 'em

- Wizard PD (Dept STU), 178 Waverley Road, Reading RG3 2PZ. Tel: 0734 574685
- Animal Soft (Dept STU), Rubensstraat 54, 1077 MT, Amsterdam, The Netherlands
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Atari ST User here gives you the most thorough comparison of the Falcon and A1200 yet seen.

The real ace up Atari's sleeve is the Motorola 56001 Digital Signal Processor, otherwise known as the DSP. This single chip, as its name implies, takes digital signals and processes them.

"So what?" you may ask. Well it does this at horrendous speed (32MHz) and, more importantly, both graphics and sound are stored in the computer as digital information.

This means the

Falcon has a custom processor that can process the data of your games and applications at rapid pace.

Even better, it is a DMA-based processor which means it reads and writes directly to memory without processor intervention, making it faster still.

With this DSP the Falcon can do some truly amazing things, particularly with sound.

Custom processors are one of the reasons the Amiga's graphics and sound were so superior. But the Falcon's DSP is far better than the Amiga's three graphics processors and Commodore have been criticised for not including one in the A1200.

In fact many industry experts believe that by the end of the year Commodore

Atari phone

Over the last year Atari have had a pretty rough time. The industry decided STs were no longer fashionable, while coming to the conclusion that the Amiga was the Cindy Crawford of the home computer market.

Almost everything the manufacturer did was seen, rightly or wrongly, as a failure or mistake. Now it seems that the once dominant Atari has put all its eggs in one basket.

If Atari is even to survive, these eggs must hatch not just a dumb little Sparrow, but a sleek, fast elegant bird of prey - a Falcon.

So far, from the initial hype coming from Atari's PR machine, it seems that its next generation computer will actually be such a beast.

Unfortunately a Cuckoo has landed in Atari's nest. The Commodore A1200, while nowhere near as pretty or powerful, is already in the nest and quickly throwing Atari's eggs and future out with the trash.

Atari's baby Falcon is however hatch-

ing and, as can be seen from the details here, is about to give the Commodore Cuckoo a real fright.

Both systems have several design elements in common and both have been projected by their respective manufacturers as the next generation of home computers.

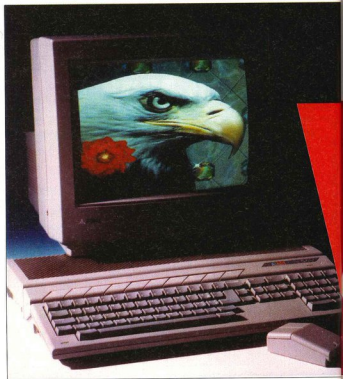
Multimedia

Both are 32-bit engines, that is instead of their predecessors which only move 16-bits of information around at once, the Falcon and A1200 move 32 bits of data around.

Both have been projected as ideal multimedia engines, the Amiga with its powerful graphics capabilities and the Falcon with its unique DSP.

Which system will end up as king of the nest? Over the last couple of days I've discussed the various technical merits of both systems with many of the market's high-fliers and come up with an interesting answer.

So dispensing - and not before time - with the egg, nest and cuckoo analogy,

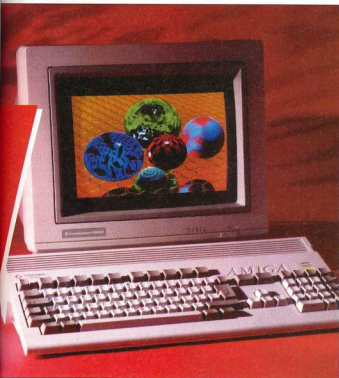


will try and catch up by announcing an upgrade card for the A1200.

Next is the Falcon's SCSI-2 ports. SCSI is the acronym for Small Computer Systems Interface and allows various computer peripherals to be attached eas-

It could be make or break for Atari as the Falcon finally hits the shops. Rob Douglas takes a close look at what it's up against

Atari's Amiga mix?



ily. More importantly it is very popular because of its speed.

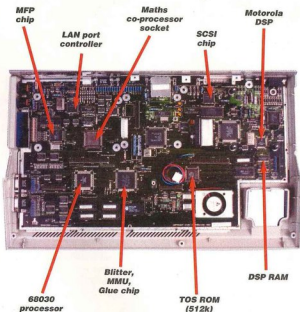
And unlike the A1200's IDE interface, the Falcon's SCSIs can be used for far more than just hard drive connection. Commodore undoubtedly chose IDE over SCSI for cost considerations. But Atari's choice of SCSI-2 ensures that the Falcon will have a wide range of power peripherals – scanners, networks, tape streams and so on – rather than just a couple of hard drives.

It won't be long before SCSI is available for the A1200 but it will be sold as an add-on, slowly increasing the A1200's price.

Although Commodore's inclusion of a PCMCIA slot is a very smart move, most of the hardware developers I spoke to would rather have seen a Falcon-style SCSI-2.

Another interface bound to aid the Falcon's immediate acceptance over the Atari are the Midi interfaces.

When Atari originally announced the ST with Midi interfaces it was pro-



It's all in the processor

Both the A1200 and the Falcon, like their predecessors, are based around Motorola processors. But the Falcon uses the 68030, while the A1200 uses the 68020 – although it can be upgraded easily.

The difference is subtle but important. Not only does the Falcon's processor running at 16MHz seem faster numerically than the A1200's 14MHz, it is also considerably more powerful – a fact which the numeric names and processing speed belie to some extent.

In fact the 68030 is a truly powerful beast. Compared to the 68020 it has a larger instruction cache – an area of high speed RAM onboard the processor which means it won't have to wait while instructions are pulled in from normal RAM – more instructions and built-in memory management.

Stomping

This last feature is particularly important for multitasking applications, which the Falcon will apparently support.

Anyone who's ever used one of the existing multitasking environments (AmigaDOS or Windows) will know that while they offer significant advantages they also have a major drawback.

This is that unless the processor you are using limits the physical area of memory that an application can read and write from, the potential exists for a "run away" program – that's one that's gone seriously wrong – to go around stomping over all the other programs and data, including the operating system.

In such a circumstance, the operating system has no chance of recovering and gaining control, and the end result is that your system usually crashes and you lose all your work.

With a memory management processor however – which the Falcon has in the 68030 – each application can be limited to a particular area of memory, and it can't go outside this area.

Even if it crashes, you should only lose the application and data that crashed. Everything else in memory will be OK!

On lower-end PCs and Amigas which don't have this facility you'll lose the lot.

claimed as a stroke of genius, making the ST the default computer for the music industry and selling quite a few STs as a result.

With the same interfaces on the Falcon – and still none on the Amiga – it is set to become the new computer for the music industry.

Resolution and colour palettes are two areas where the Falcon does perhaps miss out.

The much-hyped AGA chipset of the A1200 and A4000 does, by any comparison, provide graphically oriented users with an eyeful of colour.

With a 24-bit colour palette (16,777,216 colours) to choose from when displaying its 256 colour screens, the A1200 is a pretty stunning creature.

On a definitely positive note, the A1200's sound has undergone no improvement over its relatives. The Falcon however now has 16-bit DMA sound input and output. What this

means in real terms is that it can sample studio quality sound directly, save it to disk or memory in real time and replay it without loss of quality.

This kind of sound reproduction is a major step forward and will allow games creators to produce some phenomenal sounding games.

Voice control

And serious applications – in conjunction with the DSP – will be able to handle real-time voice control and speak back to you! This kind of thing is, of course, some way off but the possibility now exists.

So that rounds up the technical comparison. The Falcon is obviously far superior in many ways and to upgrade the A1200 to equal specification will probably increase its price to well above that of Falcons.

But Commodore are quick to point out that while their system is not as technically advanced, they have a far superior edge from a marketing perspec-

tive which will make all the difference.

However, Commodore seem to have forgotten their own past. Way back in the 80s, two companies were in a very similar position – we'll call them company A and company B.

Both had radical new technologies, but A was far advanced compared to B, and more expensive by a not inconsiderable amount.

B, the lesser, got the lead on its competitor, shipped early and for a while had a distinct lead. However, over a period of time the public began to realise that A was better and given its higher price which exaggerated this belief even further, model A became the computer teenagers aspired to.

Slowly A overtook B until the current situation was reached in which we see A as the Amiga now outselling B which is the ST.

Move on a few years and A is the Falcon, B is the A1200. It's exactly the same and I see the same happening again. The A1200 may outsell the Falcon

initially, but given time people will realise that the Falcon is better.

The higher price will reinforce this (you pay for what you get) and eventually the Falcon will become the clear market leader and Atari along with it.

Situations will reverse and Atari will ride once again with Commodore struggling to survive. Of course this is all a long, long way off, and pretty much hypothetical. But it's easy to see it happening and even better, the outcome lies in your hands.

Well, that's it. You've seen the specs and the Falcon is better than anything else, and history may well end up repeating itself.

The only question remaining is – do you wait, follow everyone else and spend your life being a Lemming, or do you take a chance, buy a Falcon, lead the crowd and be able to say that you were one of the first to buy the future of computing?

Me? I'm off down the shops!

How the Falcon can show the PCs the way home

In comparison with the ST market, the PC market is huge. Really, really big. Atari have even tried to muscle in on it, with their ill-fated PC-1 and ABC home computers.

They never actually made it however, and perhaps wisely, decided to stick with the technology they knew and understood – low cost, powerful, graphics-based home computers.

However that left us humble ST users with a difficult question that we are frequently asked by our PC owning friends – "prove your ST is better than my PC."

With the advent of the Falcon, this age old question is likely to once again come up. This time however, it's a battle of the giants.

PC compatibles, just like the Falcon, have come a long way since their relatives were first compared to the ST many years ago.

Today's PC – and the one the Falcon will be up against for the time being – is based on an Intel 80486 32-bit processor, typically has between two and four megabytes of RAM, a hard drive with a capacity in excess of 100Mb and a multisync monitor!

Easy

Furthermore, with the use of Microsoft's much loved and hated Windows operating environment, graphics cards and hardware Windows accelerators, modern PCs are now as easy to use as the ST and Falcon.

The Motorola 16MHz 68030 – the heart of Atari's much hyped super-power Falcon – certainly cannot compete on raw processing terms with the average 486 PC. These typically have higher clock speeds, starting at 25MHz, and climbing to 50MHz!

The Motorola 68030 and its bigger brother the 68040 are, however, just as capable as the Intel chips and certainly as fast – the decision by Atari to limit the employed 68030 to just 16MHz was almost certainly a cost one, in an attempt to keep the Falcon's price as low as possible.

Given time, there is now reason why we shouldn't see a much, much faster

Falcon. The Falcon's co-processors will, however, make a significant difference. On STs and Amigas, the concept of having co-processors (video, sound and so on) talking directly to the main processor, rather than waiting in turn with all the other information, has been common place from the early days.

In the PC world, this is only just starting to become common – "local bus" video cards, as they are known, have only started appearing in the last year or so.

As such Atari's engineers, with their long background in this technology, have had a lead on their opposites in the PC sector. The result is that the new Falcon doesn't just have video processors, but also DMA access for hard drives (enabling direct-to-disk recording for music and so on), the hallowed DSP and sound processors.

The combination of these co-processors will give the Atari Falcon a considerable lead in many areas and undoubtedly make up for much of the loss in processing speed.

Argument

At the end of the day however, the PC argument has always been one of price. While no one doubted that STs were considerably cheaper and possibly better value, few really considered them as flexible as PCs.

Sure the ST had several specialist areas where it walked all over competition (DTP, wordprocessing and so on) but as a general workhorse the PC had more going for it.

With the Falcon, Atari have a product that has a better price than a typical 486 model and yet is considerably more powerful, more flexible and more suitable for the graphics and sound-intensive applications that are now appearing.

The Falcon is finally a system that we as Atari owners can proudly point to when talking to PC users and confidently say "can you do this or this, or even this?" – the list is endless, as will be their disbelief when you tell them the price!

Atari do finally have a non-PC that is better than a PC!



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General Midi is taking command

Music knows no boundaries... if you've got Midi gear compatible with the new GM standard, that is. Ian Waugh demystifies a revolution in the Midi format

You've sweated blood and tears to create your latest masterpiece.

You've carefully set up the sequencer tracks and inserted program changes and control information to match your Roland D-Doobrey synth.

You send the disk off to your friend to await his praise and adoration. He loads it into his sequencer and plays it back through his Yamaha SY-Doobrey synth. What an 'orrible noise!

The trouble is, although all synths respond to program change messages, they select different sounds on different instruments. Program Change 17 may select a piano on one instrument, a flute on another and a synth pad on a third.

At least that used to be the situation. Over the past year or so, GM - General Midi - has been growing in popularity and has attracted the support of many major musical instrument manufacturers.

Essentially, GM specifies which sounds should respond to which Program Change numbers, so a piece of

music configured to play on one GM instrument will sound the same when played on another GM machine.

The full spec actually details what the sounds should sound like - there are many different types of "piano" and "organ", for example, to further ensure conformity between instruments. Drums are always on Midi channel 10.

Just to add a little confusion to the issue, when the GM spec was being discussed, Roland launched an instrument

called the Sound Canvas which they labelled GS which actually proved to be a superset of the GM spec. The differences are significant but not great enough to cause the average user any undue concern.

GM works with a palette of 128 sounds which are divided into 16 categories. GS allows for additional tones or variations so you can have more shades of instrument in each of the 16 categories.

However, if a GM/GS instrument does not have the additional sounds, it will fall back up to the nearest one. While this may not be exactly what the arranger had in mind, it does ensure maximum compatibility across the greatest number of instruments.

GS also has extra control messages for reverb and chorus. There's a GS reset command which will reset a GS instrument. Sending a GM reset command puts it into GM mode where it will ignore any reverb and chorus instructions.

Roland started the ball rolling with



Drum tracks need to be set up as well as instrumental tracks. Notator can display notes in drum notation form and list the drum names in the Event editor



A typical GM track list. The first track contains tempo data and the other tracks are named according to the GM instrument they are set to play

the SC-55 Sound Canvas to which has recently been added the SC-155 Sound Canvas and Dr Synth from Boss.

Yamaha's TG-100 is a GM instrument and Korg's 03R/W is GM-compatible.

The establishment of a set of standard sounds - some ten years after Midi itself went to the drawing board - finally means that Midi files can be truly universal. GM/GS has given rise to a booming market in third-party Midi files.

You can now buy a wide range of music in Midi file format which will load into virtually any sequencer and play as the arranger intended through a GM or GS sound module.

Some musicians use arrangements of pop songs as backing tracks for live use although I suspect the majority of Midi

How to use General Midi

Unlike synthesizers which have a mode for using just one sound and another mode for using several sounds (often called a Multi or a Performance), GM instruments are constantly in a type of multi mode.

They are set up to receive data on all 16 Midi channels. To select a sound, you simply send the required Program Change number on the Midi channel you want it to play on.

Unlike some multi modes, this means that you cannot play more than one sound on one Midi channel (although it's easy to duplicate tracks and play them on different channels in a sequencer).

To assign sounds to tracks in your sequencer, you simply insert a Program Change number at the beginning of each track. Some sequencers let you do

this from the track list, with others you will need to enter Program Changes in the Edit page.

It's also worth using the Pan instruction to place the instruments at different positions in the stereo field. You might also like to include Controller 121 to ensure the music has a "clean start".

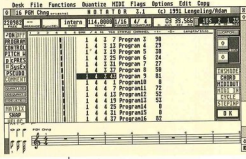
If you decide to transpose any part of a song, remember that the drums are on Midi channel ten - you don't want to transpose them. Some sequencers let you disable transpose on certain Midi channels or tracks. Use this to ensure that the drums play correctly.

If you have many control instructions, it's a good idea to insert them in an empty bar before the music proper begins.

A few de facto practices have been adopted by some arrangers such as

using a separate track for program change information, naming the tracks according to the sound used and restricting the name to eight characters (a limitation imposed by some sequencers), using a separate track for tempo information and having only one program change per Midi channel (although not all arrangers follow this).

Some arrangers also try to restrict the total number of tracks to 16 on the assumption that this is the maximum some sequencers can handle, although virtually all current sequencers can handle more than 16 tracks.

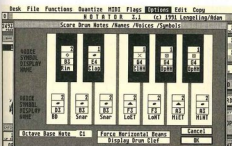


Some Midi file arrangers put all Program Change information on one track

General Midi sound groups

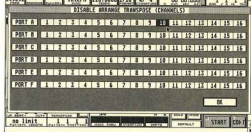
General Midi divides its 128 sounds into 16 sound groups. The numbers are the range of program change numbers which select the sounds.

1-8 Piano	41-48 Strings	89-96 Synth Pad
9-16 Chromatic percussion	49-56 Ensemble	97-104 Synth Effects
17-24 Organ	57-64 Brass	105-112 Ethnic
25-32 Guitar	65-72 Reed	113-120 Percussive
33-40 Bass	73-80 Pipe	121-128 Sound Effects
	81-88 Synth Lead	



Some sequencers let you disable transpose on certain MIDI channels which prevents drum tracks being transposed out of whack!

Some sequencers (Notator is shown here) can display drum hits in proper drum notation form, no matter what the actual notes may be



General Midi drum map

Most modern synthesizers (not just GM/GS ones) have at least one drum voice. When selected, each key on the keyboard plays a different drum sound.

These sounds are actually assigned to different MIDI note numbers and can be played from a sequencer via MIDI in exactly the same way as a normal voice.

The following is a list of General MIDI drum sounds and the MIDI note numbers they are assigned to. Collectively they are known as a drum map. Some instruments have more drum sounds than those listed here.

35 Acoustic Bass Drum	51 Ride Cymbal 1	67 High Agogo
36 Bass Drum 1	52 Chinese Cymbal	68 Low Agogo
37 Side Stick	53 Ride Bell	69 Cabasa
38 Snare Drum	54 Tambourine	70 Maracas
39 Hand Clap	55 Splash Cymbal	71 Short Whistle
40 Electric Snare	56 Cowbell	72 Long Whistle
41 Low Floor Tom	57 Crash Cymbal 2	73 Short Guiro
42 Closed Hi Hat	58 Vibraslap	74 Long Guiro
43 High Floor Tom	59 Ride Cymbal 2	75 Claves
44 Hi Hat	60 High Bongo	76 High Wood Block
45 Low Tom	61 Low Bongo	77 Low Wood Block
46 Open Hi Hat	62 Mute High Conga	78 Mute Cuica
47 Low Mid Tom	63 Open High Conga	79 Open Cuica
48 High Mid Tom	64 Low Conga	80 Mute Triangle
49 Crash Cymbal 1	65 High Timbale	81 Open Triangle
50 High Tom	66 Low Timbale	

file buyers simply play the files for their own amusement, trying different sounds and so on – you can't do that with a CD!

You can also buy files containing drum patterns. These are very useful as even the most gifted melody writers are not necessarily drummers. Mapped to a

GM drum map, these patterns can easily be edited to fit your own material.

In practice most arrangers seem to map to GS rather than GM although the majority do not use an awful lot of GS specific data. Most off-the-shelf MIDI files will play perfectly on GS and GM instruments.

GM has prized open the world of MIDI. Anyone of limited musical ability and even with limited MIDI knowledge can buy a GM MIDI file, load it into their sequencer and play it.

Originally intended as a consumer option, GM is also being used by professional manufacturers. Already some manufacturers are putting a GM drum map on certain instruments. It's a good start but hopefully more manufacturers will begin to include a full GM mode.

GMX-1 - the Roland beater?

The GMX-1 is the cheapest GM-compatible instrument to hit the market so far. It would have been even cheaper – around £235 – had not Messrs Major and Lamont forced the pound into devaluation.

It has a Walkman-type headphone socket on the front along with a sliding volume control. The Power On light flashes to indicate the reception of MIDI data.

On the back are stereo phono Outs, MIDI In, Out and Thru sockets, an RS232 socket and a power input. A 9V adapter is supplied.

It's a few-frills unit although the RS232 serial port allows direct connection to a PC, Mac or Amiga which immediately saves a prospective newcomer £70 or more on the cost of a separate MIDI interface. ST users don't need this facility, of course.

The GMX-1 uses PCM sounds. It's

20-note polyphonic and 16-part multitimbral. It has the basic set of 128 GM sounds plus 59 sound variations and 38 sound effects.

It has a standard GM drum kit plus Room, Power, Brush and Orchestral sets. The Standard kit has 14 sounds in addition to the standard 47 GM ones. The unit also has an MT-32 compatibility mode.

The polyphony of some GM instruments has caused confusion. Whereas some instruments claim a 24-note (or 24-voice) polyphony, some sounds actually use two or more voices so selecting these will obviously reduce the overall polyphony of the instrument. The GMX-1 is fully 20-note polyphonic.

Documentation is sparse and not particularly helpful to beginners. For example, the instructions which tell you how to access the variations are in a footnote and it's really not clear how to access MT-32 mode.

However, if you want a GM-compatible module mainly so you can play GM files, you're unlikely to want to mess with the unit very much.

Inevitably, comparisons will be made with the Roland Sound Canvas.

In an A-B comparison, the Canvas does have better sounds – but then it is about twice the price. The GMX-1 has no reverb (which can greatly enhance sounds) and you can't edit the sounds.

However, nice though this option is, few MIDI file arrangers actually define their own sounds as that would definitely limit their usefulness to GS instruments.

The GMX-1 is an excellent value-for-money unit for anyone on a budget wishing to play and create GM files.

BOTTOM LINE

FEATURES	Excellent
It has all the basic GM sounds and features – plus a few more.	Good
EASE OF USE	Excellent
If you're using it with third-party GM files you can simply plug it in and go. The instructions could be more helpful for the beginner.	Good
VALUE FOR MONEY	Excellent
The cheapest GM-compatible synth module on the market so far.	Good

General Midi controllers

Controller messages are used to change various synthesizer controls and parameters. Most of those adopted by GM were already in use and control messages should not upset any other synth. The following are the most common Controller messages.

- 1 Modulation
- 7 Volume
- 10 Pan
- 11 Expression
- 64 Sustain
- 121 Reset All Controllers
- 123 All Notes Off

Product: GMX-1
Supplier: Zone Distribution,
 Unit 70 Eurolink Centre,
 49 Effra Road, London SW2 1BZ
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Configuration: All ST/STE models,
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X marks the boot

Remember the old saying about getting out of the wrong side of bed in the morning? It all boils down to the fact that if you start the day badly, it'll only get worse. I don't know about you but it certainly seems to work with me. And the same thing can happen when you boot up your ST.

In the days before I discovered booting utilities, I'd switch on my machine and watch it load half a dozen AUTO programs and accessories I didn't need.

Then I'd find that the accessory I really needed hadn't been installed. The only way out was to spend five unproductive minutes renaming various files, followed by a frustrating reboot.

XBoot was designed to get over all this misery by making the job of booting up your ST as pleasant and as painless as possible. It stops the booting up process half-way and offers you the choice of which programs or accessories you want installed rather than just trying to load anything it finds in the AUTO folder or root directory.

It also lets you start up any application you like without ever seeing the GEM Desktop, choose which .INF files to use for the Desktop or any other program, and choose which ASSIGN.SYS file you want a GDOS program to use.

If you had to make these choices every day, you wouldn't be saving much time, so you can save different configurations of programs and accessories as "sets" and name them any way you like. To recall them, all you do is point and click.



What a way to start the day!

You can create a default set for every day use that installs your favourite accessories and AUTO programs and arranges the GEM Desktop in a certain way.

You can also create other sets for special purposes - you may use a DTP program with very few accessories to keep as much RAM free as possible or you might want a different configuration for graphics programs (a snapshot or picture viewer accessory, for example). Another

Andrew Wright tests XBoot 3, a bootup utility with its own graphical interface

idea is to keep a set of DESKTOP.INF and NEWDESK.INF files for different purposes - one with a RAM disk icon and another to automatically open floppy disk drive windows if you're going to be using floppies.

XBoot3 is supplied on a single floppy disk with a smart 56-page manual. There are only three small files on the disk, one of which automatically copies the main program to first position in your AUTO folder.

The third is only required if you're using TOS 1.2 or earlier - it lets you auto-load programs without going to the Desktop.

Boot partition

Once it's installed, a reboot produces the opening screen. It searches your boot partition and lists on-screen all the AUTO programs (PR?) and accessories (.AC?) it can find.

All this has been done before by shareware programs like Superboot and Mouseboot but it's the way that XBoot does it that pushes it a head and shoulders above the others.

The whole program is mouse driven with a custom-designed graphical interface.

It is aimed at hard disk owners, incidentally, and though it will work on floppy disk-based systems, there are far fewer advantages. The XBoot screen comprises eight windows, one for AUTO

programs, one for desk accessories, one for control panel extensions and one for the different sets.

If there are more than will fit, scroll bars appear, but you're unlikely to reach the limit - 100 each of AUTO programs, accessories and sets. If you do, your system is seriously overloaded!

There are also ten icons on the right-hand side of the screen from which you can access various other commands. The next step is to define a set - select the new set icon and type in a name.

Then you use the mouse to select the programs and accessories you want, as well as things like DESKTOP.INF or ASSIGN.SYS files.

You can keep all these in a separate folder, if you like, and when they're needed the program copies them into the root directory.

Having done all this, the set can be saved for future use. Now if you need that configuration again, a mouse click is all that's required.

You can do a few other things too like alter the order of execution of programs in the AUTO folder (some can be placed before XBoot if necessary).

The toolbox icon conceals a pop-up menu which offers the custom file selector and the parameter screen which lets you alter the data format, paths to various file types (accessories can now be stored somewhere else, not just in the root directory) and the speed



of themouse.

You can password protect your system and skip XBoot for quick reboots if necessary by holding down user-defined hot keys. There's also a help screen if you get confused and an UNDO command if you mess something up.

The batch commands are another powerful feature - using several standard commands you can create a small batch program to delete, move and rename files, create directories and even check that particular drives exist.

Each set can have a batch file attached to it - it is particularly useful automatically copying files into RAM

BOTTOM LINE

FEATURES

All you could need - the only way to start the day.

Excellent
 Good
 Average
 Bad
 Repalling

EASE OF USE

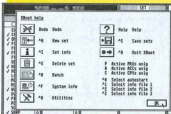
XBoot is fully mouse-driven and supplied with a good manual.

Excellent
 Good
 Average
 Bad
 Repalling

VALUE FOR MONEY

A real treat for all hard disk owners and not too expensive.

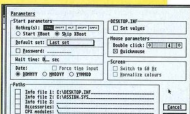
Excellent
 Good
 Average
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XBoot's help screen - what the icons mean



This set of commands installs a set of PageStream internal modules



The screen dedicated to setting various XBoot parameters



Ever since HiSoft released the first Devpac assembler package it has been the first choice among serious programmers due to its fast and integrated environment.

Comprising of editor, assembler and debugger, it provided a level of productivity that left the competition standing. Combined with the technical support available, superlative packaging and excellent documentation, it's not surprising it has remained top dog for so long.

As with all quality software houses, HiSoft take note of their punters' suggestions and "wish lists" and try to incorporate any viable suggestions for improvement into later versions.

Moving from Devpac 2's editor to Devpac 3's is akin to moving from a single bedroom flat to Buckingham Palace. Everything is beautifully laid out and it's generally much nicer to live in.

This isn't to say that Devpac 2's editor isn't good – far from it. However, Devpac 3's environment has an increased level of integration and extra features that promote fast development time and make programming less of a chore.

Integration

This improved integration is achieved, in part, with the inclusion of the Tools menu. When selected from the menu bar, you are presented with 20 "slots" to which you can assign various other external programs that may be of assistance in producing your program.

For example, another product from HiSoft, WERCS, makes the construction of GEM objects such as menus and dialogue boxes extremely easy.

If you are using Devpac 3 to create a program which makes heavy use of such objects, you can incorporate WERCS into the Devpac 3 programming environment by assigning it to a slot in the Tools menu.

The Tools menu option allows greater control over external programs than the simpler method of the Run Other option offered in Devpac 2. For example, you can

Assembler gets the royal touch

Has a new standard been set? Darren Evans investigates v3 of HiSoft's Devpac assembler package and begins to think so

choose to have a frequently used tool resident in memory when Devpac 3 loads so it is available instantly when required.

Devpac 3's multi-window editor can handle up to seven separate windows and full cross editing is available with the ability to cut and paste text between them.

This increases productivity when working with large programs which consist of separate source code modules. Switching between windows is achieved either with the mouse, via the Edit menu, or by using the keyboard with the Alt-1 to Alt-7 key combination.

Each window is a standard GEM window which can be re-positioned and resized. Therefore, you can arrange multiple windows to any desired setup which can

then be saved through the Preferences option so that Devpac 3 remembers to arrange them to your preferred setup when it is run again at a later date.

There are also some built-in window arrangements available such as Tile, Overlap, Vertical and Horizontal, each selectable from the Edit menu.

Other enhancements to the editor include the addition of a couple of new GEM objects, pop-up menu options – as used by Atari's new control panel – and list boxes.

List boxes allow a number of selections to be entered such as multiple INCLUDE directories, pre-assembled include files and EQU symbols.

With multiple window displays at your disposal, you may find yourself looking at various pieces of code which you are currently searching through, in their own separate windows.

If you need to remember where certain sections of code are during your search Devpac 3 has a nice feature which allows you to place up to nine bookmarks at specific points in the source code to mark particular sections of code.

It is then possible to go to a particular

bookmark by using Control-Shift and a number between 1 and 9 to immediately jump to that position.

Devpac 3's editor is also extremely configurable allowing you to "customise" it to your own preferred tastes. Selecting preferences from the menu brings up a dialogue box in which you can change the way the editor behaves.

Pointer

For example, you can have the editor create a second backup file when saving your code, hide the mouse pointer when typing, automatically indent lines and alter the keypad to act either as a numeric entry pad or as a cursor control pad.

All the source code that you have typed in using the editor, along with any files read from the disk, are converted to actual machine code and saved out either to a binary file ready for execution or linking, or alternatively saved into memory, which is immediately executable from within the editor.

The speed of assembly is another area that has been improved, with HiSoft confidently claiming that Devpac 3 is now the fastest assembler for the ST with a quoted assembly time 40 per cent faster than its predecessor.

This speed increase can further be improved by using pre-assembled files in your source code which can be created using the Output Symbols menu option from the Program menu. This creates a file with the same name as the file being

Product: Devpac 3
Supplier: HiSoft, The Old School,
 Greenfield, Bedford MK45 5DE
Telephone: 0525 718181
Price: £79.95
Configuration: All STs/STes/
 TTs/Falcon030

Devpac 3 allows extensive configuration of all of its main components. Here, you can configure the assembly process to your own requirements



Many extra optimisation switches have been included and activating them is made easy via the optimisation options box

Devpac 3's main editor enhancement is its multi-window editing capability which allows you to edit more than one source file at a time



Selecting DEVPA3.3 from the menu bar brings up display showing the current status of memory and lists any programs that are currently in residing there

Summary of Devpac 3 improvements

Editor:

- Multi-window editing
- Pop-up menus
- Faster search and replace functions
- Selectable font sizes
- Bookmark facility
- External program execution via Tools menu

Assembler:

- Supports all 680x0 processors including 68332
- Support for 68881/2 math co-processors
- Can produce DRI, GST, Lattice linkable code, TOS executable code and Motorola S-Records
- 40% increase in assembly speed
- Allows inclusion of pre-assembled files for increased assembly speed

Debugger:

- Split windows vertically and horizontally
- Load multiple source files into each window along with line number debugging information created by Gen
- Convert program address to a source file line number
- "Understands" new video modes, 68030 and 6881 registers and instructions and the TT memory map
- Reads and writes individual hardware ports using the Query port and Transfer to port commands
- Full range of relational operators
- Comprehensive range of breakpoint debugging aids

assembled but with the extension .GS.

For example, if you wish to include the file GEMMACRO.L into your source code, selecting Output Symbols when assembling the include file will produce the file GEMMACRO.GS. This .GS file contains the symbol table definition for absolute labels and macros within the include file and will also list files included by the include file itself.

This essentially means that the assembly process does not need to do as much work because it has been done already, thereby resulting in a noticeable increase in assembly time.

Another major attraction that Devpac 3 offers is evident in its ability to generate code for multiple processors. Devpac 3 is capable of generating code for all 680x0 processors including the 68881/2 math co-processors as well as the 68851 MMU.

Compatible

This is good news for all of us eagerly awaiting the release of the Falcon030, as Devpac 3 is completely compatible with it and can generate the code necessary for the Falcon's 68030 processor.

There are five main types of binary files which Devpac 3 is capable of producing. These are Atari executable, DRI linkable, Lattice linkable, GST linkable and Motorola S-Records.

Devpac 3 can also assemble directly to memory which allows optimum edit-assemble-debug-run times. Producing linkable code allows you to include programs written with Devpac 3 to be included into high-level languages such as HiSoft Basic 2 and Lattice C, while Motorola S-Records are the industry standard method used in programming Eproms and standalone systems that use the 680x0 processor family.

Devpac 3 also offers extensive optimisation switches which automatically replace certain statements for faster and smaller code. There are 12 switches in all and each can be set to on, off or warn.

That most hated of things for all programmers arrives when it comes time to

iron out the bugs that undoubtedly exist within any new program. Being an unfortunate and inherent part of program development, debugging can reduce the hardest of coders to tears.

Any tool which can provide help, no matter how small, can only be good news. Previous versions of Devpac have always had the Mon debugging utility, a powerful symbolic debugger/disassembler available from within the editor or as a standalone program. With the aid of this program, hunting for those elusive errors becomes less frustrating and time consuming.

As you would expect, Mon has undergone improvement too. It allows you to examine, edit, search and compare memory and programs as well as execute programs an instruction at a time. It also allows trapping of processor exceptions caused by programmer error.

It uses its own screen memory thereby avoiding the destruction of any graphical output that your program produces while you single step or breakpoint through your code. Mon's power is most noticeable when you use it within the Devpac 3's integrated environment.

After a piece of code has been successfully assembled to memory, the programmer can select Debug from the Program menu and will find the assembled program ready to examine with the debuggers program counter at the beginning of the

code ready to either single step or execute.

This fast edit-assemble-debug-run ability is one of the major strengths of Devpac which makes for a productive session for the experienced programmer and a easy to use and friendly process for the beginner.

Once in the debugger, the programmer has a host of debugging aids at his disposal. For instance, there are five types of breakpoints which can be inserted at specified points in the code which range from simple breakpoints to powerful conditional breakpoints. Up to eight simultaneous breakpoints can be active at any one time.

Mon's display consists of various windows either showing source code, registers, disassembled code or memory. Each window, except the register window, can be split to provide more windows up to a maximum of five while the register window height can be extended or reduced a line at a time. This flexibility allows you to have any window arrangement you desire.

As a standalone program, Mon can be used with any application that generates machine code output such as a C compiler.

Also, if the application that produces the output is capable of producing line number information, it will be possible to use such information to single step source line by source line and even set

breakpoints in the source code.

Some applications that currently support this are HiSoft Basic 2 and Lattice C 5.5.

As with all versatile and powerful packages, good documentation is vital. Devpac 3's manual is extremely well written and upon reading it you soon realise that extensive planning and design has been applied in its production.

Reference

It has a very extensive appendix section covering topics such as GEMDOS error codes, TOS memory map, tips on converting code written on other assemblers and also an extremely good reference type section on the GEMDOS, BIOS, XBIOS, AES and VDI libraries that are included on disk.

Packaging is also excellent with Devpac 3 coming on a double sided disk with an attractive HiSoft disk wallet and a very useful pocket programming guide booklet all contained in a very sturdy box.

If you are searching for an assembler, your search ends here. With its multi-processor support, enhanced programming environment and compatibility with Atari's new generation computer, Devpac 3 looks set to remain first choice among programmers for a long time to come.

BOTTOM LINE

FEATURES

Almost too numerous to mention. Lots of impressive additions to that of its predecessor.

Excellent
Good
Average
Bad
Spelling

EASE OF USE

The integrated environment makes programming both productive and a joy. Extremely well-written user manual.

Excellent
Good
Average
Bad
Spelling

VALUE FOR MONEY

Power and compatibility with Falcon030, combined with multi-processor support makes Devpac 3 a future-proof bargain.

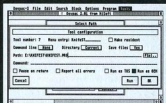
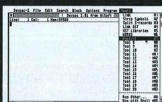
Excellent
Good
Average
Bad
Spelling

Multi-processor support ensures Devpac 3 is future proof and will remain top choice for programmers for a long time



Another example of Devpac's configurability. Here, the editor can be set up to your own personal preferences

The powerful Tools menu allows the execution of external programs from the editor (memory permitting) without having to exit Devpac 3



Assigning an external program to a slot in the Tools menu tells Devpac where to find the program and how to call it

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ISSUE EIGHTEEN • MARCH 1993

GAMER

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Plus...

REVIEWS... CHAOS ENGINE • INDY JONES & THE FATE OF ATLANTIS •
RAGNAROK • STREET FIGHTER II • HARRIER ASSAULT

ALSO... BLAST FROM THE PAST • DINO DINI'S LATEST FOOTY SPECTACULAR •
MORE CHEAPOS • NICH FALDO DROPS BY FOR A ROUND • BACK PAGE!

ONword

Nobody cares any more

Not bally likely!

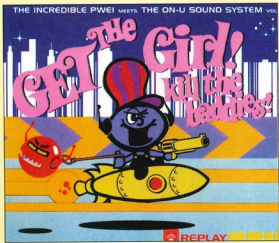
After the debacle of the Marioland record by the Ambassadors of Funk, which sadly yet typically found its way into the upper echelons of the charts, not to mention some obscure effort featuring Sonic the Hedgehog, the pop industry has decided to get its own back on those cashers in - at least, that's what they say.

Rave band Altern 8, who have a bit of a reputation for telling porkies, reckon they're putting together a computer game of their own, and the strangely dressed Pop Will Eat Itself are rumoured to be working on a computer conversion of their top ten hit, Get The Girl and Kill The Baddies.

But that's not all - with beer-swilling, tab-smoking Lemmy and the rest of Motorhead already starring in their own Virgin-published game, rumours abound that the whole of the pop industry

is about to cash in on the compo game phenomenon, with games in progress from, among others, The Reynolds Girls, Big Fun and the one who wasn't a twin from Bros.

Frankly we think it's all a monstrous lie, but we will keep you posted in the unlikely event of any developments.



Pop hunksters
PWEI -
computer game
rumours



Nice Beaver

Ever heard of Jethro Beaver? No, course you haven't - neither had I until a couple of weeks ago. Well Jethro is the latest in a long line of cutie-pie characters to hit our ST screens. He's the main man in Grandslam's new platformer - entitled, appropriately enough, Beavers!

Any software is always welcome at the Gamer offices, but a release from Grandslam wouldn't usually be the first thing that springs to mind when we anticipate a stormer.

As shown elsewhere in this issue though, Nick Faldo's golf seems set to elevate Grandslam to a higher plane, and early impressions of the colour-packed, fun-filled Beavers seems to rubber stamp this success.

Look out for a review next month. But look hard, because it might not be in.



An artist's impression of a beaver, used due to Paul's inadequacy in the 'Get Some Screen Shots' department

Changing room?

Pay attention readers, because this affects you. Over the next couple of months we will be making a few changes to the legendary pages that are known as Gamer. Why alter a winning formula? you may ask. Why mess around with the games section you all live for?

Well, because we just fancy it, that's why. No, seriously - the ST, indeed the whole Atari market, is going through a period of change at the moment.

The introduction of the Falcon will open up loads of new avenues, not only for the dead serious stuff, but also for intrepid gamers such as ourselves.

With many ST User readers set to buy Falcons, we have every intention of keeping you updated with all the latest news and reviews of games, and as the market grows, Gamer will obviously begin to reflect the change. What better time then to stand back and have a look at ourselves and see how we can improve (surely not)?

We're not going to have a tiresome questionnaire - we don't even want to know what you like about Gamer - it'll just make our heads swell. Just let us know what you want to see changed, made bigger, smaller, added, done away with, bits sliced off the end, etc.

The more opinions we receive, the better - we're making the changes anyway, and if you don't tell what you want, then don't jolly well bother complaining to us afterwards, or we'll pin your letter to the cupboard and flick spit bombs at it.

Look, we've even put the address below to save you flicking to the front page. This is your chance, so make an effort - what's the price of a bleeding stamp?

The Gamer Changing Room
Atari ST User
Europa House
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SK10 4NP

Ocean gametastic charidee bonanza

It's Comic Relief day in March, and Ocean have gone all Bob Geldof-like by releasing the first ever Red Nose Game. Called Sleepwalker, it stars a dog and his master, and the general idea as you take control of the mutt is to keep your dozy keeper out of trouble.

As he walks around town in a deep sleep, it's up to you to help him avoid hazards by removing them from his path. It all sounds like good, honest platform fun, and even though it's unlikely to be too different from other Ocean platform offerings, anyone who buys it can sleep easy in the knowledge that they're doing their bit for charity, since around £4 from each game sold will be donated to Lenny Henry and his charity chums.



"Dalek" company anti-government shocker!

EXCLUSIVE by Gamer "reporter"

Alternative Software today refused to deny that they are the instigators of a dastardly plot hatched against the government, designed to directly conflict with the policies of chancellor Norman Lamont, better known for his "yoghurt pot" capers on Central Television's Spitting Image.

Rumours began to circulate last month after Gamer revealed that sister company Admiral Software were to release platformer Dalek Attack at the price of just £17.

Apparently not content with the stir this caused, Alternative recently circulated news of their forthcoming budget label, Again Again. On its launch in April of this year, Again Again will offer previously available 16-bit Alternative titles at the unheard-of price of £5.99.

A spokesman for Alternative Software confided that a priority of the company is the value for money of its products, stressing that as an introduction to ST gaming they are ideal, in that all games will be easily playable, and fun, without stretching anyone's budget too far.

The government has over the last 13 years spent much time and effort, and squandered immeasurable public funds in ensuring that the money in our pockets buys less and less each week.

Norman Lamont has enjoyed even more success than his predecessors at this, and is unlikely to take kindly to the fact that a small Yorkshire company is single-handedly attempting to undermine his position and once again provide the British public with an affordable means of entertainment.

Gamer will endeavour to keep you posted as to the latest developments in this intriguing conflict, but in the meantime we suggest that residents around the Beachy Head area keep a close eye out for the Alternative Software company car - this seems to be the in-place at the moment for those who cross the Commons.

First in line for release from Again Again are:

Cross Bow
Chuck Bolt
Munsters
Jaws
Fallen Angel
Steigar

Dalek Attack - more reasonably priced games expected in new shocker



GAMER

INNER VISION

Good gracious me - it's all happening here...

HARRIER ASSAULT 4
Don't know about that, but I got bitten by a terrier once

INDY JONES AND THE FATE OF ATLANTIS 9

There's no such thing as fate when old Hazzer Ford takes control, yawns Ben

RAGNAROK 10
Son of Chuck? Me thinks not

DIZZY 11
Fatso's back in his biggest adventure yet - a bit of a stonker by all accounts

CHAOS ENGINE 12
More pellets than the bottom of a rabbit hutch

STREET FIGHTER 2 14
The classic (classic? - Biff) beat-'em-up finally reaches the ST



ONWARD 2
Fancy a change? Read on

TOMATO SOURCE 6
Paul and Nick Faldo discuss the rub of the green and compare clubs

BLAST FROM THE PAST 17
Remember gridball? Neither do we

CHEAT MODE 18
How to reach the top of the table in one easy lesson

BACK STROKE 20
Tales of horror in the latest computer scare

Now with wings...

AV-8B HARRIER ASSAULT

DOMARK ■ £34.99 ■ 1 meg
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It's a long time since I've played a flight simulator, in fact until a month ago the last proper flight sim I'd handle was F-19 Stealth Fighter.

A clap of thunder and a bolt of lightning later and there seems to be a whole hangar full of flight sims on the way. In January's issue it was Reach for the Skies, this issue it's AV-8B Harrier Assault and there are more on the way!

Domark are not usually known for their prowess in the flight sim department – that award belongs to Microprose, the masters of this type of game. If Domark are going to compete then they're going to have to produce an exceptionally good one.

Now then, now then boys and girls, jewellery, jew-ell-ery, what we have here is a little kiddie called Domark and she says: 'Dear Jim, can you fix it for me to produce a top quality flight sim that'll whack the pants off anything that challenges it?'

Well, we sent Domark off for a couple of weeks, jewellery jewellery, and when they came back, clutched in her little mitts was a game called AV-8B Harrier Assault.

But now then the question is, boys and girls – does Domark deserve her Jim'll Fix It badge?

Hey, thanks Jim, you hit the nail right on the head. Does Domark deserve a Jim'll Fix It badge, or indeed more importantly a Gamer Gold, for AV-8B Harrier Assault? We shall see very soon, but first a little bit about it.

Take most flight games and you'll find that the only job you have to do is complete pre-set missions while flying a high powered jet, but it's different in Harrier Assault. Here the concept is extended because you get to play two roles.

The first is as Commander of the Rapid Deployment Force (RDF) in which you will run the campaign of Operation Ocean Saber.

This is a UN-authorized invasion of East Timor in South-east Asia. In the job you are tasked with landing US Marines in hostile terrain and make strategic and tactical decisions for the force as a whole.

The second role

Great maps of Indonesia – part one in a one-part series

is as a squadron pilot, in which you'll fly the AV-8B Harrier jump jet from the flight deck of the USS Tarawa and take it into combat against the armed forces of Indonesia, the nation which has

The in-flight movie will be Nightmare at 20,000 ft. Thank you for travelling Crash and Burn airlines

seized East Timor.

As you can see, it's just slightly different from other flight sims, but hey, if you're a traditionalist you can simply fly the Harrier and let

the computer make those all-important tactical and strategic decisions for you.

As mentioned, the game is set in and around East Timor in South-east Asia, so you can't fault Domark for not being different from the rest.

As far back as I can remember, I actually think that this is the first proper flight sim featuring the Harrier Jump Jet. Most software companies ignored it, maybe because it's very hard to, erm, simulate.

But, why is it so hard to do, I hear you all cry? Well, it's because the Harrier is a VTOL fighter aircraft. As you probably already know, VTOL stands for Vertical Take Off and Landing and it means that the jet can take off and land, err, vertically.

The AV-8B Harrier is not the sort of plane you want to meet on a dark night. It can be tooled up to the teeth with five types of ordnance ranging from guided missiles to your bog standard unguided rockets to high-tech laser-guided bombs, plus it's got a couple of awesome 25mm cannon bolted on the front.

We are talking total destruction, here kids.

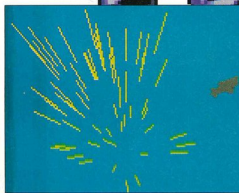
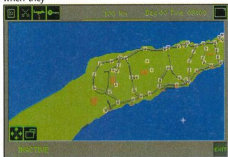
I'll let you in on a little secret, but only if you don't tell anyone. Most flight sims claim that they are accurate down to the tiniest detail, but they are not that accurate in the control department.

Planes as a general rule are a right pain in the botto to fly, ask anyone who's been on Krypton Factor. To combat this fact, most programmers make the plane that bit easier to fly, but this is not the case with Harrier Assault.

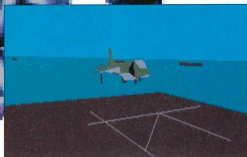
Harrier Assault is one of the most realistic plane game I've ever played, but unfortunately it does also make the actual flying of the damn thing very hard.

There is an option to flick between realistic and simple flight modes, so you can practice in simple and when you've reached Tom 'Maverick' Cruise status you can switch to the realistic mode.

It's got fairly cool graphics, all of which can be looked at via a variety of external views. It handles like a real Harrier (er, how do you know? – push



If only you could see this crash when it's moving – here it looks like a rather poor firework display



Now am I taking off or touching down? Ha, you'll never know and I'm not going to tell you either, but then again I don't suppose you're that interested are you?



I see no ships! Come to think of it I don't see any planes either...

zled sub) and everything is exactly like the real thing from HUD modes to the radar to the colour of the visor on the pilot's helmet.

You don't just get to control the one plane – you get to control the whole military campaign thus making the game that little bit more interesting.

Now onto the dreaded bad points. It is just a bit too realistic, thus making the plane very hard to fly, so you'll get frustrated very quickly because you seem to spend more time crashing than cruising.

It's just not me either – but everyone who played the game had similar comments to make, some of which aren't printable.

Another major problem is finding something and shooting it down. Stevie Kennedy, editor of our sister magazine

Amiga Computing seemed to have no trouble finding a few helicopters to blast to smithereens, but then again he's a flight sim hero.

Ben put it perfectly when he raised the question: "Have you shot anything yet?" and I



Whoever said flight sims were boring? Look at all the hot action in this screenshot. Sigh

replied "no" rather shamefully. I did eventually blast a few of the enemy and it was quite a relief – I thought I was getting a bit

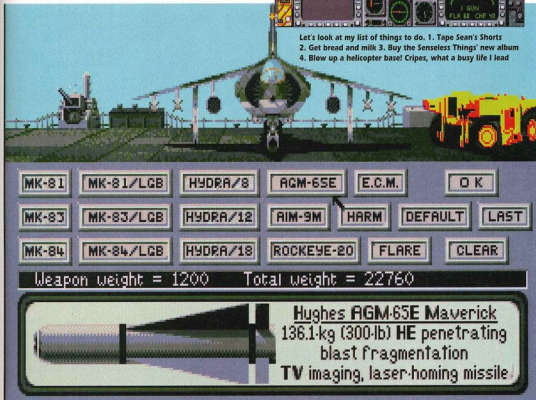
over the hill for this computer game lark, but a couple of missiles up the enemy's booty and faith was restored.

Harrier Assault is also not the fastest and smoothest flying in the world, but you can't have everything can you?

If you're a flying die-hard then you might want to buy Harrier Assault, but otherwise I wouldn't recommend Harrier and that means no Jim'll Fix it badge for Domark.

I'm off now, I've got a marathon to run with a certain jewellery laden, white-haired chap. Jim'll Fix it for you and you and youuuuu...

Jonathan



Err, Maverick missiles... laser-guided bombs... cuddly toy... fondue set. Beep Beep Beep. Didn't they do well!

VISION
GGGG
Quite yummy graphics, but alas no cherry on top.

AUDIO
GGGG
Not much going on here apart from the engine noise.

PLAYABILITY
GGGG
A bit of a disaster because the plane is too hard to fly.

ADDITION
GGGG
Warning: For die-hard flight sim addicts only!

65%

Dubbed by Ben as The Squinter, by most as "the best in the world", he owns more blazers than Moss Bros and he's coming soon to your ST. Paul Roundell packs his clubs and drives off with the man himself

the source 1

Nick Faldo's Championship Golf

Just what is the attraction with balls? The vast majority of the country – particularly men – seem to spend a vast proportion of their spare time pleasuring themselves with balls.

Between posts, over nets, through hoops, in pockets – the number of things you can do with a small round object is endless.

Golf is popular with the masses, and as with any popular sport, there are loads of sims on the market to keep the sod clompers among us more than happy. Grandslam don't think so though, and have taken it upon themselves to provide us with the ultimate golfing sim that will, and I quote... "blow us away".

Rightly or wrongly I was a bit surprised when I learned that Grandslam were developing a potentially massive game – they are after all known primarily for lower end products.

However, sporting a name the size of Nick Faldo they had to be serious, and after an initial look at the screenshots, I was keen to see what was in store.

In the final analysis gameplay will obviously be of paramount importance, but the first thing to strike me – and, I suspect, everyone who sees it – were the graphics. Blimey! – they're very nice to say the least.

Apart from the stunning definition of the courses, there's the digitised sprite – old Nick himself. When taking his swing, it's almost as though you are seeing a televised event rather than a computer game – it really is

very impressive.

It seems there are going to be just two British courses to play on, which is rather less than some, but Grandslam stress that during the development of Nick Faldo's (which is still underway at the time of writing), great emphasis was put on capturing the realism of the game.

Grandslam's David Birch went further, explaining that most golf sims – while good – are far too lenient with wonky shots. Although buried in the deep rough, it is still possible in most cases to select a lower iron and smash the ball over a hundred yards.



The practice mode will prove invaluable for hopeless cases like me who consider a round of 100 a success



See that stroke bar? Dead professional it is

This makes for a better round, but it's not particularly accurate. Grandslam are out to correct this, and on the evidence I've seen have done so very well, seemingly maintaining the all-important playability factor.

A number of players, either human or computer, can take part in stroke play or match play, and the chances are we'll

be given the option to choose which season we play in for greater variation in wind and sunlight.

The stroke bar is a little different from the norm, and doesn't offer as much leeway for sloppiness as is usual, but in keeping with the realism of the game, repeated success results in shots becoming easier to make.

A full practice mode will almost certainly be included, and is likely to be a valuable asset for amateurs and pros alike, because Nick Faldo's Championship Golf is going to be tough.

Tough it may be, but on the evidence I've seen, what we have here is a serious contender for the title of best golf sim, and I suggest fans of PGA and Microprose start saving their pennies right now. Expect it in the spring, with a full review in a couple of months time.



Playing out of bunkers is no longer a case of "swing and slash" – you've got to think about it and play it like the pros





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LUCASARTS • £25.99 • 1 meg
Joystick/keyboard • Out now

They've been quite a money spinner, all the Indy films, but good luck to them - all in all they haven't been bad. Unfortunately we have to put up with the unnecessary spin-offs, this being the category that Indy falls into.

It's just before World War II and our terminally scruffy archaeologist friend has found two artefacts which he believes are items which once existed on the Island of Atlantis.

As per usual, Indy gets them nicked by a tight trouser-wearing Nazi who is on the search for yet another enor-

mously powerful force that will help the Bosch conquer the world.

Indy discovers a mutual friend in his search for Atlantis, a buxom blonde by the name of Sophia Hapgood (0898 454545). She too has had her Atlantean artefacts stolen and is just as keen to get them back and carry on the search for Atlantis.

You begin your search in a Monte Carlo casino (I thought it was a bit of a funny place to look too, but who are we to question?). You have to buy back the artefacts that you lost earlier and some weapons to defend yourself

and the FATE OF ATLANTIS

with, then get out while trying to avoid the numerous Nazis.

I think I should mention at this point that you are actually playing two characters at once, Indy and Sophia. You can control them either by keyboard, mouse or joystick, the control method being very dated indeed.

Instead of the usual practice of the movement of the character corresponding to the direction which you select, you have to move your character around on its axis and push forward to move which is both unnecessary and irritating.

At any point you can change between the two characters. Instead of the characters just staying static when you are not using them you can choose to put them in the 'GO' mode where they will wander around of their own accord under computer control. The stop mode still lets them wander, just not so far afield.

Sophia's and Indy's health is depicted as a sine wave at the bottom of the screen. When either Sophia or Indy get into a fight, pulling back on the joystick will put the weapon which you are carrying at that particular time into effect. If you get a leathering by one of the Nazis you will be imprisoned and your control will jump to the other character.

If Indy had been written about three years ago then many of the pitfalls would have been acceptable, but techniques used in games have moved on.

For example, a lot of the older iso-

metric view games have a facility which allows you to view the situation from at least another angle.

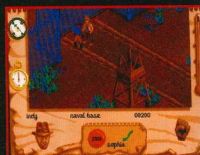
In Indy's case there are four different angles. By observing your situation from these different angles you can discover hidden doorways, treasure and so on.

But the game covers a very large area and checking for doors every few steps becomes farcical after a while, especially when you are being chased by bloodthirsty Nazis.

The next major fault is the absence of text in the game. This shouldn't really be a drawback but as a substitute for dialogue you have to translate symbols which you are shown on-screen into set phrases out of the manual because, and I quote: "Neither Indy or Sophia speak the local languages...". A poor excuse if you ask me.

All in all, Indy is a pretty poor excuse for a game. The control method and playability are so bad that it just bogs down the player to such an extent that it won't take long before you give up trying.

Ben



Indiana Jones about to have a deep and meaningful conversation with a guard...I don't think



In the casino and Indy has just lost everything on seventeen black



Sophia gets a job packing at the local warehouse... shame!

The Byzantine Crusader
No. 0010 1993 LucasArts
Indiana Jones Missing
Feared held by Nazis

Indy has been kidnapped by the Nazis and is being held in a secret location. You must find him before it's too late. The game is a puzzle adventure with a focus on exploration and problem-solving. It features a variety of ancient ruins and hidden treasures. The story is set during the early 1940s, during the height of the Nazi regime. The game is a sequel to the original Indiana Jones and the Temple of Doom. It is a single-player game that can be played on a variety of platforms. The game is rated 'E' for Everyone. It is a must-have for fans of the Indiana Jones franchise.

The local rag! Where's the story about the Royals?

- VISION**
Undated and boring.
- AUDIO**
Almost non-existent.
- PLAYABILITY**
Similar to wading through treacle.
- ADDICTION**
Not at all, too much like hard work.

33%

It makes Norse sense to me

RAGNAROK

MIRAGE ■ £34.99 ■ 1 Meg ■ mouse/joystick ■ Out now

The historically aware among you will no doubt be perfectly familiar with the concept of Ragnarok – a specific time in Norse mythology whereby all the gods gathered their armies together in a fight to the death, to free the world of evil and create a better plane for mankind.

Of course I knew this too, and duly brought it to the attention of the rest of the office, who erroneously believed that Ragnarok was in fact the sequel to Chuck Rock.

Those Nordic types were a tad rough if my memories of A-level history lessons serve me correctly (he failed – Ed). No I didn't – Mr. Haworth "asked me to leave" because of

my apparent lack of interest, but that's beside the point.

Anyway, we could reasonably expect a computer game depiction of such a race to involve arcadey hacking aplenty, combined with a fair old beat-'em-up element and no small measure of animal abuse.

But not a bit of it – no less than a board game is what we have here. Ragnarok is based, for those of you who've played it, on the ancient King's Table.

Odin is the king of the gods, and knows that he will die at Ragnarok. In this position I must say I'd be tempted to stay at home in my comfy palace and send some minions out to do my dirty work.

But unlike our Royal Family, Odin wishes to retain his dignity, and decides to face the problem head on, descending to earth with his customised game to pit his wits against devious humans in the hope of picking upon some pointers as to how he can cheat

his destiny.

The two sides are the Blacks and the Whites – the Whites represent good, and must protect their central figure (Odin) from the evil Blacks, who need to surround him on all four sides to become victorious.

On his visit to earth, Odin entered a tavern where he found 11 men and women willing to take him on. Each differs widely in skill, and he (or rather, you) must defeat each opponent twice – once as White and once as Black – before progressing onto the subsequently better skilled competitor.

Victory in 22 consecutive matches is rewarded by a very nice animated sequence

(there's also an optional one at the beginning of the game), but this kind of success doesn't come easy, and you can choose to practise as Black or White against any opponents of your choice.

Also included is a two-player mode and the original game, giving even more longevity to an already tricky game.

The options allow you to toggle the battle sequences on or off. A battle sequence takes place every time a game piece is taken, and involves the personified pieces offering each other in several bloodthirsty ways.

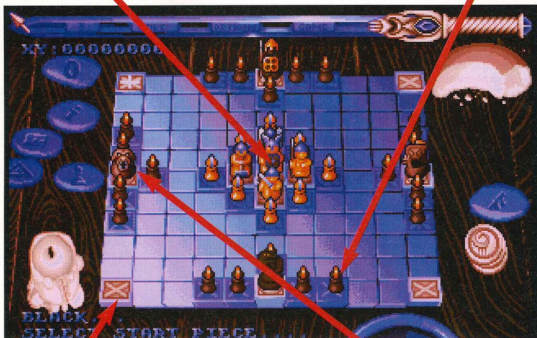
Chess players should derive great satisfaction from Ragnarok, but it's a very easy game to play for anyone – I've never so much as looked at a chess board sideways, but became instantly familiar with the rules, though admittedly didn't meet with a great deal of success.

Despite the battle sequences, it is worth remembering that while effectively offering two games in one package, Ragnarok is at the end of the day a computerised board game. An enjoyable and engrossing one, but a board game nonetheless.

Paul

Odin begins the game protected on all sides by his army. He cannot be defeated unless surrounded on all sides by the Blacks. He pays for this strength in his limited moves – only two squares in a straight line

Pawns have unlimited moves in a straight line but are susceptible to knockouts, as they need only be surrounded on two sides. Useful for causing a nuisance and helping to manoeuvre another piece



If Odin reaches a corner, or any side of the board, he cannot be surrounded and has effectively won the game

Unlike the original King's Table, there are several special pieces – like in real life, although only four can be used at any one time. Abilities of these pieces include moving diagonally, and taking any other pieces they land on

VISION

Very well presented, battles are funny, but the board could have been displayed at a better angle.

AUDIO

The boxed version may have a continuous music option – ours didn't.

PLAYABILITY

Both mouse and joystick/keys are required, but it couldn't have been made any easier.

ADDITION

Sounds like a game for intellectuals, but really, it could to appeal to anyone.

81%



Shiver me timbers, it's Cap'n Beady, a pirate who's that bit more beardy than the rest...



Dizzy gets down and meets the funkiest egg on the planet, Denny!

Mario can go back to fixing sinks and Sonic can run off somewhere very fast indeed because Dizzy is back! Yep, Code Masters have come up with the goods again.

Dizzy has become a firm favourite with the computer games-buying public and, unlike the Rocky films, Dizzy releases seem to get better and better. Crystal Kingdom is actually Dizzy's seventh appearance on the ST. Quick, someone get Norris McWhirter, I think that could well be a record.

There is something about a Dizzy game. Anything that's released at a budget price is often ignored because the buying public think that it's crap. This is not so with our egg chum.

Dizzy games are not the most intricate and exciting I've ever played, but there's something about them that makes them very cheery indeed. I will explain myself.

Picture this scene. You've given hard-earned money to the local computer games emporium and you rush home like a foaming-at-the-teeth mad dog. Upon opening the box, you find not only a cheery poster, a set of four stickers, but a couple of collectors' cards as well.

This makes you happy. While smiling, loading starts, then your ears start to dance to the great little tune that plays in the background.

Grab the joystick and you're ready to enter the world of Dizzy. Play starts and it's beaming smiles all round. The graphics are wonderfully cartoon-like and the game is so easy to play that even the youngest gamer can happily wander around the magical

Egg-cellent, it's...

CRYSTAL KINGDOM DIZZY

CODE MASTERS ■ £19.99 ■ ½ meg ■ Joystick ■ Out now

kingdom of Dizzy.

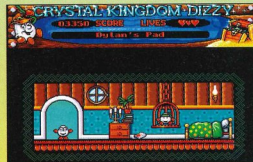
One of the main attractions is the variety of characters. There is, of course, Dizzy, the hard-boiled hero who has to, ahem, get the girl, kill the baddies and save the entire planet.

Among Dizzy's favourite chums is Denny, an egg so cool and laid back that he's almost poached. There's Dylan, the far out, psychedelic egg. Oh, and Grand Dizzy, the senile OAP egg who gets a bit grumpy at times, but that's because he's old, bless him.

There's even a star

appearance from CJ the Elephant, a hero from one of the Code Masters' previous games.

There's been a bit of a disaster in the Yolkfolk village. The crystal sword, chalice



'Yeah, peace Dizzy.' Dylan, the hippy egg, chills out



What is that whip around in Daisy's bedroom? More importantly, why is that naked Tony MP hiding in her cupboard?



Yo, surf's little egg dude. Dizzy pays a visit to Fat Freddie's Surf Shack...

and crown have all been stolen from the temple in the centre of the Crystal Kingdom.

This may not sound so bad, but removal of these objects will cause extremely strange things to happen to the Yolkfolk!

The object of Dizzy's quest is, of course, to return all the objects to the temple, so that peace, happiness and harmony will return to the Yolkfolk village.

So, will Crystal Kingdom be egg-cellent or will it prove to be a right Humpty Dumpty? Well, it's pretty good, actually.

I would recommend Crystal Kingdom to anyone, whether they are young or old. For sheer playability-value alone it's worth it, but couple that with the great graphics and you've got another Dizzy classic on your hands.

It may not look as superior or sound as good as the Chaos Engine, but that doesn't matter. The games are simple, but it practically oozes playability and addiction.

As a rule the Dizzy games are packed to the brim with tons of humour and Crystal Kingdom Dizzy is no exception to the rule. The only downpoint I can think of is that games players might be getting a bored of the Dizzy series, as they look and play pretty much the same as the rest of the Dizzy games.

Don't forget that this Dizzy game isn't budget and will cost you £20, but I think that's only because more time and money has been spent on making it.

I know it's not very good English, but Crystal Kingdom Dizzy is probably one of the cheesiest games I have ever played. It's the only game this month that has truly captivated me. Shell out some dosh for Crystal Kingdom Dizzy, you won't regret it. I promise.

Jonathan

VISION
Great graphics that are bright and colourful.

AUDIO
A good bouncy tune with a mere smattering of sound FX.

PLAYABILITY
So easy to play even your Granny could do it.

ADDITION
Very similar to previous games, but you'll come back for more.

85%



Entropy antics

THE CHAOS ENGINE

RENEGADE ■ £25.99 ■ 1 meg ■ Joystick ■ Out now

The Bitmap brothers are two of the most respected software producers of all time. Their releases include such triumphs of programming as Speedball and Magic Pockets and their latest - The Chaos Engine - looks to be no different.

I liked the look of The Chaos Engine before I'd even clapped eyes on the game. The adverts in the press sporting the six psychotic looking weirdos sorted that out.

The story behind a game has always been very important to me. If the storyline is weak then the game become just that - a game. But if there is a good tale to get your teeth into, you're prompted to think about

the game and become more involved in it than you usually would.

CE is set in a world similar to our own - not exactly free from trouble and strife. In a castle near to a town there lives a mad professor type. As per usual the experiments he is conducting are far from your average medical research.

Even so there is nothing that the locals can do, mainly because they are too scared and none of the experiments have really done any damage until now.

Everything went quiet at the castle for a while and the professor was rumoured to be dead. Some people in the surrounding area did know what was going on and the talk was of something called the Chaos Engine, a

weapon of massive proportions.

People in the village started being attacked by horrible mutations and eventually began to realise that it was the Chaos Engine which was warping space and time causing these freaks of nature. The machine, naturally, had to be stopped before it destroyed the world.

The players must battle through the four worlds, each of which contain four levels. To shut down the Chaos Engine you have to choose

two reckless psychopaths to go in and kill hundreds of dribbling beasts.

Of course there are loads of people lining up to do this sort of job, but you have a shortlist of six nutters from all walks of life - a preacher, a navy, a mercenary, a gentleman and a thug. Each character has different attributes and a special power (this is starting to sound like Street Fighters) but more about that later. Every two levels





there is a shop. This is where you choose your local friendly psychopath. When you select one of the volunteers, measurement bars show health, intelligence, skill and speed.

On these measurement bars is shown the potential maximum of that particular aspect and the actual level. The potential level of the navy's intelligence, for instance, will be relative low but this can be increased by "buying" him some intelligence when you have the option to go shopping.

Also on this shopping screen are facilities to buy extra lives, increase any of your attributes and buy other special skills like monster repellent and the like.

After you have chosen the character you want you have to choose one for the computer, assuming that you aren't playing with a friend. The amount of intelligence the character you choose has dictates how much he gets involved.

If he is relatively thick then he will tend just to protect himself and ignore you. However, as the game wears on he will begin to get a little more involved.

You view the game from a slightly offset plan view. To progress through the level you must find sil-

ver sets of keys which will open doors and passageways.

Just because there is a natural progression through the game with the existence of the silver keys, this doesn't mean it becomes uninteresting. Gold keys open up different sections on the games revealing money and special powers.

At the end of the level you are shown an appraisal screen which tells you how much of the level you discovered, what percentage of the gold you picked up and who did the most work. How much you do on your particular level decides how much of the treasure you get.

There are all manner of beasts from trolls to gigantic hands which follow you around but on the whole they are pretty easy to dispatch. Remember to hang around after you have bumped them off, though, because they always leave a bit of money lying around.

Graphically Chaos Engine is pretty flawless - no matter what all the other magazines say about it looking typically Bitmap-esque. The screen scrolls excellently around your character, plus you don't have to put up with waiting for your partner if he goes

off-screen.

If you leave your partner well behind he will materialise next to you after a couple of seconds. This doesn't apply if he is a human character - if he wanders off-screen, you have to wait for him to catch up.

To get through the levels, not only do you have to find all the silver keys but you have to activate the nodes. These are large monolith-like things which seem rather uninteresting until you shoot them a bait. Then they turn into massive pulsating mar-lal aids.

You have to activate all of these to get the exit open to the next level. On later levels there is more than one exit so it can get a little confusing, but this doesn't detract from the fun.

Ben

VISION

GGGGG
Clean, nicely styled - what more should you expect?

AUDIO

GGGGG
Awesome soundtrack, nice and loud.

PLAYABILITY

GGGGG
Easy to get into and fun.

ADDICTION

GGGGG
Definitely, there's always more to get back to.

90%





Eh, look here if it isn't an old friend of mine. Who is it, you cry? Ah, well it goes by the name of Mr Hype. Hello Mr Hype, do you mind if ask you a question? Sure, fire away. What do you think of Street Fighter 2?

Street Fighter 2 is undoubtedly

going to be the best beat-'em-up ever on the ST, is going to be faithful to the SNES version and will feature amazing graphics, mind-blowing sound and absolutely brilliant playability. SF 2 is the hottest two-player arcade action

game you can get. It has gargantuan sprites and stunning fights - in fact it's the game that the ST was made for.

Hmm, thanks Mr Hype for your unbiased and objective comments. So kids do you honestly think that Street fighter 2 will be as good on the ST as it is on the SNES? Ha, well I personally

think you've been ever so slightly conned.

Hands up who got the game from Granny and Grandad for Christmas and eagerly loaded it up and then wept buckets. If you have a friend who

High on hype, low on speed

STREET FIGHTER II

US GOLD ■ £27.99 ■ 1 meg ■ Joystick ■ Out now



It's Chun Li against Blanka. Size isn't everything



Doesn't Ryu look really tough in his pyjamas?



owns a SNES and SF 2 I would keep the fact that you've got a copy of SF 2 on the ST very quiet indeed.

Perhaps I'm going over the top because Street Fighter 2 isn't really that bad. It's not amazing, but thanks to Mr Hyper your expectations have been unnecessarily raised and you probably think that the game is going to be the best ever on the machine.

That's Mr Hyper for you, making the eager youngish devils that you are scribble the game down on your list to Santa and find out that it's not quite as good as everyone says it is.

Right, now I've got that grumble off my chest I might as well tell you about the game even though you probably know everything that there is to know about SF 2, from what moves Ryu does to the size and colour of Blanka's underpants.

The object of the game is simple because all you have to do is take your fighter around the world beating the crap out of all the other fighters.

It does have some things going for it and one of those is the fact that you have a choice of eight fighters.

You can pick Ryu, a sort of Karate kid lookalike; Ken, like Ryu with blonde hair; Dhalsim, an Indian rubber man; Guile, an American GI with a Bart Simpson hairdo; Zangief, a wrestler who likes nothing more than throwing oiled men around a ring; E Honda, a fatty sumo wrestler who needs a bra; Chun Li, a Chinese Cynthia Rothrock type and last but not least, Blanka, a green-skinned monster with orange hair.

Each fighter has his/her own special moves. For instance Chun Li has the vicious spinning bird kick among others and Edmond Honda has the hundred hand slap, a sort of handbags at 40 paces kind of move.

Also included from the coin-op are the gratuitous violence bonus screens. The fighter is given the chance to earn bonus points by either smashing wooden barrels to pieces, punching and kicking three burning cans or wrecking and destroying a snazzy and very expensive car. Hey, if that isn't

gratuitous I don't know what is.

Street Fighter 2 was never going to be as good as the Super Nintendo version, but I have to admit that Creative Material have had a damn good go and possibly done the best job that they could do considering the ST capabilities that they had to play with.

The graphics are almost identical to the coin-op with the exception of loss of colours, but unfortunately they're very jerky and also the collision detection is rather dodgy. It's not funny when someone hits you and you're nowhere near.

The sound is not brilliant and when Chun Li attempted her 1,000 kick manoeuvre she sounded like a dog yapping. Some of the original speech is still screaming all manner of obscenities that sounds like Japanese.

The game is slow - not as slow as a tortoise, but more your old age pensioner kind of speed. It's much better in one-player mode simply because it slows down to sloth proportions in two-player. Some of the special moves will only work once in a blue



Ouch, bet that made his eyes water...

moon and are more than a bit fiddly, but seeing that the SNES has six buttons and the average ST joystick only has one I can't really moan that much.

On the easiest level I completed the game in one go, but stick it up to the hardest and you won't have a chance

Overall Street Fighter 2 will be a disappointment to most ST games players due to the fact that the game has been hyped too much.

When it comes down to the crunch SF 2 is just slightly better than your average beat-'em-up. If you've not

bought SF 2 I would save your money and wait for Body Blows by Team 17 and if you have bought it, then tough.

As Chuck D and Flavor Flav from Public Enemy cried in unison: "Don't believe the hype!"

Jonathan



The battle of the blonde haircuts. It's sad, very sad indeed.

VISION



Nice graphics that are almost faithful to the coin-original.



Not bad speech, but other effects are fairly dire.

PLAYABILITY



Very slow especially in two-player mode.



Put it on the hardest level and you'll be at your Amiga for years.

68%

A BLAST FROM THE PAST 1992 82.8

Microprose Golf by Microprose

Take a trip down memory lane as Jonathan remembers the good times and lets them roll...

Most golf games unfortunately suffer from a bad case of the yips. You load them up and everything looks OK, but as soon as you hit the ball off the tee all the excitement fades as you realise that the play is about as realistic as Terry Wogan's wig.

Never mind, because way back in

November 1991 Microprose Golf arrived and proceeded to change the future of golf games as we then knew them.

The biggest thing Microprose Golf had going for it was the sheer realism of a round. In fact, if you'd donned a funny hat and some striking chequered pants you could almost have been there.

As well as being realistic, it is probably the most friendly and easy to play in the entire universe.

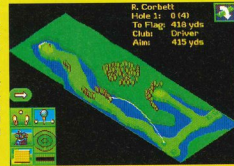
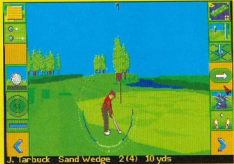
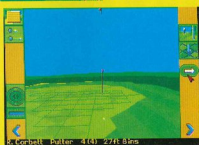
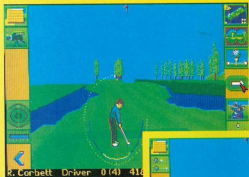
The whole control system is handled via icons except for the actually hitting and

putting of the ball, which yields to a couple of presses on ye olde mouse.

There are six courses to choose from all of which are presented in wonderful 3D. In most golf games, you hit the ball and you see it fly off into the distance and then you lose sight of it, but in Microprose Golf a mini camera follows the ball, so you see your shot in full.

And with five different camera angles to choose from the fun is endless. If only there was a record option, you could then send your golfing mishaps into Jeremy Beadle and have the whole nation laugh at you.

Microprose Golf has brilliant 3D graphics, simply oozes tons of great gameplay, is addictive as an addictive thang and will appeal to golf fans and non-golf fans alike.



Wizball by Ocean Software

OK, I'm sure you're all familiar with Sensible Software, the company behind such recent hits as Sensible Soccer and Wizkid.

Well, a long time ago in the beginnings, when the ST was just a little lad wearing shorts, a game appeared from Ocean entitled Wizball.

It is about a wizard and his cat who by some strange happening have found that their world has been robbed of all its colour.

They both have to collect paint that is running rampant around the Wizworld.

The wizard transforms himself into a little green ball, hence the name of the game, Wizball.

The Wiz has to then fend off lots of alien beasts as well as collecting enough paint to cover the world of Wiz.

Taking into account how old the game actually is the graphics are astounding and would even put some of today's products to shame.

You can't fault Wizball, simply because it is so original. The sound effects and music aren't that hot when compared to today's games, but way back then they sounded amazing.

The control of Wizball is very clever too, because when in his ball state he acts exactly like a ball would.

Wizball is more addictive than most other games, although it isn't the easiest game in the world.

I don't think there is a category that I could put Wizball into - it has elements of a



Dino Dini. It even sounds like a footballing name doesn't it? I know the guy's a programmer, but you really can imagine someone of this name hurtling down the left wing, skipping past defenders and placing a delicate chip into an unreachable corner of the net, can't you?

In fact – talent that he is – I do wonder if he would have enjoyed the same success had he been called, for instance, Bernard Scroggins or Cecil Plod.

But anyway, successful he has been, and surely no-one can deny this of the man responsible for the mega footy duo Kick Off and Kick Off 2.

Kick Off was undoubtedly the best



Dino Dini. About to take footy fans by storm yet again

football game of its time – its successor, despite the difficulty in mastery experienced by many beginners, has now become damn nigh legendary for its sheer controllability.

In fact these two games were to all intents and purposes the only real choices we had if we wanted a fast, controllable, realistic footy game.

Until about nine months ago that is, when Sensible Soccer arrived on the scene. Sporting new options, a different perspective and a sense of fun, it won oodles of followers straight away and sparked off a Mario versus Sonic-like war among the two sets of fans.

Well Dino Dini has become used to

the source 2

being king of the castle over the last couple of years, and he's not about to relinquish that crown to a bunch of young upstarts from just up the road.

He's been working flat out for about 18 months, and in just a few weeks' time

you'll be able to feast upon the fruits of his labour in the form of 90 Minutes.

Don't be fooled by the name – 90 Minutes is the third game in the Kick Off series, and no mistake. Dino has recently parted company with Anco though, who

With the war for top footy game as hot as ever, Dino Dini – not one to rest on his laurels – is determined to knock the sense out of Sensible Soccer once and for all. Paul Roundell kicks off to Cambridgeshire to try and make sense of it all

MINUTES 90

published the previous Kick Offs, to team up with big boys Virgin, and due to some internal wrangling that I was too polite to ask about, the Kick Off name stays with Anco.

Dino has completely re-written the game using more efficient techniques than previously, and although it was still incomplete when I saw it, several new elements are in evidence.

Inertia, or acceleration, has been applied to the players, meaning that rather than beginning a run at full tilt, a player will now need about half a pitch's length before he reaches top speed.

Perspective has changed also. There is still the option to play your game with a view of only a small part of the pitch (now one sixth instead of one twelfth), but you can also view from a much higher angle which gives you an outlook on over half of the pitch.

These views can be switched at will throughout the game at the tap of a key, which is a nice touch – handy for corners, free kicks and the like.

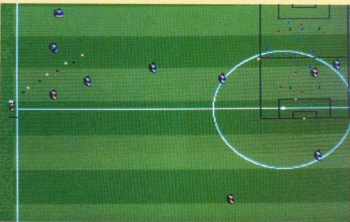
Speaking of these, Dino has eliminated the need for guesswork in such matters by including a, erm... trajectory pointer thingumajig which generously indicates the line your kick is going to take.

A criticism levelled at KO2 was the sheer infallibility of the goalies – it was as if they'd never heard of the Dave Beasant syndrome [Dave who? – exactly!]. Not only has this been amended, but the whole game displays a greater intelligence.

An example of this is in the referees, who discriminate between red and yellow cards not only in severity of the foul, but also as to whereabouts on the pitch the incident took place.

The crowd are far rowdier than ever before, and rightly so too as there are loads more variations of teams and kits to choose from – though why on earth they'd want to cheer along with 'Albion' is way beyond me.

Couple all of these elements with the existing playability of Kick Off 2, add a couple of new pitch options and a few more skill settings, and what you get is a potentially stonking game that seems set to take footy fans everywhere by storm.



A larger overall view is there if you want it



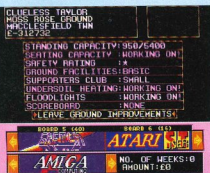
Alternatively, just play like you always did, you old stick-in-the-mud

PREMIER MANAGER

The best thing to do even before a coin is tossed, a ball kicked, or an Arsenal player disciplined, is spend some money. Go to the Ground Improvements and Sponsors Screen and use some of your starting money on the following:

Scoreboard
Floodlights
Supporters Club
Ground Facilities
Safety Rating
Seating Capacity

While scoreboard and floodlights are obvious, extending the seating capacity will enable a larger attendance, which is more likely with a bigger supporters club. Logical eh?



When the ground improvements are underway, check the ground sponsor-ship, which at the beginning should provide you with plenty of cash.

Next go to the Squad Details screen and check out your team. Don't bother looking at the transfer market at this stage - arrange the squad as best you can with the players you already have, make a phone call to the head coach and get the players training, as this does seem to make some difference to performance.

Now ring the Job Centre and employ your staff. Take on every person available, and begin by paying them a low wage (£90 or £135), apart from the head coach and the youth team coach who you should pay slightly more.

It's unlikely that you will see any immediate dividends from your youth

coach, but just one or two players coming through the ranks as you progress in the game could save you thousands in transfer fees.

Alternatively, ex-youth players are useful in that they can be sold off, and the money put towards a higher calibre of player in the market.



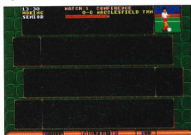
Fed up languishing in the lower reaches of the Conference league?

Paul Roundell has found another excuse to spend a few hours with Gremlin's managerial feast, and he's here to put some silverware on your mantelpiece. Listen up, Gream Souness...

You should now be ready to play your first match. It's up to the individual, but since the game screen isn't particularly exciting, and would take about 15 minutes to play through on slow mode, I prefer to play it on ultra with a finger hovering over the substitutions button.

If a match is going well then it's pointless to change a formation or make a substitution. The time to do this is if and when you find yourself a couple of goals down, or maybe just one goal down with not much time left.

When this happens, change your team's formation into the most attacking one possible - it won't work every time, but you'll save a few matches by using this tactic.



After a few matches you should be able to judge which areas of the team need strengthening. Even if your team is doing well, it won't have sufficient depth in reserves to continue its success should one or two players become injured.

It's likely that as well as a goalkeeper you will begin with four reasonable defenders, three midfielders, three forwards and some token reserves.

Forwards seem to be hit by injury most often, so it's best to buy a good forward and one other player to begin with. Borrow as much money as you can before spending in the transfer market - you should be able to coax £500,000 from the

friendly bank manager in the first instance.

There isn't much point in bidding for a player from a club several divisions higher than yours - you won't be able to afford him, and the bid would be rejected anyway.

While in the conference you should restrict your search to no higher than the Third Division (bids are occasionally accepted by Second Division clubs, but it's very rare, and the transfer fee would leave you penniless).

On finding the player you want (and can afford), it is advisable to make a bid about ten per cent higher than the asking price. This isn't a waste of money as there will



cheat mode

By now you are a few games into the season and your team is taking shape. The best way of putting a winning run together is by not only keeping constant check on your own team, but also by being clued up on the opposition.

In the Squad Details screen, look who your team is playing before every match; take note of how they rate performance-wise against your team, where their strengths lie, and what kind of game they play.

It's not a bad idea to check the league position of the opposition - if they're low down then their tactics mustn't be very effective and you can play your own game.

A high riding team are obviously doing something right, and it may be necessary to alter your own tactics in order to deal with theirs.

For example, if you have a fairly balanced mid-table team, but play an attacking game, and come up against, say, the top of the league, who also play an attacking game, then you will often find that you stand a better chance of gaining at least a point by adopting a defensive style.

BUCKLESS TAYLOR WAGGLESFIELD THM 14: CONFERENCE
CONTRACT 2 4 E-331081 WEDNESDAY WEEK 18 OF 1992

NEXT MATCH DATA

MATCH TYPE: MATCH:2 CONFERENCE
AGAINST: GATESHEAD
MANAGER: T. LEE
GROUND: INTERNATIONAL STADIUM
LEAGUE: CONFERENCE
COUNTRY: ENGLAND
STANDS: 0/0
SEATS: 581/12000
CAPACITY: 581/12000

GOALIE: GOOD ***
DEFENCE: GOOD ***
MIDFIELD: GOOD *
ATTACK: GOOD **
SQUAD: GOOD ***
STYLE: DEFENSIVE

TO BE PLAYED ON SATURDAY WEI
AT MOSS ROSE GROUND



be competition from other clubs, and it's important to buy players soon because the transfer market becomes depleted towards the middle of the season.

If you find bids are being constantly rejected, turn to your scout to find a player for you. This tends to be slightly more expensive than going through the transfer market, but at this point an increase in his wages will ensure you get a good service from him.

Be realistic though - don't put example expect him to come up with a world class player from the lower reaches of the leagues.

BUCKLESS TAYLOR WAGGLESFIELD THM 14: CONFERENCE
CONTRACT 2 4 E-331081 WEDNESDAY WEEK 18 OF 1992

DRINK LEIGH INFORMATION

MONEY IN ACCOUNT: 4-231001
OVERSEAS: 4-231011
MONEY IN CREDIT: 4-231040
MONEY IN DEBIT: 4-231050
MONEY IN BALANCE: 4-231060
MONEY IN LOSS: 4-231070
MONEY IN PROFIT: 4-231080
MONEY IN LOSS: 4-231090
MONEY IN PROFIT: 4-231100

LOAN LEIGH MEN

5. VERNON: £5000
6. VERNON: £5000
7. VERNON: £5000
8. VERNON: £5000
9. VERNON: £5000
10. VERNON: £5000

ONLY FOR A LOAN
LOANED TO: 231011
LOAN: 231011

When the FA and League Cups come along, if you have found a style of play that works, then use it. If you are still experimenting however, then I found that attacking teams of a similar calibre, and defending against teams from higher divisions seemed to pay off best. And I won the FA cup with Wycombe Wanderers, so I should know - so there!

If a player becomes injured it's worth spending the extra money to send him to Lillieshall for a speedy recovery. Don't sell all the average players in your squad to enable you to buy good ones - it's important to

BUCKLESS TAYLOR WAGGLESFIELD THM 14: CONFERENCE
CONTRACT 2 4 E-331081 WEDNESDAY WEEK 18 OF 1992

DRINK LEIGH INFORMATION

MONEY IN ACCOUNT: 4-231001
OVERSEAS: 4-231011
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10. VERNON: £5000

ONLY FOR A LOAN
LOANED TO: 231011
LOAN: 231011

have several reserves in case of an injury crisis.

After every few games, check the Ground Improvements screen for any more sponsors. Keep improving all the facilities (you won't be able to afford under-soil heating until you've received a big bonus).

It is important to keep spending money on the supporters club and ground capacity, because as the wages and bills of your club increase, you will need more revenue from gate receipts to afloat.

Improvements become increasingly expensive as you progress through the leagues, but it really is money well spent - you should aim to have under-soil heating by the time you arrive in Division Two.


BUCKLESS TAYLOR WAGGLESFIELD THM 14: CONFERENCE
CONTRACT 2 4 E-331081 WEDNESDAY WEEK 18 OF 1992

ADAMS PARK

DESCRIPTION

TOTAL CAPACITY: 2704/5900
STANDING CAPACITY: 1947/4100
SEATING CAPACITY: 757/1800
GROUND SAFETY: 3
GROUND FACILITIES: GOOD 0
SUPPORTERS CLUB: MEDIUM 0
UNDERSOIL HEATING: NONE 0
FLOODLIGHTS: MEDIUM 0
SCOREBOARD: SHALL 0

HIGHEST DIVISION: 3
LOWEST DIVISION: 2



This isn't a normal run-of-the-mill Cheat Mode, because there are any amount of variables that come into play (what a cop out - Ed). Follow the above steps though, repeating them frequently, and you should find that the Conference league will soon be left behind. There are a few final points to bear in mind, though.

Occasionally another manager will contact you, offering what is usually a very decent fee for one of your better players. Think before selling - even if you are short of money, the loss of a star player may do more damage than paying off an overdraft (you can actually go several million into the red - not a bad idea as long as revenue is coming in from gate receipts).

At the end of a season you may be offered a position with another club. Only very rarely is it a higher club who makes the offer, and unless it is, stay where you are.

One final important point - save your game before entering a high power situation such as a cup final, but particularly during the last few games of a season if relegation or promotion beckons. This way

you can have as many tries as you like without worrying too much about the outcome. I managed to fight my way into the First Division, where I finished eighth. If anyone manages to win the Premier League without cheating, and can prove it by sending us a photo or something, we'll send you one of the games recently reviewed in Gamer.

CONTRACT 2 4 E-33637 WEDNESDAY WEEK 18 OF 1992

CONFERENCE LEAGUE TABLE

PS	CLUB NAME	D	H	A	P	P	PIS
1	BROMSGROVE	18	10	4	28	17	35
2	GATESHEAD	18	10	4	28	17	34
3	ALCOCK TOMH	18	10	4	28	17	34
4	MELLSIDE WID	18	10	4	28	17	34
5	WORTHING WID	18	10	4	28	17	34
6	BATH CITY	18	10	4	28	17	34
7	BATH CITY	18	10	4	28	17	34
8	WORTHING WID	18	10	4	28	17	34
9	WORTHING WID	18	10	4	28	17	34
10	WORTHING WID	18	10	4	28	17	34
11	WORTHING WID	18	10	4	28	17	34
12	WORTHING WID	18	10	4	28	17	34
13	WORTHING WID	18	10	4	28	17	34
14	WORTHING WID	18	10	4	28	17	34
15	WORTHING WID	18	10	4	28	17	34
16	WORTHING WID	18	10	4	28	17	34
17	WORTHING WID	18	10	4	28	17	34
18	WORTHING WID	18	10	4	28	17	34
19	WORTHING WID	18	10	4	28	17	34
20	WORTHING WID	18	10	4	28	17	34
21	WORTHING WID	18	10	4	28	17	34
22	WORTHING WID	18	10	4	28	17	34

The light is fading and we're rapidly running out of things to say. The back page is here again and this month we have an in-depth feature into whether or not computers of any sort are killers...

ST bites dog!

The Gamer staff are always on the ball as far as news coverage in the computer world goes and this month is no exception with the publication of various scare-mongering stories about Nintendo machines giving small children epileptic fits, sometimes resulting in death.

We got our very own news-hound John "Scoop" Butters on the job and he unearthed a veritable scandal in the ST world with the story of Bob - the serial killer 1040ST.

We discovered Bob in the home of Alice and Fred, two unwitting teenagers who had bought him from a car boot sale in Wigan. The couple were saved just before they would have met an untimely demise.

Back STROKE

"When we first got Bob we had no trouble at all," said Alice.

"We used to play on him well into the night. Then about five months ago we invited some friends round for a game.

"We left them to it for a few minutes and when we came back they were dead as door nails, with Bob standing over them holding a machete dripping in blood, his disk drive clicking like mad.

"It took us a while to convince the police that we had nothing to do with it, but Bob got them too.

"I went to make a cup of tea and Fred went to the

loo. When he came back Bob had wired one of the poor men up to the mains and was happily eating the other with some fava beans washed down with an expensive bottle of Chianti."

Yes, this is a send up but it is designed to defuse some of the scare-mongering.

There have been isolated stories around the country of unfortunate games players suffering from fits.

But look at the facts - if you are epileptic and you stare at flashing computer screen you are running a risk.

This form of scare-mongering is no worse than the Pit Bull Terrier scare which

Insulting

This month we have the pleasure of insulting Biffa, alias Jonathan Maddock, the self-modelled indie kid with the bad attitude.



If you feel you have a insult you would like to throw at Biff please send it in to us at Gamer and we will be quite happy to do it for you. The best printable insult will get you your very own Enamel Gamer pin badge, so get writing kiddies.

eventually ended in the destruction of hundreds of harmless animals.

Again this was completely unnecessary sensationalism. So don't believe everything you read - apart from Gamer of course.

This month

Last month

THE CHARTS

This month

Last month



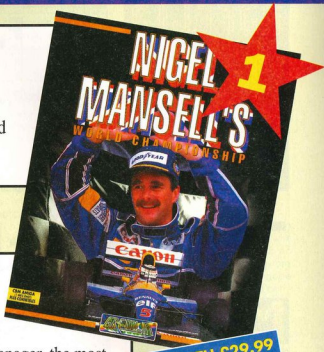
1	▲ (-)	Street Fighter II	US Gold	£27.99	11	▲ (-)	Archer Maclean's Pool	Virgin	£27.99
2	▶ (2)	Sensible Soccer	Renegade	£25.99	12	▲ (-)	Indiana Jones	Code Masters	£7.99
3	▲ (-)	WWF European Rampage	Ocean	£25.99	13	▼ (10)	Dizzy Prince of the Volk Folk	Code Masters	£7.99
4	▼ (1)	James Pond	GBH	£7.99	14	▼ (13)	Lotus Turbo Challenge	GBH	£9.99
5	▲ (-)	Premier Manager	Grenlin	£25.99	15	▼ (14)	Dizzy Panic	Code Masters	£7.99
6	▲ (-)	Street Fighter	KIXX	£9.99	16	▲ (-)	Lemmings - Oh No More Lemmings	Psygnosis	£29.99
7	▼ (5)	Trivial Pursuit	Hit Squad	£7.99	17	▼ (8)	Dream Team	Ocean	£25.99
8	▲ (9)	Lotus III	Grenlin	£25.99	18	▶ (18)	Test Drive II	Hit Squad	£7.99
9	▲ (19)	First Division Manager	Code Masters	£7.99	19	▲ (-)	Formula 1 Test Drive	Microprose	£34.99
10	▼ (6)	Spellbound Dizzy	Code Masters	£7.99	20	▼ (12)	Treasure Island Dizzy	Code Masters	£4.99

You've nothing to

CRIBE NOW!

NIGEL MANSELL'S WORLD CHAMPIONSHIP

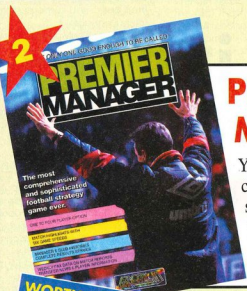
Become a Grand Prix legend in a race for the title of world champion in the definitive Grand Prix experience – Nigel Mansell's World Championship



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PREMIER MANAGER

You can have Premier Manager, the most comprehensive and sophisticated football strategy game ever, absolutely free. Start your career in the Conference League and use your management skills to leap up the divisions



WORTH £25.99

SQUIK MOUSE

Subscribe to Atari ST User and for only £3 more you can have this fantastic mouse, boasting a tracking speed of 290dpi and running as smooth as glass

WORTH £14.95



TWO EXTRA ISSUES AND A BINDER

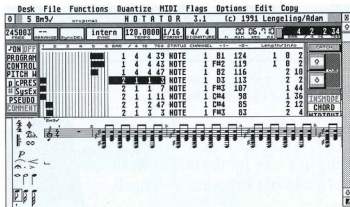
As well as a high quality Atari ST User binder, this great offer gives you two free magazines by extending your subscription for an extra two months

WORTH £12

lose ...and so much to gain!

ASPECTS of the ST

Six pages devoted to your favourite applications on the Atari ST



It may look like a keyboard vamp but it sounds like a guitar! Clever programming from Midi Busker

Try Busking it

Midi and sequencers are very much keyboard-oriented. In fact, due to the way Midi was designed, there were problems getting early Midi guitars to work properly. Most of those problems are behind us now, but difficulties still linger.

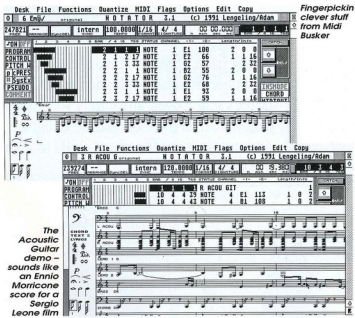
The problem lies in duplicating the strumming of a guitar using a keyboard. The order of the notes and their spans are different and trying to get the up/down strum just right is not a task for the faint-hearted.

The solution, of course, is to record guitar parts using a guitar. But not everyone plays guitar or has access to a \$1,000+ Midi guitar system. So, Midi Busker to the rescue.

This is a series of Midi files containing guitar strums and vamps recorded using a Midi guitar. There are eight styles - Accent, Ballad, Blues Rock, Country, Fingerpick, Folk, Strat and Vamp. There are two or more files for most styles containing the common chords and the less common ones.

Consecutive tracks in each file contain different chord types. Solo each in turn to hear what it contains. In use, you load some styles, select the chord types, string them together to produce your song and apply any transposition if required. The result is uncannily like a real guitarist!

There is extensive documentation for setting up your equipment



If you don't have a GM module plus info on how to use the Busker. There are also tips on using it with Cubase, E-magic (née C-Lab) and Hybrid Arts sequencers.

Niggles? Well, the velocity of some of the parts goes up to 127 which can cause overload prob-

lems if you're not careful, although you could make a global velocity reduction in your sequencer.

You are free to use the patterns in any music you produce without further payment but if it is for sale or distribution, the documentation asks that you contact Station for a

One of the most difficult things to record into a sequencer is a convincing guitar lick. Ian Waugh has an axe to grind...

Book of the month

We occasionally receive letters from readers asking how to go about writing their own sequencer or music programs.

"With great diligence, patience and optimism," is the obvious reply. However, there does seem to be a dearth of books about music programming.

The *MIDI And Sound Book For The Atari ST* from IMP is one of the few programming books to come my way, although I will confess that my programming expertise extends little further than Basic and some custom music languages.

Although it only arrived on my desk recently, it is a couple of years old. But it's American in origin, so perhaps it has taken this long to get the distribution sorted out.

However, it discusses the obsolete Steinberg Pro-24 and refers to C-Lab's Notator v1.1 - it's now up to 3.15.

But it contains a wealth of information and covers the ST's sound chip as well as Midi applications. The basic programming info is still current and the book includes a disk of programming examples in C and GFA Basic, hence the price tag.

If you've been looking for a music programming book - check it out. *The MIDI And Sound Book For The Atari ST* costs £21.24. More from IMP on 081-551-6131.

licence to do so. This is free and it's simply to dissuade anyone from copying or sampling the riffs and selling them as their own work. Seems fair.

The review disk contained Acoustic Guitar patterns. Station is working on one for Electric Guitar which should be available by the time you read this. In fact, there's an Electric Demo on the disk just to whet your appetite.

Midi Busker is one of the most interesting developments to come out of the "Midi pattern" market for quite a while. It's the easiest way to add convincing guitar accompaniment to your music without hiring a session man.

The disks are £14.95 each. More from Station Records, Station House, Station Road, Sudbury CO10 6SS. Tel: 0787 311500.



The attention to detail in the Egmont score is amazing



The front end of Oscar's Egmont

Winning Oscar

We looked at Oscar Music's Midi version of Mozart's Symphony No 40 last November. Two more additions have since joined the Oscar library – Bach's 2nd Brandenburg and Beethoven's Egmont Overture (\$24.99 each) of which the Egmont is in my copy of Notator and playing merrily away. Most of the time, that is.

The work is so large that an average 32-note polyphonic instrument is just not enough! The music has been set up for the Yamaha SY77 and there is a Sys Ex dump to fill your SY77 with the right sounds.

However, to hear the Egmont in full you need two SY77s! You can use Midi Thru to pass on the extra notes to another instrument which is a cheaper alternative.

When asked about the large polyphonic requirement, Oscar said the only other option would be to remove some of the notes – and I'm sure Ludwig wouldn't have been too happy about that! The

strength of Oscar's Midi files lies in the fact that they are complete and full renditions of the score – no compromise!

Like the Mozart symphony, the Egmont is another tour de force of programming. The attention to detail is amazing. It's cheaper than the Mozart, too, which may bring it to a larger market. Well worth investigating. What about the 1812, chaps?

More from Oscar Music, 91 Brick Lane, London, E1 6QN. Tel: 071-377 6294.



The front end of Oscar's Egmont

I've received several letters from readers who read our coverage of the Falcon and basically want to know whether or not to upgrade.

Most of the concerns are summed up in a letter from J.H. Meadowfield of Ipswich. He has been using a portastudio at home and is thinking about buying an ST for sequencing purposes.

J.H. is rather taken with the idea of being able to combine sequenced Midi data with acoustic recordings and wants to know if it's worth buying an ST now or waiting for the Falcon.

He is also concerned about software compatibility as he has heard that, in spite of Atari's claims, a lot of ST programs won't run on the Falcon. He wonders if he'll have to wait for the machine to build up a reasonable level of software support.

Well, the Falcon specs are certainly impressive. It is the first affordable computer with built-in direct-to-disk recording facilities.

However, the success of the system will depend entirely on software support. If the Falcon is to achieve "professional" status in the music business as a direct-to-disk recording machine then the software will have to be pro quality.

D2D already has some d-t-d (good!) software under development. We haven't yet had the opportunity to evaluate it but the demos we've seen certainly look impressive.

Software compatibility is a thorny

Waiting to see how the Falcon sounds

subject. Atari claimed the Falcon would be "very compatible" with existing ST software. Depends on your understanding of the word "very", but it seems that a good deal of software is simply not compatible at all.

Games suffer the worst but this is to be expected as games programmers tend to use all sorts of "unofficial" routines which often don't even work on new operating systems.

Musically, Steinberg's Cubase will run on the Falcon but C-Lab's (or Emagic's – see news item last month) Notator and Creator won't.

Software supply

We're still waiting to see Notator Logic which will run on the Falcon. However, that's not much comfort to anyone already running Notator who wishes to upgrade to a Falcon – they'll have to upgrade their software, too.

As with every new machine, it will take a while for the Falcon to build up its own collection of software.

As of writing, the best advice I can give to J.H. and anyone else thinking of buying an ST/Falcon is to wait and see how great the compatibility problems are, how this affects music software and, if direct-to-disk recording is important, how good the d-t-d software is.

Even though the Falcon was "launched" last August we still don't have all the answers. I'll certainly be exploring music on the Falcon. Although the ST is still the best music computer, the Falcon could well be even better. Watch this space.

All that's new in the music world...

● Free demos from Heavenly Music Send the dynamic duo a formatted disk plus SAE and you will receive 20 demos from the Megga Tracks range of Midi song files.

Those angel fingers have been working overtime, too, to bring you new pattern disks – Dr Soul Soul, Rock, World and 50s & 60s – at \$13.95 each. Well worth checking out.

Also new is Easel SC55, a graphic editor for Roland's Sound Canvas. It gives the user access to all parts, parameters, drum levels, tuning, reverb sends and so on. It's \$24.95 plus \$1.50 p&p.

More from Heavenly Music, 39 Garden Road, Jaywick, Clacton CO15 2RT. Tel: 0255 434217.

● Newtronic are to distribute a new accompaniment generator called Session Partner (\$149). It supports all 16 Midi channels and produces little melodic riffs. A more extensive – and expensive – version is being prepared for Frankfurt.

Newtronic are now the sole UK distributor of Y-not Application Design Editor/Librarian/Manager software. The range includes System 99 (\$129) for the Yamaha SY99, Shape (\$89) for the Korg 01/W, Aftershape (\$59) for the Korg 03R/W, Alexis (\$49) for the Alexis D4, Edith (\$59)

for the Yamaha SY55/TG55 and Jive (\$TBA) for the Roland JV80/880.

If you have a Korg 01/W or Pro/Pro X then check out Newtronic's Magic Patches (\$29 each). They contain 200 sounds/combinations, designed to sound good without using any FX. All the 01/W controllers are used and some patches use the "newly-discovered" crossfade function which is not used in any of the factory presets.

Got an Atari Portfolio? Newtronic have a Midi Interface for it. The package will include some music software and cost \$249.

If you're a compulsive Midi file buyer, it may be worthwhile joining Newtronic's Midi file club for heavy users. Members can buy 100 Midi files over a period of a year for only \$4 each. They also get a regular copy of Newtronic's disk magazine, Midi Music Collection Monthly, which contains updated titles.

More from Newtronic on 081-691 1087.

● Yamaha continues their habit of releasing free software editors for their instruments. The latest from the lab is Tony, an editor for the TG100 GM sound module. Sheesh! Where will this customer support end? Give Yamaha a call on 0908 366700.

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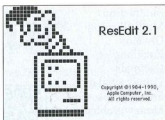
Fun with icons

Icons were originally pictures of Christ, the Virgin Mary and the Saints, but in this day and age, many computer users do not know any other meaning for the word than the pictorial representation of software programs and data files on graphic user interfaces such as GEM, Windows or the Mac's Finder.

For disk directories, I have always preferred the textual variety since it contains so much more information. But since the arrival of NeoDesk, as well as more recent versions of TOS, I have become addicted to designing ever more scurrilous icons: not for disk directories, but for "dragging" onto the Desktop itself.

Double-clicking on the icon will then launch an application directly, without the need to open any windows and clicking through various levels of the directory tree.

This has always been possible on the Mac, of course, and while ST programs rarely come with their own customised icons, Mac soft-



Jack-in-the-Box on the "Jackintosh" – Apple's ResEdit is fully compatible with the Specfic GCR emulator

ware always installs its own unmistakable pictorial symbol.

So on the face of it, there seems to be little need for an icon editor. But for truly creative spirits, the customisation of what is already pro-

vided represents an irresistible challenge.

So how do you go about editing your Mac icons? The answer is – if you do not already have a program called ResEdit, get a copy immediately.

As the name suggests this is a Resource Editor provided by Apple and available from Apple dealers as well as most bulletin boards and PD libraries.

The existence of separate "resource" and "data" forks in Mac files, combined with the much stricter adherence of Mac programmers to established guidelines and conventions than is the case in the more chaotic ST world, makes it easy to use ResEdit to gain

Editing Mac icons and installing the same for old DOS programs in Windows 3 are on the menu for Günter Minnerup

So macho!

Running Windows 3 on an ST equipped with a PC emulator has become a sort of virility symbol, I suppose – supreme proof of the ability of our beloved grey box to keep up with the DOS Joneses in every respect.

It is also far more pleasing visually than the boring old command prompt in text mode, and hence more appealing to us mouse and icon addicts.

So we tend to "overlook" the rather less than blistering speed of Windows on anything less than a 486, even if much of the software we own cannot actually take advantage of the facilities offered by the Windows environment.

For a start, true multitasking requires of least a 386 and most PC emulators for the ST still run on a 286 or less. In "real" or "standard" mode,

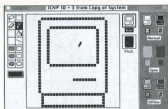
however, non-Windows applications cannot run in a window of their own but only in full-screen mode. Given the cost of the latest, Windows-compatible versions of the most popular commercial programs, I for one tend to stick with my old, familiar workhorses, combined with public domain software and the accessories bundled with Windows.

To make the most of running non-Windows software under Windows, however, it is important to be aware of the importance of PIFs or Program Information Files. Too many users simply drop out to the DOS prompt to run such software but this is totally unnecessary.

Even the other obvious alternative – running non-Windows programs from the Run option – is cumbersome compared to just double-clicking on the program's icon in the Program Manager.

To install such an icon, Windows needs to be provided with some essential information regarding the program; the most obvious of which is the name of the executable file.

This is what the PIF editor, one of the accessories supplied on the Windows 3 disks, is there for. Double-clicking on it produces a dialogue box which allows you to specify a range of parameters and options, any configuration or



Even the System file icon (and other features of the System file) can be manipulated with ResEdit

access to the guts of your software. Editing icons is one of the easier tasks – just launch ResEdit, open a program file, click on the ICON icon, and you are presented with a fully-fledged icon editor every bit as comfortable as that bundled with NeoDesk.

ResEdit is fun but it can also be a necessity sometimes, especially when it comes to importing files from a non-Mac environment.

Changing the Creator description and, on occasion, making other modifications can be a precondition for Mac applications being able to open such files. But please heed my warning – ResEdit can also be very dangerous.

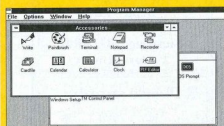
You are therefore strongly advised never to let ResEdit loose on the originals, but always to work with copies of your files!

data filenames to be passed to the application, the directory to be used, the screen mode (text or graphic), the minimum memory required and so on.

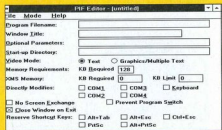
If the program plays tricks with the hardware that Windows ought to know about, then this is also the place to tell it. Finally, you can make the keyboard short-cuts used by Windows work with your non-Windows program – to save a screendump to the clipboard with Alt-PrtSc, for example.

Save your PIF, and from now on you can forget about the DOS prompt. But you will also notice how all the newly-created program icons look the same, just as they used to do on the ST's GEM Desktop.

Does Windows really have to be that drearily uniform, or is it possible to edit and customise these icons? Watch this space...



The PIF editor is found among the other accessories bundled with Windows 3. Just double-click to launch it...



... and you are presented with this simple form to fill in

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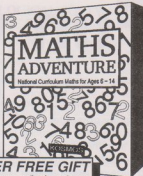
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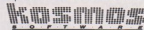
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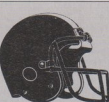
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"From my point of view, the game has kept me sitting up at nights and through holidays and weekends for up to 12 hours at a stretch, with minuscule breaks for food and other necessities... it is a game I have no hesitation in recommending to anyone with even the slightest interest in American Football." - Atari User review.

HEADCOACH V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your gameplay to test the very best the NFL can throw at you.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild...

The Stalker affair

Over the past few months, you may have noticed many the screenshots of comms sessions have been from Gribnif's Stalker comms program.

Recently, I've been using this almost exclusively for general comms use - when I'm not using

modern and efficient Ymodem and Zmodem protocols.

Stalker operates in a standard GEM window, so is compatible with all models of ST, TT and STE - and presumably works on the Falcon too. However, to get a full 80-column display, the GEM scroll bars may be hidden from view.

Another nice feature is its ability to interface to Steno, Gribnif's text editor package which can also run as an accessory. Steno can be used as a large editable capture buffer, or maybe to preview text before uploading.

Devoted

You can program Stalker yourself, via a compiled script language entitled BackTalk, supplied with the package - indeed, more than half of the manual is devoted to writing scripts. BackTalk is very similar to the C programming language and allows access to any of Stalker's functions.

One very handy feature is Remote (mini BBS) Mode, which allows you to log in to your own computer from another modem.

I've used this several times when away from my machine to fetch files which I suddenly needed to work on at another site.

OK, quick trivia question - who knows where the name Gribnif came from? The origin is a closely guarded secret at the company, but by dint of much sleuthing I've established that it's all to do with an episode of a (censored) 70s American TV series, in which a young child is seen valiantly trying to type up a report for (censored). Well! You live and learn, don't you...

dedicated Off Line Reader software for CIX, that is.

However, until now the only way to get hold of this excellent package was by ordering it directly from Gribnif in the States, as the UK company which distributes NeoDesk (another Gribnif product) wasn't interesting in importing the rest of their range.

Products

Thankfully all that has changed, with the news that Compo Software (distributors of CompoScript and That's Write!) have taken on the remainder of the Gribnif product range, including Stalker and its accompanying text editor accessory, Steno.

The list of features is quite impressive. Although powerful and versatile, it is still small enough to be used as a desk accessory, with drop-down menus available at the top of the window.

This means that all operations (including uploading and downloading) are available as "background" tasks - so your computer is able to get on with running other programs while Stalker is sending or receiving a file. File transfer options include the ubiquitous, but outdated, Xmodem, plus the more

Beginners' guide to E-mail Newpeak

Rather like citizen's band radio, with its "breakers", "smokies" and "ten-four's", regular users of computer comms systems have built up their own list of shorthand expressions.

Rather than confusing the issue, they're meant to speed typing and sometimes to help you understand the mood of the person sending the message - but if you don't know the vocabulary, you might find just the opposite!

Here's a brief summary of some of the more common terms you might find:

BTW - By The Way

FWIW - For What It's Worth

IMHO - In My Humble Opinion (or IMO, if you're not that modest)

IYSWIM - If You See What I Mean

NALOPTK - Sorry, not a lot of people know that one

OTOH - On The Other Hand

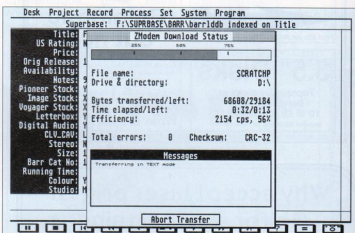
RSN - Read Soon Now. Indicates a forthcoming product availability date, thought to be copyright to Atari UK.

RTFM - Read the Friendly Manual. At least, I think the mild word is "friendly"...

You can also add "smilies" to your messages. These are little symbols, usually made up from punctuation marks, which indicate mood - pleasure, annoyance, humour, and so on:

- :-) This is a happy (or joking) smiley (look, it's a smiling face turned on its side)
- :-(A sad smiley indicates displeasure
- > A sarcastic smiley (one raised eyebrow)
- !-) A tight-lipped, or indecisive, smiley
- :-O Shocked!
- 8-) A smiley with glasses
- 8-> A smiley with glasses and a beard (this is getting silly!)

Finally, if you want to emphasise a point, you can SHOUT IN CAPITALS LIKE THIS, or make a "really" important point like "this".



Stalker supports background downloads - in this example, a file is being transferred while still editing a Superbase database

Highly useful and scandalously hard to get - that was Gribnif's off-line reader, Stalker. But André Willey has some welcome developments...

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The final classification in my admittedly over-simplified scheme is the display face. In many ways it's what an American friend once called the "bucket" category – if it doesn't fit into the serif, sans serif or script categories, it must be a display face.

In many ways, that's true. Display faces are the fonts you'd use to attract attention in posters and perhaps leaflets. They might even be used in invitations, logos and the odd informal business document.

They are often wide, tall or extra bold and while they work well in large point sizes, using them below about 14 points often causes them to become somewhat illegible.

Collections

Looking around at the public domain fonts, such as the huge collections available from the ST Club or Image Art PD library, most of them fall into this category.

The reason is that it is far easier to design a bold, gimmicky display face than a gentle, well-balanced serif typeface which looks good in all sizes.

The secret in choosing a display face is to match the face to whatever you want it to say. This can be quite hard, especially when we all have our favourites. In the first example, the typeface is specially chosen to reinforce the message.

Customised creations

If you don't have a font to suit your need, try some simple editing of a thick serif font. To duplicate the Stencil font effect, for instance, Adobe's PD font Utopia might be a good starting point, or perhaps the PD version of Clarendon Bold in Calamus format.

You'll only have to edit the relevant letters so it shouldn't be a long job but there is another alternative if you haven't got a font editor and you use PageStream.

Trying creating some white lines and overlaying them on top of a thick serif font at strategic points to create the same effect. You can save it as a graphic and use it again and again.

Dashing displays



Match the face to what you want it to say

Jones Builders need to convey strength and reliability – the typeface is Aachen Bold but there are PD fonts like Advertise (in Calamus format) that would do too.

The second face is Gillia, another PD Calamus font which is somewhat similar to Drury Lane Capitals in Timeworks. This is an excellent choice for entertainment and could be used for programmes and posters, perhaps for the local amateur dramatics society or the school pantomime.

Classical elegance

Caston Open Face is the third one – this one is an Adobe Type 1 – and its engraved look conveys a real sense of history. It also exudes a sort of classical elegance and could be used for advertising antiques or simulating inscriptions.

Our Speedy Couriers have to have a sense of speed – here a plain font with a distinct slant (or Italicised) provides the answer. The typeface is Franklin Gothic Black

but it could equally well be a bold Swiss or Helvetica. It could also be enhanced with clip art or some vertical lines denoting movement.

Another PostScript font, Charlemagne, gives Finest Antiques the elegance and sense of age that attracts attention and

finally, the Computer Club is kept nice, simple and modern – using a PD Calamus font called Chrome.

Other associations are possible too. A square serif typeface like Easy Text's Athens or Timeworks' Rockface is useful for architectural or building subjects while modern serif faces such as Bodoni are good for use when craftsmanship or build quality are an important message. Both are very good for posters too as they attract attention readily.

Neutral

If you can't be sure that you're getting the right typeface, try and build up a collection of thick, bold fonts suitable for all occasions. With a little time and effort and the services of a font editor, you can put together a whole range of weights in a neutral sans serif typeface.

And don't forget the script typefaces discussed in a previous issue – they too can convey an impression to reinforce your message. Certificates and invitations need a good script typeface to look their best.

Type can be manipulated for effect too. The second example shows how several weights of the lovely Gill Sans typeface can be used to graphically illustrate the point – here it's part of a poster for a slimming club.

Don't forget the more unusual characters – they too can be used



Manipulating type for effect

Andrew Wright finishes his guide to font classes with the attention-grabbing display typefaces

to good effect. The word "URGENT" looks as though it has been stamped but in fact it is a commercial PostScript font called Stencil. Placed at an angle on posters or leaflets, it can have a dramatic effect.

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● Steinburg Pro24 manual, dongle, unregistered £50, Tel Ralph 02406 5667.

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Will your flow allow you to grow?

Your profit and loss forecast, as discussed last month, might well indicate that all is well as far as profitability is concerned.

But what about your cashflow? It's all very well having provided say \$50,000 worth of services or supplied a similar value of finished product.

But if your costs are \$35,000, you've no prospect of receiving a penny by way of payment during the next couple of months, and your suppliers are ready to call in the receivers, you could find yourself in an impossible situation unless you've made full allowance for the situation when arranging your finance.

Poor cashflow is one of the major causes of business failure. It's vital to prepare yourself for the worst that can happen well in advance – and that means producing a cashflow forecast.

Rather than simply deflating how much is sold and how much is spent, and how much profit (or loss) is made in theory like a profit and loss forecast does, a cashflow forecast pinpoints the times when cash comes into and goes out of your business account.

So although a profit and loss forecast might show a profit for the year of \$75,000, it could be that the com-

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SALES	1000	1200	1500	1800	2000	2200	2500	2800	3000	3200	3500	3800
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WAGES	500	500	500	500	500	500	500	500	500	500	500	500
RENT	200	200	200	200	200	200	200	200	200	200	200	200
UTILITIES	100	100	100	100	100	100	100	100	100	100	100	100
INSURANCE	50	50	50	50	50	50	50	50	50	50	50	50
TOTAL	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
CASH FLOW	350	300	500	700	800	900	1100	1300	1400	1500	1700	1900

pany is so far in the red at say the half-year mark that it is simply unable to continue trading, with all cash sources exhausted and no-one with sufficient faith in the projected bottom line to help you out.

Find out how much credit your suppliers will give you, and take a pessimistic view of how soon you will get your customers to pay up. Although some may sur-

prise you to pay early, some may pay only when virtually forced to. Others whose own businesses go under may never pay you a penny.

Perhaps the last thing you want to think about when planning a business is bad debt provision. However, many have ignored it at their peril.

If you can't get your projected cashflow to work out the way it needs to for your business to be successful, try different suppliers, various incentive schemes for early payers (which should be distinct from discounts for bad payers, such as warning them they'll start charging interest after a certain time) which might help improve matters – but never rely on promises and the sporting nature of fellow businessmen.

The first can be broken. The second is a myth when more and more businesses are becoming increasingly desperate.

If you obtain the information you need, prepare your cashflow forecast using a spreadsheet with which you feel at home, setting it something out like the one illustrated here, and err on the side of pessimism – you should be under no illusions about the likely success of your venture in cashflow terms.

If you've been following these articles on starting up a new business, or using the information to improve the forward planning of an existing business, your plan should by now be starting to take shape.

Last month I covered the first six of 12 points your plan should include if it is to make any impression on those – usually a bank or other financial institution – to whom you present it.

The second six points are just as vital to success:

Premises, equipment, vehicles: State where you intend to locate the business, and why. Provide details of lease, rent or buying costs. If renting or leasing, state when the next review is due.

List the equipment and machinery you will need, say why you need it, and how much it will cost. Detail any vehicles required, stating whether they will be bought or leased, and the terms. Also estimate the lifespan of the vehicles.

Personnel: Provide names, addresses, dates of birth, qualifications, work experience and any other relevant details of key personnel, including the salaries you propose to pay them (do not include yourself or any partners here – see Personal Details).

Make absolutely certain you really need a particular employee before taking on him or her. Would it be cheaper to contract out some kinds of work? Are there services you could buy in more cheaply than employing someone full or even part-time?

If you do opt to pay outsiders for

some kinds of work, detail the services and costs here.

Marketing: Describe the kind of marketing and advertising you intend to do, detailing method and cost, and why you think these methods will be suitable for your market. State the source of your estimates.

Note that this section is about the marketing activity you intend to undertake and the costs involved, and is not to be confused with the description of your market, which I covered last month.

Record system: This is an area where your ST will be of great help. Describe how your records will be

kept, and how you will ensure they are always up to date.

You don't need to bore your bank manager or other potential backer(s) with precise details of the accounts package and spreadsheet you will be using, but describe the main points of what it does, and how it will ensure you have all the information you need.

Make sure you describe how your accounts will be backed up, so that you never lose any of your vital data.

Finance: Give full details of any orders you may already have, including value, and a list of any

existing business assets, again including the value.

Provide a complete list, including costs, of the equipment you will require at start-up and throughout the first year. State how you propose to pay for these, the most likely means being your own resources, grants, loans and credit.

Find out from your suppliers what credit will be available (it may vary according to how long you deal with them, how much you buy in a given period) and include this in the plan.

Taking into account all your capital costs, loan repayments, overheads, direct costs, salaries and any other payments you'll have to make, create profit and loss and cashflow forecasts.

If you don't have a spreadsheet yet, get one – this is the area in which it will really come into its own, and save you hours of valuable time.

Personal details: And so to the easy bit. Providing your name, address and telephone number should present no problem.

Detailing your qualifications should also be straightforward. But watch out when it comes to describing any relevant work and business experience you've had.

It's easy to get carried away, and to perhaps exaggerate your experience and capabilities. Remember, for instance, that working for an employer in a particular business is a far cry from being fully accountable for the business yourself.

Acknowledge where appropriate that you have some learning to do, but state your willingness to learn – and where and how you plan to learn it.

Richard Williams with the second six of the vital dozen points every business proposal should include

REPLAY 16

At last, a low cost 16-bit sampling system for the Atari ST, featuring full 16 bit input and output in the same unit. The system comes complete with a sophisticated sample making/editing program, superb digital Drum machine program, and a powerful MIDI keyboard emulation program which gives the user the ultimate in MIDI sample control.

HARDWARE - The 16 bit sampling unit plugs into the cartridge port of the ST. Audio connections to and from the sampler are provided via standard Phono connectors. An input volume control is also provided.

SOFTWARE - EDITOR - The sample editor is a highly flexible 'WIMP' style program which allows conversion or editing between any AVR format. 8/12/16 bit, Mono or Stereo samples. Sampling rates of up to 48KHz can be used, but the program can re-synthesise samples to practically any other speed.

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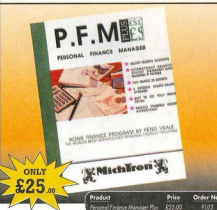


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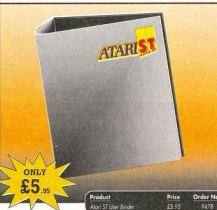


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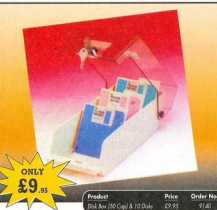


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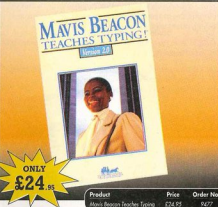


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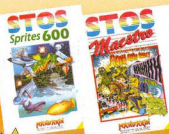


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