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ISSUE 46 ■ MAY 1993 ■ £3.25

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ST FORMAT

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"I think it's about time we started using more red and green!"

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WELCOME TO *ST FORMAT!*

This month's been absolutely frantic, what with the news that Atari are dropping the price of the STFM – when we first heard the news in the office there were major jubilations – more ST owners! More software! More backup! Continued support from Atari! It's a move that can only benefit us all – read all about the implications on page 53. You'll soon see that anyone who thought the ST was dead has another thing coming – and that's a very strong competitor.

Other brilliant news to come this issue is the long-awaited release of *Civilisation*. This game has come out as a direct result of your enthusiasm and determination to see more games come out on the ST – see whether you think it was worth waiting for – we certainly do – on page 59.

Also in this issue is a huge feature explaining how you can make time and money using your ST, and with both in short supply for most of us these days, this is an essential place to look. Check out Every Second Counts on page 18.

Floppy drives (page 26), platform games (page 34), hints, tips, and your artistic contributions (page 102) are all covered in detail – there should be plenty here to keep you going all month. Enjoy!

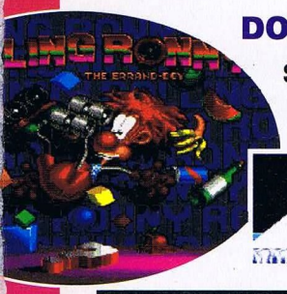
Paula Richards,
Editor, *ST FORMAT*

WHAT'S THE BEST FLOPPY DRIVE AROUND?

We round 'em up and meaningfully analyse them on page 26

DO YOU LIKE HIGH HEELS?

Sexy, aren't they? See if platformers have the same allure on page 34



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■ ***Civilisation*** **finally comes to your ST – we think it's excellent but do *you* think it was worth the wait after your vigorous campaigning? Find out on page 59**

COVER DISK 46

GET IN BUSINESS

This month's amazing Cover Disk is specially designed to please everybody – first we've got something to enable you to organise your life in the form of a demo of *The Biz* accounts package and if you like it turn to page 96 to order your complete copy. It's integrated – all the data is stored in one master file, so you can access everything conveniently. Also tying in with this month's feature on making money are two professional quality vector fonts so you can enhance your documents you've produced with your DTP setup. They're such good quality that you can even use them in professional work.

■ **Be organised with *The Biz*.**

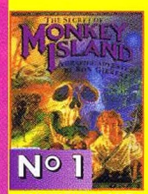
After you've tried to sort out your finances you'll probably be yearning for a bit of light relief, and we're also giving you that with these three engrossing games, which come straight to you hot from the programmers' disk drives. Before you load them you can test out your joystick with *Joystick Tester* – at least it should avoid the excuses about a pathetic joystick! First there's *Rayoid*, a first rate arcade game with a two-player option. *Balls* and *Kubes* are puzzle games with great graphics and sampled sounds – so get playing!

■ **Then you can relax with *Rayoid*, *Kubes* and *Balls*.**

TURN TO PAGE 14 FOR FULL DETAILS!

ATARI ST SOFTWARE & ATARI LYNX 2

SPECIAL RESERVE TOP TEN ATARI ST GAMES OF FEBRUARY/MARCH 1993



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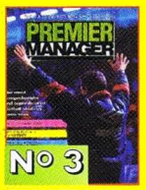

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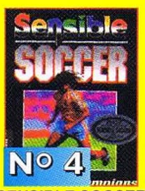

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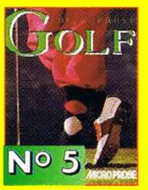

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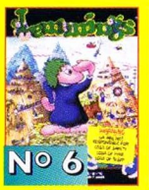

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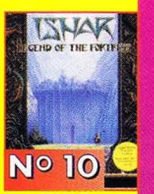

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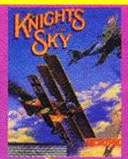

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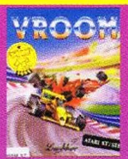

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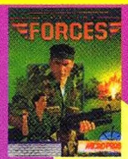

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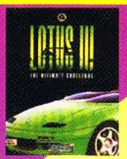

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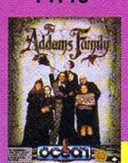

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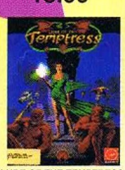

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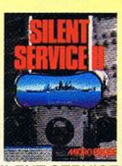

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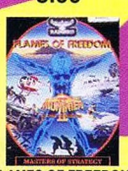

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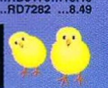

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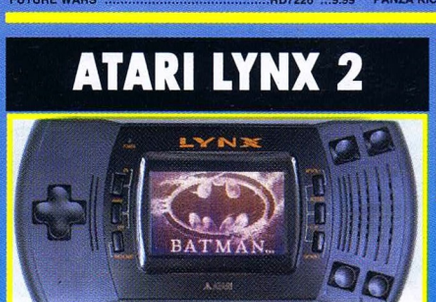

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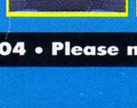

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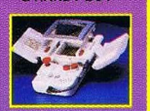

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More Atari News & Views from HiSoft

When only the Best will do...

Falcons from HiSoft

Yes, we have them - now! In what is an unusual step for us, we have decided to stock both the 1Mb and the 4Mb/65Mb HD versions, the retail prices of which are £599 and £999 inclusive.

We have un-rivalled (in the UK at least) knowledge of the Falcon hardware, its operating system and the tools that will be available for this amazing machine; in addition, we firmly believe in quality of customer service, both before and after a sale. So why not give us a call to discuss the benefits of this superb new computer and how it can best meet your requirements?

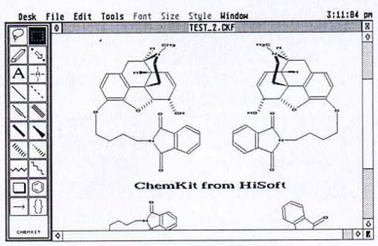
Devpac 3 £79.95

HiSoft Devpac 3 is the latest version of the popular assembler/ debugger package for all Atari 680x0 computers. Packed full of features, it is the ideal programming environment for beginners and professional programmers alike.

Improved and extended, the Devpac 3 macro assembler is now often 40% faster than its predecessor (without using pre-assembly), has many extra, switchable optimisations and, with the ability to pre-assemble files for inclusion, can now claim to be the fastest assembler on the Atari computers. It produces 68000 up to 68030 code (via a user option) & supports the maths co-processors.

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary include files for your system (ST/STe/TT/Falcon030), GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide. Call or write for more details.

ChemKit £39.95



A new package that many chemists and students of chemistry have been waiting for; ChemKit allows the easy creation, amendment and printing of any chemical structure.

Using a wide variety of flexible drawing primitives together with GDOS text, this package is a boon for anybody involved in producing chemical drawings. ChemKit runs on any ST/TT/Falcon030 and needs 1Mb memory.

Books from HiSoft

We have a number of excellent books for the ST/Falcon in stock at the moment.

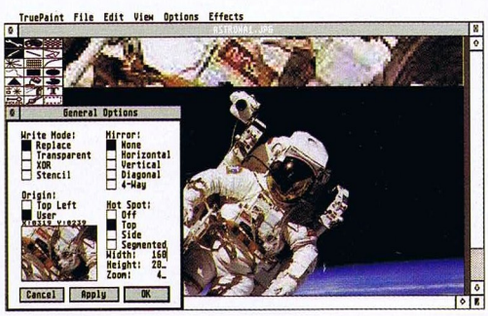
These include C-manship by Clayton Walnum, ideal for the C enthusiast or the beginner; Program Design Techniques by Paul Overaa, an informative book on how to write well-structured programs in most languages; Real-Time 3D Graphics by Andrew Tyler, shows you how to create vivid solid 3D colour graphics while the Motorola 680x0 Programmer's Reference and the Motorola DSP 56000 Reference are the bibles for 680x0 assembler and DSP programmers. Please call us or write to us for pricing details on these titles.

TruePaint £39.95

The True Colour Paint Package

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer ... and it is shipping now. Some of the highlights of the product are:

- *Works on all STs and Falcons in all screen resolutions including 768x480 True Colour*
- *Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts*
- *Full range of drawing tools*
- *A large variety of effects including shear, wrinkle, smooth, rainbow etc.*
- *Flexible zoom, full screen mode with edit, colour picker, bézier curves ...*
- *Animation, Font/Speedo GDOS support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more*
- *Extensive and informative 170-page manual*



TruePaint was launched at the 7th International Computer Show and has already gained wide acclaim from its users. For more information, please call us and ask for a brochure.

HiSoft BASIC 2, Harlekin 2, Lattice C 5.5, HiSoft C, HighSpeed Pascal, FTL Modula-2, KnifeST, WERCS, XBoot 3, HiSoft Devpac, HiSoft BASIC 2, TruePaint, Wordflair, Diamond Back, Superbase, Diamond Edge, K-Spread, K-Data, FirST BASIC, HiSoft FORTH, ProFlight, ChemKit, Tempus 2 ...

All prices include UK VAT and P&P within the UK. Please call for export prices, educational discounts etc. E&OE. Specifications and prices may change.

Diamond Edge £49.95

From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks. Version 1.04 is now available, this supports the IDE hard disk within the Falcon030 - call for upgrade details.

The current version of Diamond Back, 2.51, has full support for the new 21Mb flopticals - again. contact us for information on upgrading.

XBoot 3 £34.95

We are pleased to have acquired the exclusive rights to version 3 of this package, which provides comprehensive management of your AUTO folders.

New features include independence from any video hardware, selection of CPXs, definition of links between related files, new batch editor, integrated parameters dialog, a complete new function to change the running order of your programs and more.

XBOOT is an efficient, easy-to-use program and comes with a well-written and useful manual. Please enquire about upgrades (from £12.95) if you have an earlier version of XBOOT.

Superbase Professional £99.95

Following the sale of the ST and Amiga versions of Superbase to Oxxi Inc with whom we are working closely on a project for the Falcon030, we are pleased to be able to offer the superlative Superbase Professional (Version 3.02) at a substantial saving over its previous recommended price.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call Julia, Sallie or Marlynne on 0525 718181.

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STFM'S PRICE COMES DOWN BY £90!

NOW ONLY £159

DOWN £90

By Michael Roberts

Atari are bidding to rejuvenate the ageing STFM by dropping its price to a staggeringly low £159 – and it is strongly suspected that the firm will also be dropping the prices of its STEs later in the year.

Stocks of the STFM have only been trickling through the market, priced at around £249. Atari stopped supplying the machine to distributors and retailers just over a year ago. Its last official RRP was £299.

The manufacturer stressed that the new move is not a price drop but a "re-introduction of the machine at an ultra competitive price point." Atari believe that at its new price the STFM can recapture some of its old glory days and hit sales of 150,000 units in 1993.

Atari's Marketing Manager, Darryl Still, told us that they had considered dropping the eight year-old machine altogether but decided on a revamp due to perceived demand from retail.

Back into production

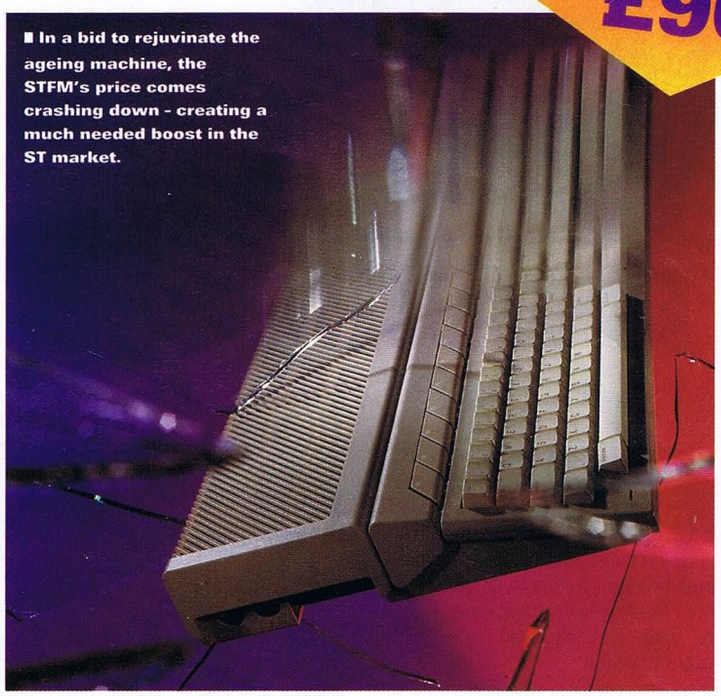
New, cheaper production techniques are being used to manufacture the new batch of FMs. This makes the low price point possible but also means that the machines will be extremely difficult and costly to upgrade. Still described it as "definitely a workshop job."

He went on to explain Atari's rationale behind the introduction:

With the STFM at £159 it will definitely put pressure on consoles like the Mega Drive and Super NES
Darryl Still

"The plan was for the FM to be superceded by the 520STE. We intended publishers to write to the E and produce a software base that was even more impressive than the Amiga's. Unfortunately, publishers didn't do that, they continued to write to the base machine.

"Now, with the STFM at £159 it will run 98 per cent of all ST games and it will definitely put pressure on consoles like the Mega Drive and Super NES. It gives consumers the option of a real computer for the same price as a console."



■ In a bid to rejuvinate the ageing machine, the STFM's price comes crashing down - creating a much needed boost in the ST market.

He conceded that some newer games, because they are written to the E and need a minimum of 1MByte of RAM, will not run on the STFMs but claimed that there is a large enough library of software and a regular enough supply of new titles to keep consumers happy.

At such a low price, not much software is expected to be bundled with the machine. Still explained that the exact contents of the whole package have not been finalised yet but predicted that it would come with a couple of low cost productivity titles and three or four old Atari games.

A number of well-placed sources have claimed that the STFM re-introduction will be followed by the 520 STE dropping from £249 to £199 and the 1040 STE falling from £299 to £249.

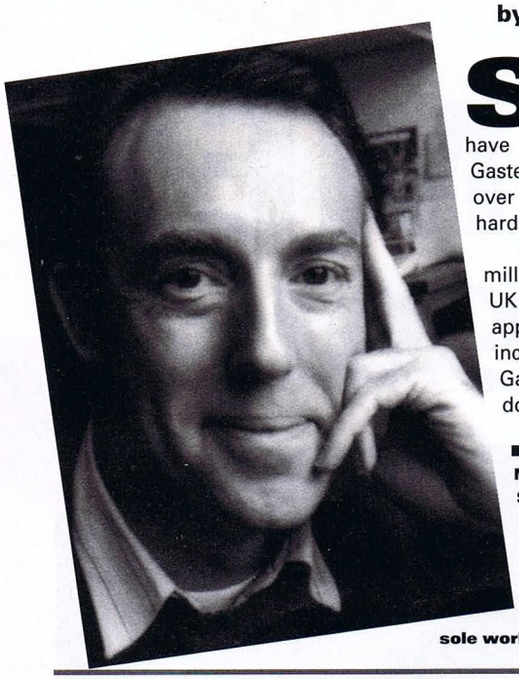
Atari's only comment on the two machines, however, was that both the 520STE and 1040STE continue to be available as part of the £249 Discovery Extra pack and the £299 Family Curriculum pack respectively.

"It gives consumers the option of a real computer for the same price as a console"
Darryl Still

■ Will the STFM's price drop revive interest in the ST?

● To find out exactly what the price drop story means for you, turn to page 53.

SEGA VS GASTEINER



Nick Alexander, Managing Director of Sega Europe is getting increasingly worried about Gasteiner's hard drive riding off the back of Sega's "considerable reputation" in the console world. Are these related?

by Paula Richards

Sega, the Japanese makers of the Mega Drive game console, have threatened to take Gasteiner to court in a dispute over the name of Gasteiner's hard drives – "Mega Drives."

Sega, who sold over one million Mega Drives in the UK in the last 12 months, appear to be getting increasingly worried about Gasteiner, the small London-based ST hardware and software supplier. They seem to believe that Gasteiner hope to increase their sales of these hard drives because they have the same name as the consoles off the back of Sega's "considerable reputation," despite the fact that the products the two companies are selling are quite different.

Gasteiner have been instructed by Sega's solicitors that, if they want to avoid this infringement of trade mark – and subsequent costly court action – they must remove any signs or logos which use the words "Mega Drive," and that they must not place any more advertisements in any journal which uses the words "Mega Drive" in connection with hard drives – or any other related computer product.

On top of this, Gasteiner have had to provide a list of all the newspapers, magazines and journals in which they have advertised using the offending words.

Just two days too late

What all this means to Gasteiner is that, unless they cooperate fully with the Japanese console giant's instructions, they are likely to be taken to court and sued for infringement of trade mark.

The irony of the entire situation is that Sega applied for the "Mega Drive" trade mark on July 25 1989, and a mere two days later, long before they could possibly have known about the console boom of 1992 which consolidated Sega's reputation, Gasteiner was incorporated.

Given this and the fact that Gasteiner don't have the funds to fight court battles with financial giants such as Sega, they're left with little choice but to obey the conditions laid down.

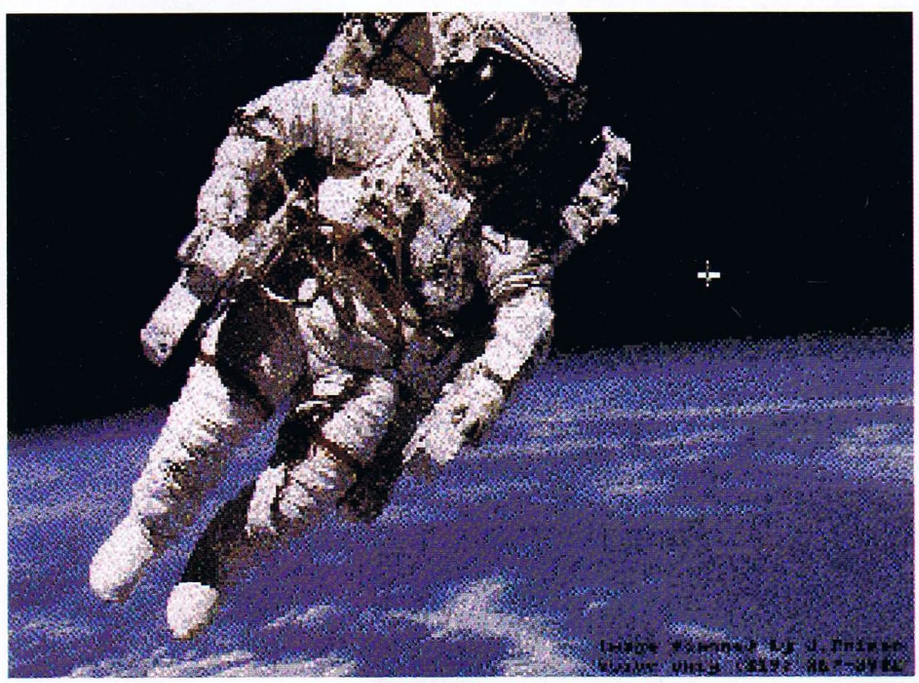
THAT WAS THE SHOW

By Clive Parker

This year's 7th International Computer Show was well represented by Atari hardware and software developers and suppliers and well attended by ST enthusiasts – it was so busy that on the Friday new arrivals were forced to wait outside until there was room to get in.

Atari UK representatives Darryl Still and Alistair Bodin gave question and answer sessions about Atari's future plans, particularly the Falcon. Among the existing Falcon packages for sale was an early version of *Musicom,* a two track direct to disk DSP sound processor package costing £49.95. Compo reported that they'd sold more copies of *Musicom* than there were Falcon owners at the show, the usual comment from people being that they were "just about to get a Falcon." *That's Write 2* (£129) was running perfectly under MultiTOS on another Falcon.

On show but not on sale was a 286 PC emulator board which runs with a Norton factor of 11.3, the equivalent of a fast 286 PC clone. The reason for the extra speed is that the Falcon uses 16MHz RAM chips while an ST runs at 8MHz. The working name for the emulator is *Falcon Speed* and it is expected to be priced around the £200 mark but there are no details of availability yet.



An example of the outstanding graphics capabilities of the Falcon030, this is an example picture displayed on a standard Atari monitor using *True Paint*.

A Falcon genlock was on display overlaying graphics from a video camera onto a TV using a software package called *Overlay*. The genlock software will support the new Speedo GDOS (the latest GDOS replacement) when it becomes available. Compo also announced that virtual memory software is being developed for the Falcon, enabling the hard drive to be used as extra memory space. For more details contact Compo on ☎ 0480 891819.

True painting

HiSoft were displaying and selling *True Paint* (£39.99), the true colour paint package designed for the Falcon030 but capable of running on the ST range of Atari machines. Also on show were the latest versions of *Diamond Edge, XBoot 3, Devpac 3, HiSoft Basic 3* and *Harlekin 3.* Later this year HiSoft are also planning on releasing new versions of *K-Spread* (spreadsheet) and *Superbase* (database) for your ST, call HiSoft on ☎ 0525 718181 for additional information.

CGS Computerbild were demonstrating *DA's Vector,* a new colour vector graphics, animation and presentation program which

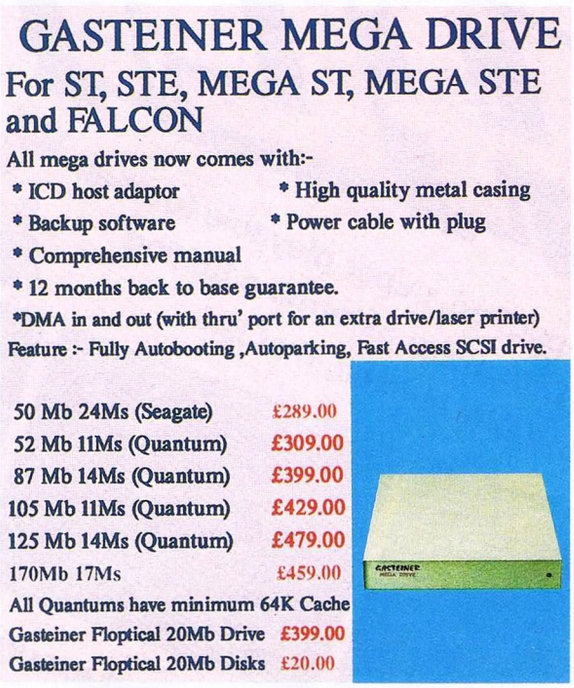
IN MEGA BATTLE

Help 'em out

So Gasteiner, as well as losing a lot of money in having to pay solicitor's fees, are also minus one very well known brand name of hard drive, a brand name that ST owners would be more ready to associate with hard drives from Gasteiner than with consoles.

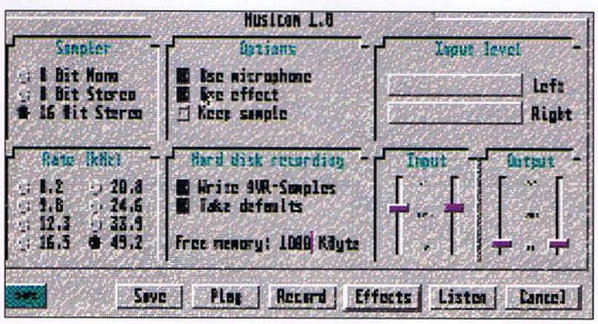
We've got together with them to bring you one of these now-nameless 50MByte hard drives which is worth £289. All you have to do to earn yourself this incredible bit of kit is think of a new brand name – preferably something memorable, short and appealing, so get your imagination into gear.

It'll be up to Gasteiner to choose their favourite name, but send your entries into us at "There's Nothing Mega About This," *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW by Friday 21 May.



One of the offending adverts from Gasteiner that regularly appear in *ST FORMAT* - "remove them or we'll issue proceedings against you." warn solicitor's acting on behalf of Japanese console giant, Sega.

THAT WAS



***MusiCom* running in on a standard Atari monitor in 80 column true colour interlace mode.**

runs on the STE, TT and Falcon030. It looks nothing short of brilliant; being able to display vector images in any resolution from monochrome to 16.7 million colours. The displays we saw were absolutely stunning, with high resolution colour animations being designed and demonstrated on the spot in a matter of minutes.

It costs just £149 and has to be seen to be believed – watch out for the review in a future issue of *ST FORMAT*. Other items being displayed by CGS included *Didot Professional 4.2, GT Look: 2* scanning software for the Epson GT series of A4 24-bit colour flatbed scanners and *Retouche Professional*. Fore more details call CGS Computerbild on ☎ 081 686 8121.

There were many other items of interest for ST enthusiasts including music and MIDI software from Harman Audio, Microdeal and Newtronic, *Calamus* from Halco, samplers and digitisers from 2-Bit Systems and all the usual distributors selling everything from monitor plugs to the ST Book.

MAD INVENTOR ALERT

Inventor's are always mad, aren't they? You never see them walking around supermarkets, their hair discreetly parted, looking for the rice pudding shelf, do you?

Well, one of these loonies has been up to his tricks again, this time with the space-time continuum and unleashed the forces of chaos on an unsuspecting world.

Of course, we're talking about the possibly very excellent new *Chaos Engine* game from those wonderful Bitmap Brothers, which is finally being released for your ST this month, price £25.99

You lead a gang of adventurers to the inventor's lair, with the ultimate aim of infiltrating the Hall of Machines – where the Chaos Engine is located – and returning the world to order.

ST FORMAT should be bringing you the full review next month or else you can phone Renegade on ☎ 071 702 3644 for more information. The in-game music, by the way, has been written by Asian rave band Joi.

You and your adventurers stumble into the grounds of an isolated mansion, where some very, very strange things are going on. Welcome to the *Chaos Engine*.

SNIPPETS

The next phase

16/32 Systems are now the official UK distributors for all Lexicor Software Corp software featuring the *Phase 4* graphics packages. The titles available include *Chronos 3D* (£159), the 3D key frame animation program, *Xenomorph* (£79), the upgraded version of the *Phoenix 512* raytracing program which comes complete with *Cyber Sculpt, Phase 4* (£280), an integrated suite of graphics programs (*Prism Paint, Chronos 3D, Prism Render 24* and *Cyber Sculpt*), the *Cyber Colour* (£69) three dimensional object painting tool and *Genesis* (£42.50), a world construction and starfield generator. All of the Lexicor range are compatible with the Cyber series so you can import objects created with *CAD3D* and work on them. We'll be starting a series of reviews next issue, so watch out for that. Contact 16/32 Systems on ☎ 0634 710788 and watch out for the definitive *STF* reviews starting next month.

Inexpensive inks

Premier Inks are about to flood the inkjet refill market with low cost high quality refill packs at an affordable price. Most twin pack inkjet refills cost £14.99, the Premier Inks twin refill pack costs £10.99 and contains more ink, a single refill is also available for £5.99. The packs are available in black, cyan, magenta, yellow, brown, green, dark blue and dark red with other colours to follow. Also under development is a completely waterproof ink. Most of the major inkjet printers can use the refills, call ☎ 0942 887648 to see if your printer is among them.

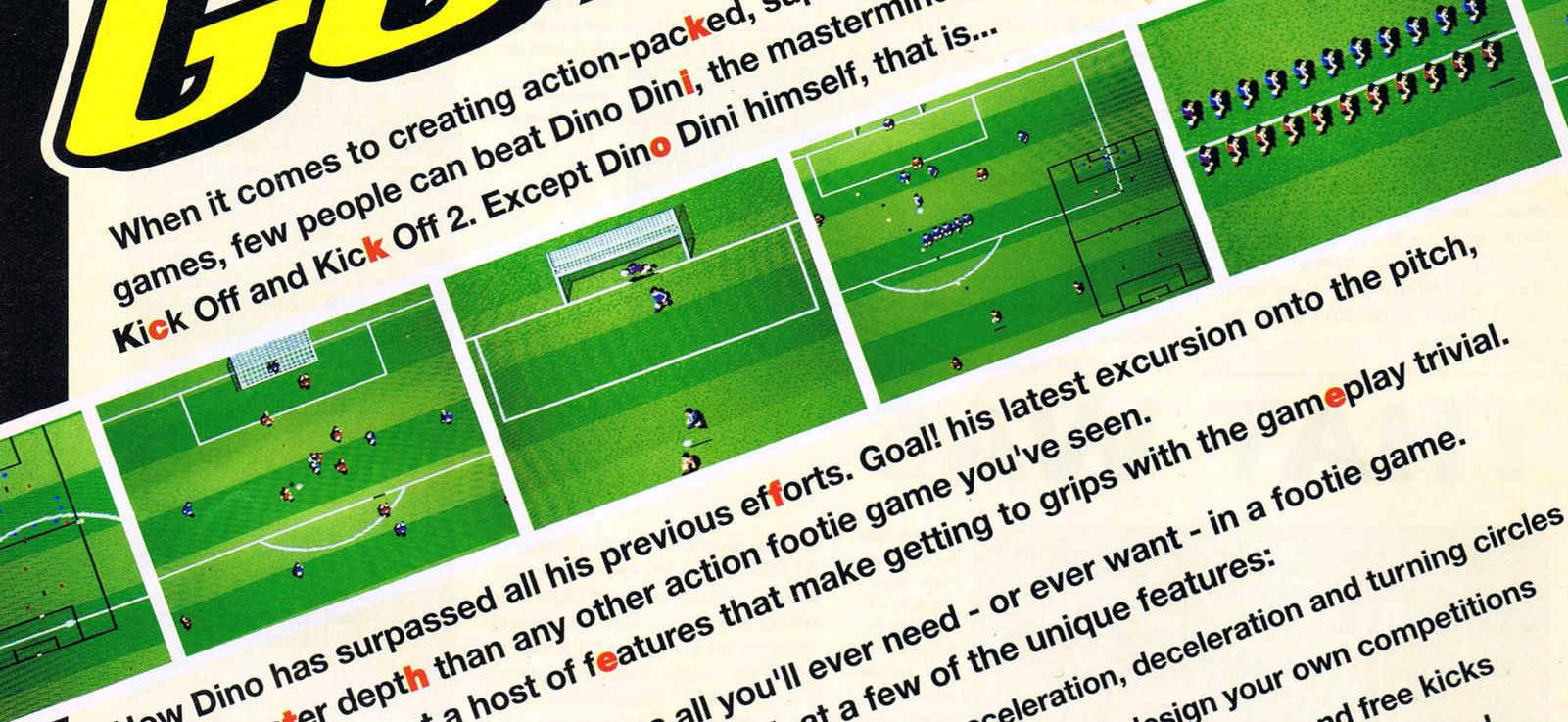
Up a ton

Because of the exchange rate between the US dollar and the pound, the pound is now worth 25 per cent less than a few months ago. This means that all US goods cost more to buy, so all the machines in the Falcon range have risen in price by £100. The three basic models of Falcon030 will be the 1MByte RAM version for £599, the 4MByte machine for £799 and the 4MByte version with 65MByte hard drive is now £999. Ouch!

FANTASTIC FOOTBALL ACTION!

GOAL!

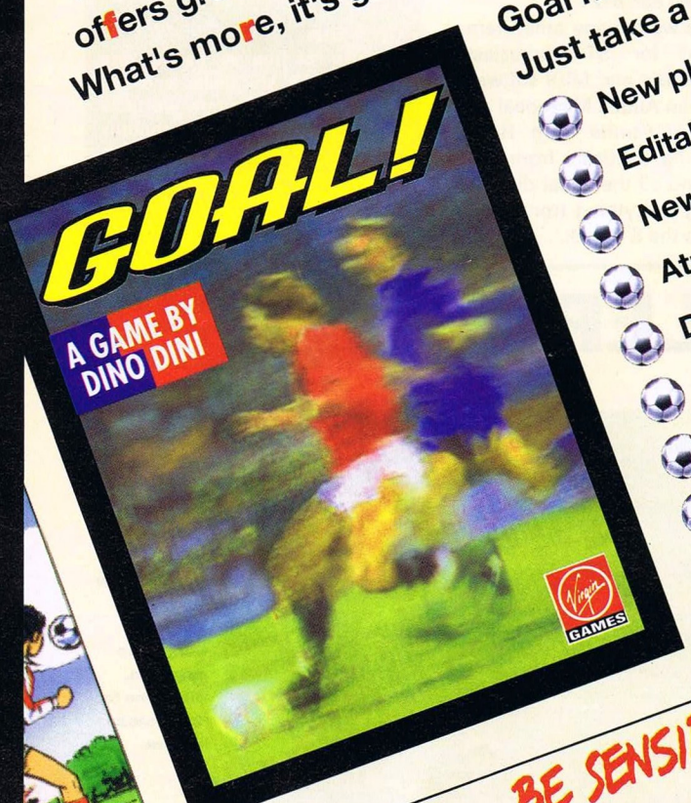
When it comes to creating action-packed, super playable football games, few people can beat Dino Dini, the mastermind behind Kick Off and Kick Off 2. Except Dino Dini himself, that is...



Now Dino has surpassed all his previous efforts. Goal! his latest excursion onto the pitch, offers greater depth than any other action footie game you've seen. What's more, it's got a host of features that make getting to grips with the gameplay trivial.

Goal has all you'll ever need - or ever want - in a footie game. Just take a look at a few of the unique features:

- New player attributes - acceleration, deceleration and turning circles
- Editable cup and league systems - design your own competitions
- New system for controlling throw-ins, corners and free kicks
- Atmospheric spot sound effects - listen to that crowd roar !
- Detailed action replay system - works like a video recorder
- Four new pitches - muddy, wet, normal and stripey
- Flippable screen display for large or small sprites
- Horizontal and vertical pitch display options
- Improved computer-controlled players
- Tactics editor



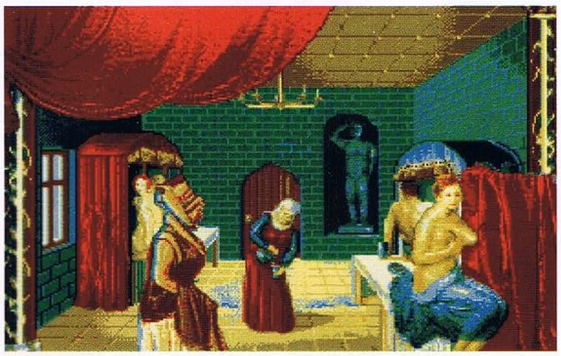
© 1993 Dino Dini, ℗ 1993 Virgin Games.

BE SENSIBLE, BUY THE BEST FOOTIE GAME THERE IS!

Available on Amiga and Atari ST.

Virgin GAMES

TRADE AND TRADE AGAIN



■ **Eine schone dame mit der grosse busen. Roughly translated, this means a beautiful lady with big red buses. Watch out, the Germans are coming to annexe your ST with *The Patrician*.**

With one eye fixed on the Hanseatic League's top job you bribe, marry and scheme your way to the top

Simarils' UK distributor Daze must be putting in 25 hour days at the moment. Not content with announcing the imminent arrival of *Ishar 2* for both the ST and Falcon, they're also gearing up to release Germany's chart-topping adventure game, *The Patrician.*

The game revolves around the business and trading activities of the Hanseatic League during the Middle Ages. You – and up to three other human players – start off with a small shipping fleet, based in a member town of the league.

Ambitious to the last, you soon realise that material success isn't enough and start clawing your way to the top of the mediaeval pile. With one eye fixed on the Hanseatic League's top job, you bribe, marry and scheme your way to the top. However, there are a healthy number of pitfalls in this game including piracy, blackmail and intrigue – and it's your job to overcome them.

The Patrician is going to be released in June, price £25.99. If you'd like additional information about the game, phone Daze on ☎ 071 328 2762.

■ **Grog, bear-baiting and the pox. Things haven't changed that much since the Middle Ages, have they?**

READY, STEADY, GO!

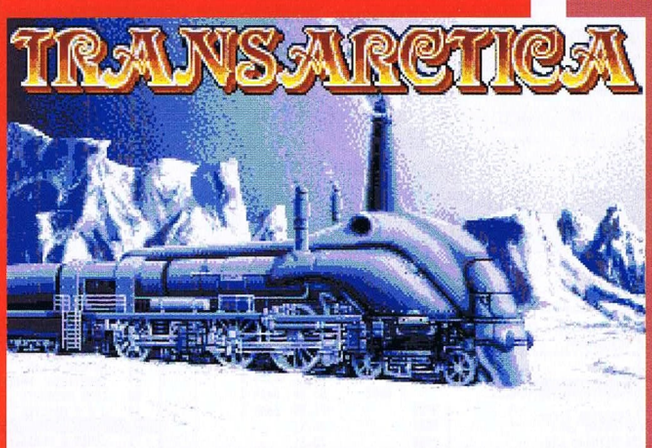
Falcon software and hardware has started to sneak onto the market with a rash of new items appearing this month, these are they

APPLICATION SOFTWARE AND HARDWARE

Chagall	Professional 24-bit paint program
Chranach	Professional painting package
Comic Maker	Create your own comic using library files
D2D Edit	Stereo direct to disk recording
DA's Vector	24-bit colour vector graphics package
Devpac 3	Fully 68030 compatible
Digitape	Six track direct to disk recording with DSP effects
Dynacadd	CAD program
Falcon GCR	Mac emulator from Gadgets by Small
Falcon Speed	IBM 286 emulator
HiSoft Basic 2	Fully 68030 compatible
JRI Genlock	Falcon specific genlock
Lattice C	Fully 68030 compatible
Matrix	True colour digitizer
Musicom	2 track direct to disk recording with DSP effects
Phoenix	True colour 3D rendering package from Lexicor
Prism Paint	Professional paint program
SMPTE Track	MIDI sequencer
True Paint	£39.95 from HiSoft
4T FX	Four track direct to disk recording

GAMES

Humans	Humorous *Lemmings*-style fun with cave people
Ishar	Adventure RPG game
Road Riot 4WD	Arcade driving game
Transartica	Strategy game



■ **"*Transartica* is a massive adventure featuring trains and mamoths instead of the usual dungeons and dragons." The ST version was reviewed in *STF* 44 and received a good (but not brilliant) 79%.**

SNIPPETS

Modem magic

The *ST FORMAT* BBS has a new number. Call 0225 465977 24 hours a day, seven days a week at speeds up to 9,600 baud. The BBS is a forum of lively debate between *ST FORMAT* readers and has an ever growing user base; the BBS features an expanding file base, every *ST/Amiga FORMAT* Cover Disk and all *ST FORMAT* Cover Disks up to issue 40. Cover Disk files can be downloaded individually so you can complete your file collection if you missed any previous issues.

From next issue we are starting a directory of ST based bulletin boards, if you would like your BBS featured in the directory then send details to Clive Parker, BBS Directory, *ST FORMAT,* 30 Monmouth Street, Bath BA1 2BW. Please include details of modem speeds, on-line hours and any special features of your BBS.

I'll go where the music takes me

Over 300 MIDI and music companies will be represented at the 4th MIDI and Electronic Music Show taking place at the Wembley Conference Centre from Friday 23 to Sunday 25 April. Over 150 exhibitors will be present featuring new MIDI products from all over the world, including Take Control, Zone Distribution, Gajits, Music Sales Group, Harman Audio and Heavenly Music. Many items on display will be making their UK debut having been previously shown only at the Frankfurt Musik Messes. Keep an eye out for music demos running on the Falcon, several companies including D2D Systems, Soft Arts and C-Lab are all to be demonstrating Falcon-specific titles. Tickets for the show are available from the credit card hotline on ☎ 081 547 1183, advance tickets cost £4 for one day or £9 for a three day pass. Prices on the door are £8 for adults, £6 for students, OAPs, the unemployed and children under 10 years old, and a three day pass costs £15 on the door. You need a passport size photo for a three day pass.

Red faces at Atari

Red noses, actually. The bods at Atari UK did their bit for Comic Relief by engaging Sega and Nintendo in a watery "It's a Knockout" style battle at Harlow swimming pool in Essex, organised by Special Reserve, the mail order company. Seven teams took part in the contest, with Special Reserve emerging as the eventual winners of the trophy and Electronic Arts coming in second.

COVER DISK 46

The Biz

BY: ORPHEUS SYSTEMS
RESOLUTION: HIGH RESOLUTION
FOLDER: THE_BIZ
FILES: BIZ_1.TOS, BIZ_2.TOS
GET STARTED WITH: SEE BELOW

***The Biz* is a** comprehensive integrated accounts package – it's wonderfully crafted and everything knits together beautifully. The demo on the Cover Disk is complete – you can use all the functions apart from the fact that you can't print. You get the opportunity to have a good hands-on session before making any decisions – and if you do decide you want the full package, you can order it from our special offers department complete with a discount – see page 96 for more information.

To squash this huge demo onto our Cover Disk we've compacted it into two files. Get a blank disk and copy across BIZ_1.TOS, then run BIZ_1.TOS. After a minute or two a handful of files appears on the disk. Now delete BIZ_1.TOS, otherwise there won't be enough room for the second half of the program. Copy BIZ_2.TOS to the same disk and run it. Another set of files appears. You can delete BIZ_2.TOS now too. *The Biz* demo only runs in high resolution using Atari's dedicated monitor. The full version also runs in medium resolution but there just wasn't room on the disk for both versions. No problem, we've included the excellent mono emulator *Sebra* to enable you to run the demo on a colour monitor or television. It's in an AUTO folder and installs itself when you boot from your new disk. Have a read of the document SEBRA.DOC to familiarise yourself with it. When you've got the disk ready, run BIZ_D.PRG. A box comes up in which you have to enter a few parameters – like the date – before you get started. You then find yourself at the main screen and it's all yours.

The demo comes with a full set of data to give you something to play with. Use the cursor keys or the mouse to select an entry and press <Alternate> and <E> or select Edit from the Edit menu to (surprise surprise) edit an entry. To add your own transactions, select what sort of transaction you want from the Transaction menu or click on one of the icons at the bottom of the screen. The little "Δ" symbols next to some fields are an excellent touch – clicking on these reveals an enticing menu of possibilities.

There's also a separate set-up program to define how *The Biz* is configured. There's an address database – ADDRESSD.PRG – and a report generating program – REPORT_D.PRG – they're both in the same impressive style.

Got *STF* from the shop, got the disk from the cover and it's in the drive? Good, now read on

On the inside of the thing on the outside

The Biz Demo
Demo of this powerful fully integrated accounts package.
Page 14

■ **Check out this month's feature about making time and money starting on page 18.**

Balls
Cunning puzzle game where it's all done with mirrors.
Page 15

Kubes
More falling block mayhem with this infuriating puzzle game.
Page 16

Rayoid
Spin around blasting and thrusting with this first-rate arcade game reminiscent of the classic *Asteroids* and *Spacebattle* games.
Page 16

Joystick Test
Have you got wonky wagglers? Test out your joysticks with this utility, and never blame the thing again.
Page 17

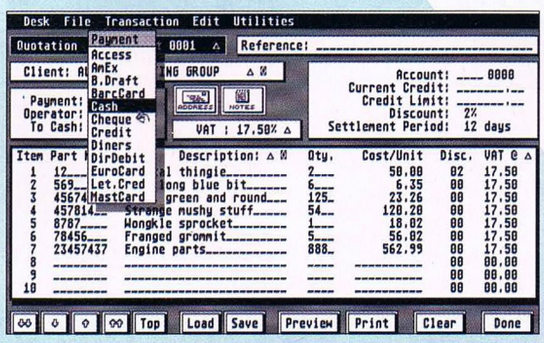
Vector Fonts
Two professional quality vector fonts. To use with top DTP programs.
Page 16

Midi File
If you have a MIDI setup, why don't you give your synth a work-out with this stunning MIDI file?
Page 16

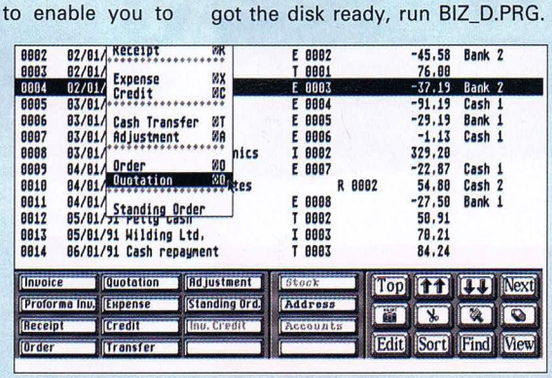
Assembly Listing
More assembler lists for er, assembling in, yup, assembly.
Page 17

■ **Follow the third installment of our tutorial on page 95.**

Back-Up
The ever faithful *Back-up* – get that Cover Disk copied in a trice.
Page 17



■ **Invoice creation using *The Biz*. Everything is presented on one screen and you can also access the address database and definable sub-menus. Once you've got all the data in you can preview the printed result.**



■ ***The Biz's* main screen. You can access functions using keyboard short-cuts, the menus or the row of icons at the bottom. Unlike conventional accounts packages, all transactions are kept in one large file in memory.**

■ **If you have 1MByte or more you can use the comprehensive *Address* program to sort, edit and set flags to your database of addresses. Useful when you want to keep track of who's been sent a mailshot.**

Before you do anything else, you must read this

Tread carefully
To keep your *STF* Cover Disk safe, write-protect it by moving the black tab so you can see through the hole. Nothing can now be written to your Disk. Write-protection also keeps your Disk safe from viruses.

Study the map
Space on the Cover Disk pages is limited, so you may find text files for some programs on the Disk. These have the file extension DOC. It's always a good idea to read these for more information on a program. Double-click on them and select "Show" to display the text. If text disappears off the screen when you try to read a DOC file in low res, change to medium res and try again.

Avoid the pitfalls
To keep your *ST FORMAT* Cover Disk safe you should make a backup, so if anything goes wrong, you still have the original. Because we use a special disk format to squeeze programs on to the Disk, you can't do a direct disk-to-disk copy. We've made life easy for you, however, with this *Back-up* program. Follow the instructions on page 17 and you can't go wrong. Now there's no need to risk damaging or losing your disk again!

Some programs are compressed to fit on the Disk and cannot be run directly from it. Follow the instructions here and it'll all be fine.

Is your drive obsolete?
We use a double-sided disk format. If you own a single-sided drive, you can't read the Cover Disks, or much of the new software since single-sided drives are obsolete.

You are strongly advised to buy a new double-sided drive which can cost as little as £35.

Balls

BY: SIMON CARTER
RESOLUTION: LOW RESOLUTION
FOLDER: STFBALLS
FILES: BALLINST.DOC, LEVELS.MBK, STFBALLS.PRG
READ: BALLINST.DOC
GET STARTED WITH: STFBALLS.PRG

Stop it, we know what you're thinking. There are going to be no cheap jokes in this caption. Every few levels of *Balls* a code pops up that you can type in here to skip levels. On some levels you get two balls to play with, oops, damn, damn.

A gem of a puzzle game this, you control the path of a little ball as it bounces around the screen by placing mirrors with the mouse. Run STFBALLS.PRG and you are asked for the levels disk. There is a set of levels already on the Cover Disk, so just press the mouse button to continue.

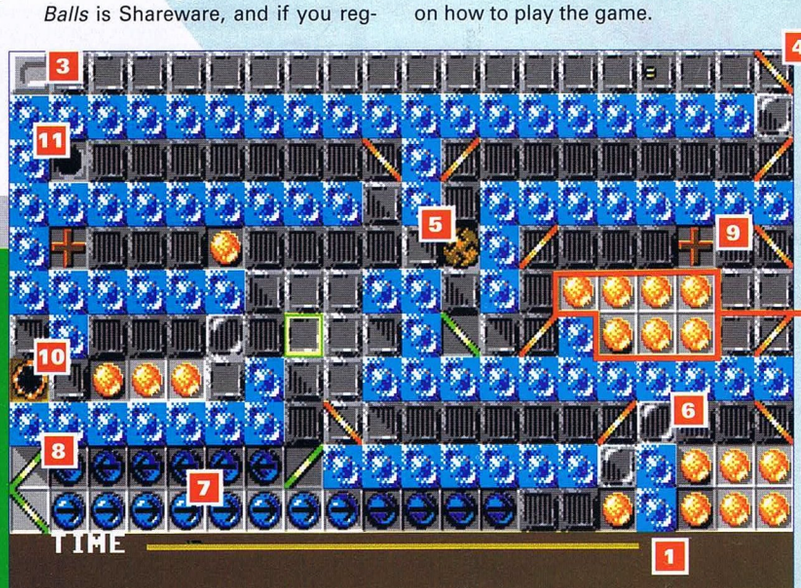
From the main screen you just press the mouse button to start at Level One. The time bar at the bottom of the screen starts to grow, when it reaches the maximum size, out pops the ball. The bar then starts shrinking again – it's time to place those mirrors. You need to bounce the little ball to get every orange pod thingie at the same time as avoiding the spikes, then you have to get it to the exit.

To guide the chap around you can place 45 degree mirrors using the left or right mouse buttons. You cannot remove them once they're on the screen, but you can change their orientation by clicking with the opposite mouse button, although it stops you from laying any more mirrors for a while.

There are a few special blocks about. Some increase or decrease the ball's speed, others flip the ball about in random direction or perform other interesting tricks. If you hold the cursor over an orange pod while you're pressing the button, a mirror appears immediately the ball hits the pod – handy for getting hold of those seemingly impossible ones. *Balls* is Shareware, and if you register your copy you get extra levels – you have 32 to start with – a level editor and other goodies. All the information you need is in the text file called BALLINST.DOC along with a set of detailed instructions on how to play the game.

BOUNCY BOUNCY

Good wholesome entertainment for all the family, honest. Balls has some devious levels that require some devious thinking. Here's Level Two in all its twistiness



1 **Time bar** – when this reaches nothing, your goose is cooked.

2 **Orange pods** – these are the things your balls needs to get before heading home.

3 **Starting point** – when the time bar reaches the maximum length, your ball pops out here.

4 **Your mirrors** – to be successful the mirrors need to be in the right place at the right time. Position them with the mouse; the mouse buttons give mirrors that slope in different directions.

5 **Rotator** – turns your ball through 90 degrees.

6 **Destroyable block** – one hit and they are zapped.

7 **One way block** – your ball can only go in the direction of the arrows.

8 **Permanent mirrors** – you can't move this at all, so you have to work round them.

9 **Speed-up** – gives your ball a boost in the speed stakes.

10 **Spikes** – run into this and zap! your ball whizzes round the screen in a total kind of death spasm.

11 **Home** – once you've got all the orange pods, head for here to finish the level.

Rayoid

BY: RAYMOND HILL
RESOLUTIO : LOW RESOLUTION
FOLDER: RAYOID
FILES: RAYOID.TOS
GET STARTED WITH: SEE BELOW

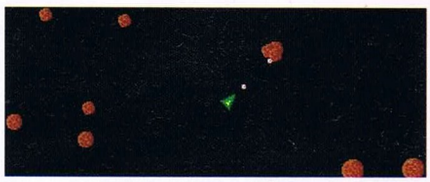
Connected by modem or MIDI cables, you and a friend can fight it out across a starfield bent on zapping each other's empires.

As soon as you see *Rayoid* in action you're bound to feel at home – it's like versions of the classic *Asteroids* and *Spacebattle* games. That's not all, you can play the games over the modem or using two STs connected with MIDI leads. *Rayoid* runs on any ST, including TTs, and features DMA-driven sound samples on STEs and TTs. *Rayoid* hails from Canada so there are documents in both French and English.

Rayoid's been archived, so copy RAYOID.TOS to a blank disk and run it. The games and two text files are decompacted on to your new disk. Run RAYOID.PRG and prepare yourself mentally. At the main menu use the up and down arrow cursor keys to make your selection and press <Return> to accept it. You can use the <Undo> key to escape from any of the menus. If you're on your own try the first option – Single Player. This sends you to a spiffing *Asteroids* style game. Select Customise Keyboard to look at the controls and alter them depending on your desires. Press <Undo> when you're done and select I Want To Play and press <Return>. It's a classic point and thrust style game. Unless you've been living in a hole in the ground you know the idea is to blast the asteroids and alien ships. Clear one screen and a more difficult one appears. To get the power-ups, just fly into them.

If you have 1MByte or more of memory and a willing accomplice, then you can get into the two-player games. The simple version can be played on one ST or on two connected by modem or MIDI leads. Each player gets control of a ship and you have to shoot the living daylights out of each other. The complex two-player game can only be played with two linked STs. It's a battle royal to conquer a sector of space. You need to explore, attack enemy bases and establish bases of your own. You can recruit, colonise, refuel, lay mines and generally expand all over the place. There are radars, a map and energy meter to watch too. Your first step is to recruit some colonist from your first base and find a willing asteroid for them so they can start work on another base.

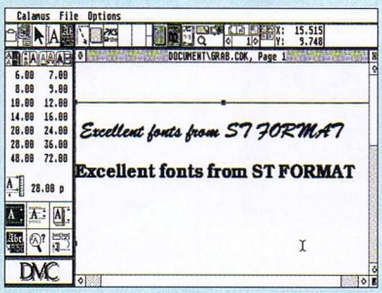
Rayoid is Shareware, if you want to register your copy with the author, you get a version that can save scores, keyboard configurations and your personal record. You also encourage the production of more such quality games and get to feel good about yourself.



So you fancy a rock-smashing session on your tod, do you? The single player game in *Rayoid* is a version of *Asteroids* with power-ups and samples aplenty.

Vector Fonts

BY: ADVANCED GRAPHICS LTD
FOLDER: FONTS
FILES: CALAMUS.TOS, PAGESTRM.TOS
GET STARTED WITH: SEE BELOW



The Cover Disk fonts installed into *Calamus*. There are also Type I PostScript versions for *Calligrapher* and *Pagestream*.

The latest range of serious ST DTP programs use vector fonts. These are stored as a series of coordinates rather than actual images, meaning that you can use them at any size without losing clarity. Good quality vector fonts are expensive. Advanced Graphics Ltd produce a large range of professional quality Type I PostScript and *Calamus* fonts at £5.95 a time – or even less if you choose families of fonts. That's around a quarter of the price of other PostScript sources, but the quality remains top-notch. Need proof? Then take a look at these.

The fonts are in two archived files for *Calamus* and *Pagestream* or *Calligrapher*. Copy across the one you want to another disk and run the program to de-archive them. They are Adobe registered and have full character sets. If you're into desktop publishing and need a source of quality fonts, these should be just the sort of thing you're looking for.

Advanced Graphics Limited can be reached on ☎ 0942 498174 in the UK. They also have distributers in the USA on ☎ 010 1 512 3230040 and in New Zealand on ☎ 010 6 46 3432699.

Kubes

BY: DIGITAL DIMENSION
RESOLUTION: LOW RESOLUTION
FOLDER: KUBES
FILES: HI, KUBES.ASC, KUBES.PRG
READ: KUBES.ASC
GET STARTED WITH: KUBES.PRG

Yes, it's one of those falling-blocks-from-the-top-inducing-increasingly-panic-stricken-keypresses-type games. *Kubes* is simple in design, polished in execution and deadly in gameplay.

That *Tetris* game has a lot to answer for. Not only are there numerous versions of the game itself but loads of variations on the theme. *Kubes* is one such variation and a good one to boot. You need to manoeuvre coloured blocks into horizontal or vertical rows of three or more.

Instead of moving the blocks about you move the rows of fallen blocks to line them up and clear them. The more blocks you deal with, the faster they fall. It slowly hots up into a frenzied rush to get rows together and clears space for more of the unending flow.

To get into *Kubes,* just run KUBES.PRG. From the main screen use the mouse to select either Info to view the text file of instructions, or Start to, er, start. Then select your starting level and how many blocks in a row you need to line up. Use the mouse on the little up and down arrows to adjust the figures. Level One is pretty easy, although choosing to have rows of more than three blocks isn't. Click on OK when you've selected the starting point and you're into the game proper. The row you are moving is highlighted by yellow dots on either side of it. The <Q> and <A> keys move rows up and down and the <O> and <P> keys move the rows from side to side. You can speed things up by pressing the Spacebar to drop a block early on. If you make it to the high score table your ST saves your score to disk, so always use your back-up copy since it's not really a good idea to have your Cover Disk write-enabled.

Rock This Midi File

BY: HEAVENLY MUSIC
FOLDER: MIDIFILE
FILES: ROCKTHIS.MID, READTHIS.DOC
READ: READTHIS.DOC
GET STARTED WITH: SEE BELOW

If you've a MIDI set-up then this should blow your socks off. Heavenly Music produce a commercial range of MIDI files that just ooze quality. In the folder MIDIFILE you can find an example of their handiwork. It's in standard type one MIDI format, which most decent sequencers can handle. All the voice information is on a track helpfully called Global. If you haven't got a general MIDI instrument, then you need to disable the Global track and set each channel up yourself assigning appropriate sounds on your synth. Take a look at the READTHIS.DOC textfile for more details on the MIDI file and on Heavenly Music.

Joystick Test

BY: S. BRADSHAW
RESOLUTION: LOW RESOLUTION
FOLDER: JOY_TEST
FILES: JOY_TEST.PRG
GET STARTED WITH:
JOY_TEST.PRG

■ **A perfect answer to those "it was the joystick, honest" situations. *Joystick Test* gives your stick a quick MOT check.**

You know the type, they're always blaming the joystick when they smash into the wall or alien. "I moved it right in plenty of time, it's not fair!" Well, with this little program you can test out your joysticks. Just plug in a suspect stick and run JOY_TEST.PRG. Now move the stick about and try out the Fire button and Autofire – if it's got it. *Joystick Test* even gives you a speed rating on the fire button.

Autofire should manage above eight, preferably more. You can test out your own <Fire> pressing skills – try getting above ten. Check the <Fire> button in combination with movement, too. If everything checks out then it must have been a complete lack of skill that caused you to fall down that pit ten times in a row – and not a dodgy stick, tut tut.

Press <Alternate>, <Control> and left <Shift> when you've finished your testings.

Cover Disk Back-up

BY: BRIAN TILLEY
RESOLUTION: ALL RESOLUTIONS
FOLDER: BACK_UP
FILES: BACK_UP.TOS
GET STARTED WITH:
BACK_UP.TOS

However conscientious you are, there is always the unexpected to confuse you. Along it comes and spills an entire mushroom biryani all over your Cover Disk. The only way to be ready for the unexpected is to make a copy of your Cover Disk, but because of its special format you can't do a standard Desktop copy. You could drag each folder across to drive B, but the number of disk swaps is a real pain. The easiest way is to use the thoughtfully provided *Back-up* program which makes the whole process quick and smooth.

The first step is to write-protect your disk so nothing can be written to or deleted from it. Move the little black tab at the corner so you can see through the hole. Get a spare disk ready and run BACK_UP.TOS. Up pops a menu, press <1> to start copying the Cover Disk, just swap disks when prompted. The source disk is the one you're making a copy of and the destination disk is the one you are copying it to.

If you're lucky enough to have two disk drives, then drive A is used for the source disk and drive B for the destination. *Back-Up* is clever enough to use all the available memory, so if you have 1MByte or more you only need to make one disk swap. *Back-Up* can be used to back up most other disks too, press <2> to see if it's possible. It doesn't do copy-protected game disks, so don't bother with them. Other than those you can do quick copies of most disks with the minimum of fuss.

Assembly Listing

BY: TONY WAGSTAFF
FOLDER: ASSEMBLY
FILES: DATA.S, GMDOSMAC.I
GET STARTED WITH: SEE BELOW

To accompany our third tutorial on assembly programming we have a listing on the Cover Disk that does all manner of clever things. There's also an updated version of the GMDOSMAC.I to replace the one from last month. Intrigued? Turn to page 95 and start getting stuck in there.

What's your problem?

1. This Disk won't load!

Before you do anything else, check your drive. If it's older than 1988, it's probably single-sided and can't format any disks to more than 360K – this also means it can't read *ST FORMAT* Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35.

So your drive's spanking new, or at least it's double-sided, and you still have a problem. *ST FORMAT* duplicates hundreds of thousands of Disks every month so, unfortunately, some are bound to be defective or damaged in some way. If the Disk just won't load, or you can't open a window at all, there's nothing in it, or the folder names are gobbledegook – the Disk is defective. It doesn't happen often, but please accept our sincere apologies. You're guaranteed a free replacement if you return the Disk to:

***ST FORMAT* May Disk Returns,**
PO Box 21
Daventry
NN11 5BU.

Enclose a sturdy unstamped self-addressed envelope – we pay for the postage – and a brief letter explaining the problem, what hardware it is on and the version of your operating system. If you're worried about sending your precious Cover Disk via the normal service, the Royal Mail's Recorded Delivery service costs only 30p on top of the normal postage. Please don't send your defective Disk to any other address than the above one – we have no stocks of Disks at the Bath or Somerton offices.

2. I can't work out this Cover Disk program!

Your Disk seems OK; everything loads, but you've got a problem with one of the programs. Make sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your ST owner's manual – that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the *ST FORMAT* Cover Disk Hotline ☎ 0225 442244 on Wednesdays between 2 – 6 pm only.

We don't write the Cover Disk programs ourselves and don't know as much about them as the programmers, but we'll do our utmost to sort your problem out. Please note that the above phone line is for Cover Disk problems only. If you have any other queries, read on!

3. I have a problem with this other program I bought!

The best place to start is the distributor of the program. Most software houses run some kind of helpline service – check the information that came with your software for the number.

4. I've still got an ST problem!

If you still have a problem, you suspect your machine may be faulty, or you need an answer to a more general query – then you have two options. (a) Ring the official Atari Helpline ☎ 031 332 93233 on any day from Monday to Saturday 6 pm – 11 pm or on Sundays from 8pm to 11pm. (b) Write to ST Answers, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW – and let *ST FORMAT's* team of experts tackle your problem in the pages of *STF*. To help us when sorting, could you please indicate on the envelope what type of problem it is – for a full list, turn to ST Answers on page 36.

You *could* win loads of cash!

We pay for your software – games, utilities, demos – anything good, original and short. If you've written anything worthy of appearing on *STF's* Cover Disk, send it with this form and full documentation to: Chris Lloyd, *ST FORMAT* Cover Disk Editor, 30 Monmouth Street, Bath, Avon BA1 2BW. Please be patient: we get absolutely loads of submissions, and we try to give them all a fair testing!

Name _____

Address _____

_____ Daytime phone _____

_____ Program title _____

_____ Total size in K _____ O

explain concisely what the program does and why you happen to think it's so brilliant.

Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Contributions are non-returnable, so keep your own copy of your program ■ Enclose an attractive bribe. Not that it makes any difference.

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

Signed _____

EVERY SECO

Stop whatever you're doing and think, is there a quicker and better way of doing this? Yes, there is. Use your ST. It'll save time, and you could start making money

Yes, yes, of course games are fun. You can spend many an enjoyable hour blasting alien scum into the alien scum afterlife. But that's only scratching the surface of your ST's true potential. Beneath that deceptively cool grey exterior lurks a beast capable of some serious business.

Your ST has the power and flexibility to lend itself to almost any task. From word processing and database work right up to running a music studio or a DTP bureau – your ST is equipped for the job. Right from the start, Atari designed the ST to be flexible. It has a marvellous crisp and rock-steady high resolution display available with dedicated monitors, giving an impressive 256,000 pixel display – ideal for getting lots of information on-screen.

Including built-in MIDI ports was a smart move, leading to the development of top music software for your ST. The silicon heart of your ST is a Motorola 68000, a powerful piece of gear, enabling your ST to match or even beat similarly priced rivals in the power stakes. With extra memory and hard drives, it really starts looking like a meaty machine. If you want to push the boat out, there are hardware accelerators, floptical and optical drives, graphics boards and monster monitors. The TT adds a whole new dimension too, with a 32-bit processor and maths co-processor packing a considerable punch.

You don't necessarily need lots of expensive extras though. A standard 520 makes an excellent word processor or sequencer for a couple of quid if you buy a PD program. All the tasks thrown at machines in the office can also be dealt with by your ST. There is an excellent range of software for word processing, accounting, creating databases and projections. In the music studio, your ST has long reigned

WORD PROCESSORS

■ These days you can't be a writer without using a word processor. Clive Parker, *STF's* Technical Editor, uses *Protext* because of its "professional approach and speed."

Word processors can satisfy all of your correspondence needs, such as business letters, faxes, internal memos and price lists. They can save you and your business time. For example, you can correct mistakes as you make them by using the delete key and typing in the correction – on a typewriter you would either have to start again or use liquid paper.

Word processors are packed with features which are designed to help you. If you're not very good at spelling, you can use a spell checker. If you're preparing a large document you can include footers, headers, footnotes and create special paragraph styles so that your headings are in bold type and your footnotes in italics.

Data can be stored on disk and reprinted many times. Instead of having to search through files for an old letter or document to get a copy, you simply open up the file and reprint the original. Grouping files together in directories of similar correspondence makes it easier to find that elusive letter.

Linking a database with a word processor to mail merge highlights exactly how some of these packages can ultimately save you and your company a lot of time, money and hassle.

WORD PROCESSING JARGON BUSTERS

ASCII – The American Standard Code for Information Interchange. All word processors have a "save ASCII" option which saves the file as straight text without any font, formatting or other document information – this enables you to pass data to other applications.

FILE – Any word processing document that has been saved to disk can be referred to as a file. Each file is identified by its own unique file name.

FILE NAME – The name given to a file when it is saved to disk – it usually consists of an eight letter prefix and a three letter suffix. Each file must be given a unique name to identify it and this name normally reflects the subject matter of the file.

FONT – A font is the actual character style to be used, it's the computer equivalent of a typeface.

MAIL MERGE – This is a system where form letters can be customised so that each one bears the correct name and address of the recipient.

WYSIWYG – This stands for "what you see is what you get" and is especially important in DTP work.

ND COUNTS

supreme, offering a powerful and affordable MIDI sequencer. Desktop publishing (DTP) is also a big hit, enabling you to produce professional standard output working from your desk without ever seeing a paste-up board. Programmers are also well catered for with implementations of all the main languages – you can develop business programs in C or Pascal.

There's a lot of snobbery around technology. Machines get fashionable and desirable without providing anything your ST can't handle. If you've only used your ST for games, you've probably had a whale of a time, but if you have something more productive in mind, you've already got the main tool for the job.

Top ten tips for starting a successful business

1. Pick something you enjoy doing and are good at – you're going to spend lots of time doing it and selling your services.
2. Check out potential government sponsorship, there are various enterprise schemes that can help you out with a few quid to start.
3. Don't buy expensive equipment unless you really need it for the job. Always look at hiring the equipment first.
4. Present yourself well. Clients aren't impressed by badly designed business cards – especially if your services involve DTP.
5. You need a unique selling point. Better prices and quality service are a good start.
6. Get small quantities of stationery unless you are planning a mailshot of some sort.
7. Contacts in the trade are crucial. Keep your ear to the ground and follow up all leads. Friends of friends bring in business.
8. Your reputation is made by the quality of your last job, don't bodge anything.
9. If you can't handle a job, say you can and then find someone to do it for you. You look more accomplished and you can still make a commission on the job.
10. Don't give up your day job unless you've enough work to keep you busy for a while. One hot day doesn't make a summer.

Save time, turn to page...

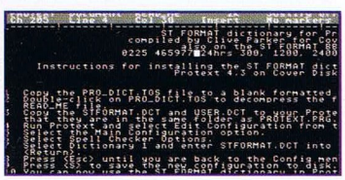
Accounts ..... page 24
Databases ..... page 24
Desktop publishing ..... page 22
MIDI sequencing ..... page 22
Programming ..... page 20
Spreadsheets ..... page 20
Word processing ..... page 18

PROTEXT 4.3

Different from most ST word processors, *Protext* does not use the standard WIMP. Instead, a PC-like editing environment is used which includes the dreaded command line. The menus are just a mouse-click away, and almost every function has a handy keyboard shortcut. Easy to get to grips with.

***STF* RATING: 80%**

- **On Cover Disk 41, see page 44**
- **Information: Arnor ☎ 0733 68909**



It's not big and it's not clever, but *Protext 4.3* is excellent value for money and is probably the best Cover Disk word processor in the world. Wow, look at all that text!

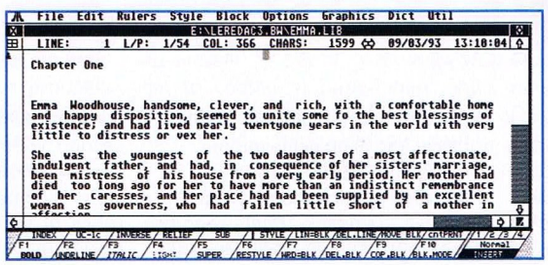
REDACTEUR 3

With its ability to import 16 different image formats and display graphics on the same lines as text, *Redacteur* is almost a mini desktop publishing package.

The most outstanding feature of the program is its sheer speed. If you move a graphic or cut and paste text in this kind of program, you usually have to wait for the screen to update, but *Redacteur* performs all screen updates in the blink of an eye. It is very fast, efficient and very easy to use.

***STF* RATING: 90%**

- **£119, ST Club, ☎ 0602 410241**
- **1MByte RAM required**



Although you can't see it if you have the "still" version of the magazine, this *Redacteur* screen has just updated itself in 0.005 seconds. Those of you with full motion video copies of *STF* should be suitably impressed.

DB WRITER

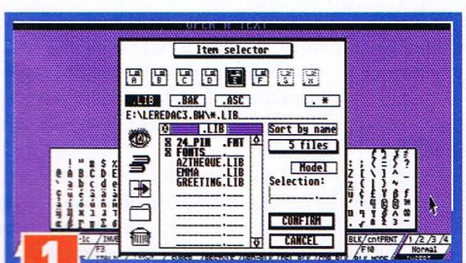
Providing an alternative interface to GEM, *DB Writer* avoids any drop-down menus. Instead, there's an icon bar with the main options – everything else is accessed by keyboard shortcuts. Complete with a whole range of dictionaries, this is the best PD word processor available for your ST. As a bonus this program is Freeware, that means it is complete and you don't have to pay any more for it.

Look out for next month's tutorial where we tell you all you need to know about using this excellent word processor.

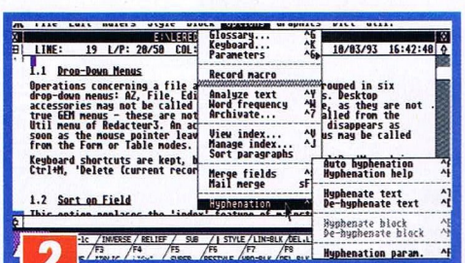
***STF* RATING: 91%**

- **£2.75, Disk GD1672**
- **Check out your favourite PD library from those on page 90**

Redacteur 3, the fastest word processor around



1 **Running *Redacteur 3* presents you with a customised file selector to replace the one supplied by GEM. You can import .LIB files, .BAK files or straight ASCII files by selecting the appropriate filter.**



2 **Because of all the options and functions it is impossible to cram them all into the drop-down menus. Epigraf have sneaked past this limitation by having sub-menus from various menu options.**

3 **The spell checker is much better than in most word processors - along with the standard spell checking functions there are options to check as you type, conjugate verbs and check highlighted blocks.**

SPREADSHEETS

Spreadsheets are very probably the most powerful accounting tools available for your ST. All their powerful functions add up to real time savings. In a small business, a spreadsheet is an excellent planning tool used for increased price projections for example. In a large business, profit and loss reports can take days to calculate using traditional methods and a single change to a single figure can mean that the whole thing has to be recalculated.

Using a spreadsheet, however, the relevant figure can be adjusted and the recalculation is performed instantly.

The sheet itself is larger than the screen and consists of up to 1,000 (and more) columns and rows. Rows are marked numerically from 1 to 1,000 while columns are lettered A, B, C and so on. The area where a column and a row intersect is called a cell, depicted on-screen as a box.

These cells are the heart of the spreadsheet. Data can be entered in them in a number of formats – text, numbers, labels, dates – or a particular cell can have a mathematical formula assigned to it. The reason that the formula aspect is so powerful is that the formula can read the data in any single cell and use it as part of a calculation. A simple example can be entered in cell A4 as follows; A1 + A2 + A3. This takes the data in the three cells A1, A2 and A3, adds them together and displays the sum in A4.

You may think that this is not very impressive, but if you change any of the values in the first three cells, the total in A4 is recalculated automatically. You are not just limited to basic maths functions either since almost any type of formulae can be used. This ability can be invaluable when interest rates, VAT or exchange rates change for example – all you need to alter is the value in the cell containing the rate and every calculation on the spreadsheet that uses that figure is automatically adjusted.

On top of data output, many spreadsheets also provide graphic output like graphs, pie charts or bar charts. Data files can also be exchanged with other spreadsheets or saved as ASCII files to be imported into your word processor.

SPREADSHEET JARGON BUSTERS

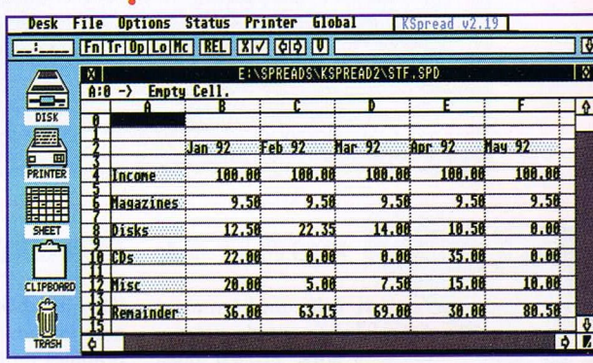
ACTIVE CELL – The cell that is selected and being worked upon.
CELL – The basic unit of the worksheet – identified by the column and row, cell HB24 is in column HB and row 24.
COLUMN WIDTH – Number of characters that can fit in a cell.
FORMAT – The way data is displayed in a cell. This can be in scientific notation, currency or a date. Labels and text can also be entered into cells.
FORMULA – A cell entry which uses values or labels or refers to other cells.
GLOBAL – Any command that affects every single cell.

K-SPREAD 2

As one of the most powerful spreadsheets available, *K-Spread 2* has the ability to merge two different files together to form one large spreadsheet. Another excellent feature is a program enabling you to create customised printer drivers – very useful since the only driver included in the program is for the Epson FX80. Many functions are available from icons on-screen to make things run a bit faster, and there are some handy keyboard shortcuts. All good stuff and enough to get you up and running.

STF RATING: 81%

- **Cover Disk 36, see page 44**
- **Information: Kuma ☎ 0734 844335**



Included on Cover Disk 36, *K-Spread 2* is one of the most powerful spreadsheets available. Great value for money.

PROGRAMMING FOR CASH

Without software to run on it, your ST is about as much use as an ice cube in the Sahara. Everybody wants good programs, and programmers get paid wedges. Programming at the highest level is not easy and is an achievement.

Wayne Smithson has an impressive track record programming ST games – *Baal, Bloody Money* and *Anarchy,* his personal favourite which ran at 50 frames a second with parallax scrolling. He is currently working on the ST version of *Lemmings 2.* It features 12 tribes of the small cute ones with 60 different skills to try out.

"The desire to program is half the battle. You work on a project for so long, if you don't really enjoy it you'll never finish it." He uses a system called Snasam which uses another machine to write and assemble the program before transferring it to the ST for testing. "The ST is a nice system, it's stable and has a good operating system. It's one of the best learning tools and doesn't trash disks."

Asked about the possible financial rewards, Wayne was a little cagey: "There are stories of programmers driving in Porsches, it does happen, but not very often. It's not a job you want to enter with the idea of making a fortune." Piracy is really hurting sales, "Nobody is going to work for months on a game if they just get ripped off, it just pushes people into the console market."

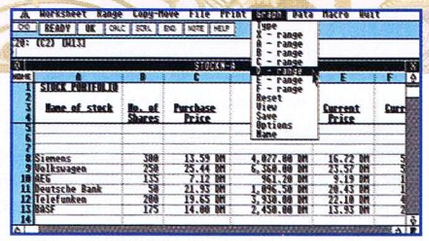
Along with *Lemmings 2* Wayne has a few other ST projects in the pipeline including *Creatures* and *Shut It.*

The best way to start out is as a freelancer so you can learn and work in your spare time. When you've got something decent, hawk it round the software houses. If it has

Don't be fooled by the cool calm exterior, inside there's a programmer capable of top quality arcade games. With more than four projects already in the pipeline we are going to be seeing a lot more of Wayne Smithson's work.

The next big thing from Wayne is the ST version of *Lemmings 2.* This time you get 12 different tribes with 60 different skills to master including surfing and hang-gliding.

LDW POWER



■ **An interesting series of columns, rows and boxes that all add up in the *LDW Power* spreadsheet.**

An easy to use spreadsheet, *LDW Power* features all the functions you are likely to need if you work in or run a small business.

The manual is detailed enough to teach you everything you need to know about using a spreadsheet, starting with a simple "getting to know your screen" section and progressing through each and every element of the program.

The size of the manual may be daunting, but don't be put off. Follow it one stage at a time and you are bound to get to grips with accounting very quickly.

***STF* RATING: 84%**

● **£114.95, Silica Systems**
☎ **091 3091111**

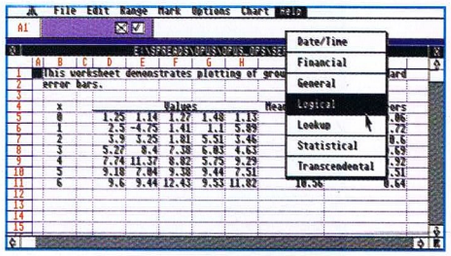
OPUS 2.2

This is an excellent Shareware spreadsheet that incorporates all of the major features found in commercial offerings, for a fraction of the price. Sending off $15 to the author gets you the next version with *Lotus 123* file compatibility – *Lotus* is the PC industry standard.

The manual is on disk and needs to be printed to get the most from *Opus,* but if you should get confused at any point in the program then there is a brilliant built-in help facility that pops information onto the screen. If you can't afford a full price comercial package, then you can't get a much better deal than this.

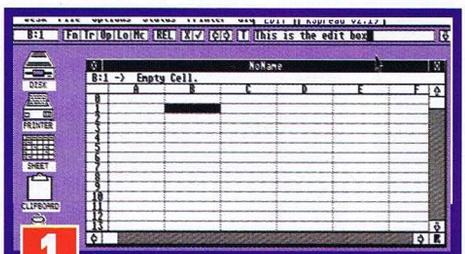
***STF* RATING: 85%**

● **£1.45, Check out your favourite PD Library listed on page 90**

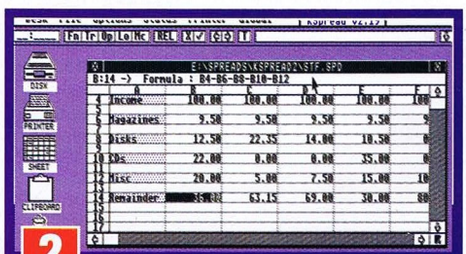


■ **Selecting an item from the Help menu brings this pop-up menu to the fore, select a subject for more info.**

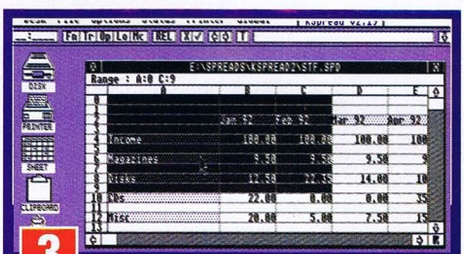
Want to activate your cells? Start with getting a copy *K-Spread 2*



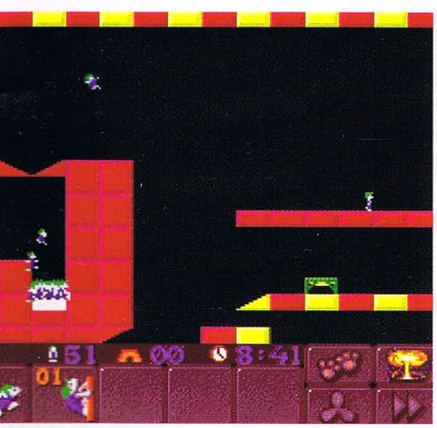
1 **As with all spreadsheets, *K-Spread 2* presents you with an empty screen. The grid is labelled with letters and numbers. Clicking on a cell makes it active and changes the program to edit mode.**



2 **Various types of data can be entered into each cell, this data can be text, numeric values or a formula. Text is used for headings and labels, numeric values for numbers and formulae for calculations.**



3 **If you want to copy sections of the spreadsheet you simply drag a box over those cells and then drag them to another section or to the clipboard and import them into another spreadsheet.**



■ ***Lemmings 2* has some terrific touches like these circus lemmings.**

potential it is bound to get noticed. With a solid background in assembler you are going to be in demand – getting that background, however, is another thing altogether, but the rewards are there for those who can hack it.

If you don't fancy writing games – because, let's face it that's what assembly is best at – then other languages like C are a very valuable alternative language to learn. The world always needs good programmers – so, you've got your ST and a strong cup of coffee in front of you, why don't you go ahead and give it a try?

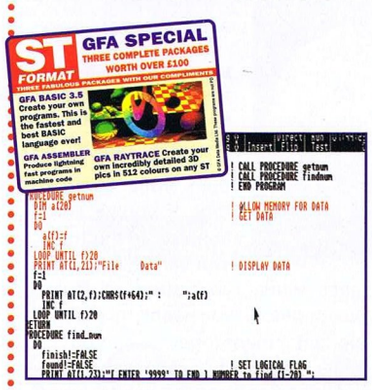
GFA BASIC 3

Most people who hang around computers long enough have probably come across BASIC – Beginners All Symbolic Instruction Code which is an ideal language to start with. *GFA Basic* isn't the most complex, and is easy to get to grips with.

GFA Basic makes full use of GEM and has over 350 commands giving you lots of control over your ST's workings. An ideal instruction to the mysteries of programming.

***STF* RATING: 91%**

● **Cover Disk 35, see page 44**
● **Information: GFA ☎ 0734 794941**



■ **The elegant editor for *GFA Basic*. It's a deceptively powerful version of BASIC with a full range of commands – as well as the standard range of BASIC commands.**

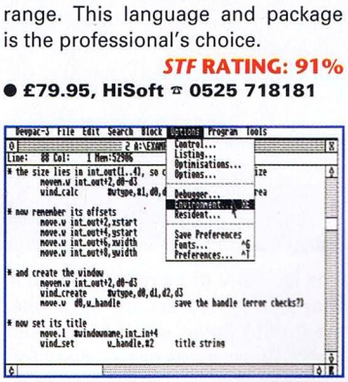
DEVPAC 3

Assembler is the closest you can get to coding in pure binary and produces the most efficient and fastest code going. Without doubt the best assembler is *Devpac 3.* Code is written on an integrated GEM editor. It's fast and you can write, assemble and run programs without any disk accessing.

There's a debugger and disassembler along with lots of other flash functions. There are functions to access all the goodies in the operating functions and *Devpac* is compatible right across the ST range. This language and package is the professional's choice.

***STF* RATING: 91%**

● **£79.95, HiSoft ☎ 0525 718181**



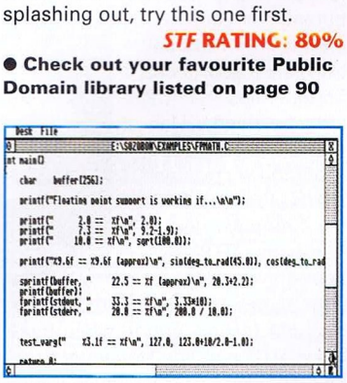
■ ***Devpac 3,* highly developed, well supported and a bit of a smart performer all round. It takes you from simple utilities right up to full commercial-quality games.**

SOZOBON C

There are implementations of all the main languages in the Public Domain as well as more obscure ones. *Sozobon C* is one of the "every bit as good as a commercial package" numbers – it's a full version of C for a fraction of the cost. Obviously, you don't get the mountains of documentation but you do get a competent compiler. It's not an ideal language for beginners, it's all a bit baffling at first but is capable of high-powered programs. If you're looking to have a crack at C and want a good taster before splashing out, try this one first.

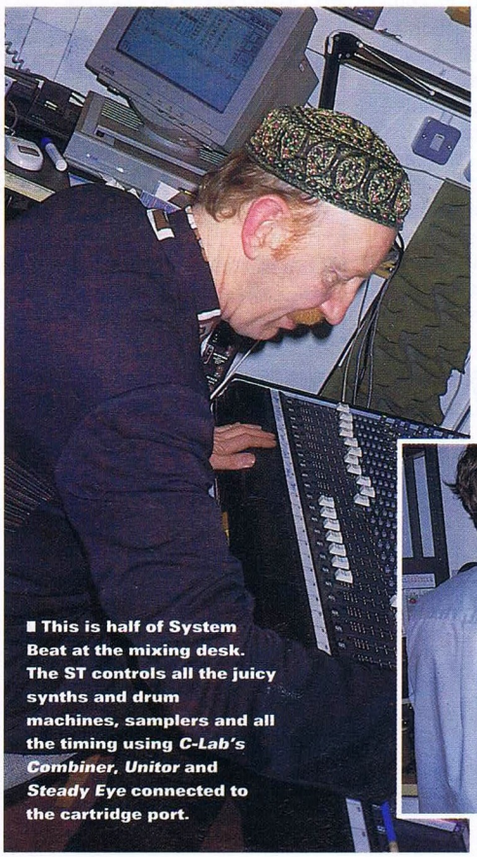
***STF* RATING: 80%**

● **Check out your favourite Public Domain library listed on page 90**

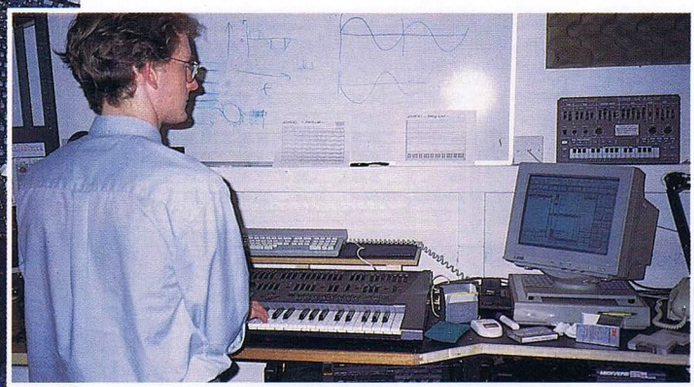


■ **This gibberish is, of course, a *Sozobon C* program, obvious really. It might not be the most readable of code, but it sure is pokey enough to do lots of damage.**

MIDI SEQUENCING



■ This is half of System Beat at the mixing desk. The ST controls all the juicy synths and drum machines, samplers and all the timing using *C-Lab's Combiner, Unitor* and *Steady Eye* connected to the cartridge port.



■ The sharp end of things, actually playing an instrument. All the synths are connected to the ST with *Notator* recording every nuance. You can then do non-destructive editing before committing it to digital tape.

Since its early days, the ST has made regular appearances in the professional recording studio. With its built-in MIDI ports, crisp high resolution display, processing power and affordable price it's a big hit.

The quality of software is top-notch, running from very simple MIDI sequencers to full-blown gear that can get at every function of MIDI-controlled equipment. Take a look at the lists of studio kit, there's always an ST in there somewhere.

Derek Pierce and Jon Tizzard, collectively known as Beat System, have been making music for a few years. "With a sequencer you can concentrate on constructing the music, changing things around and bouncing ideas off each other. The important thing is to have a good song, not just a beat."

Sitting in the studio is a Mega ST running *Notator,* along with racks of effects units, synths and other pieces of electrical wizardry. Nothing is committed to tape until the final moment, the ST even triggers all the samples they use.

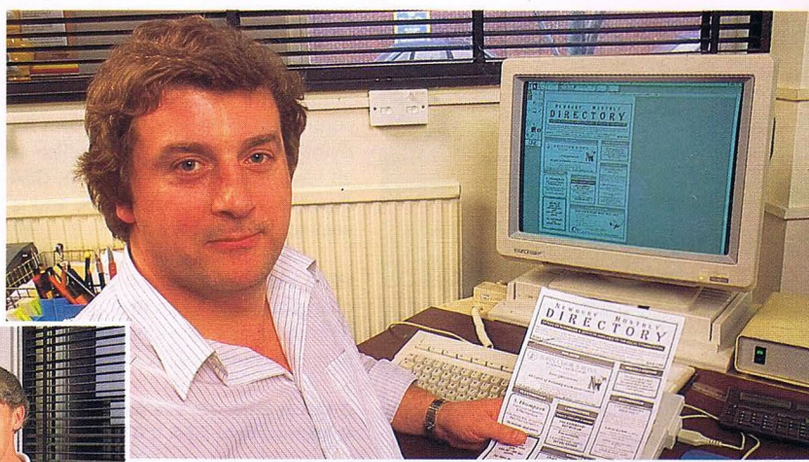
The latest waxing, *Happy Day,* features snatches of sampled gospel against a dance beat. "Sequencing is the best thing that has happened to the music scene in the last decade. It's so liberating, no need for expensive acoustic studios. It opens it all up to everybody. It's quick and easy and saves a fortune on expensive gear. Absolutely brilliant."

If you've put together a song that you think is going to make it, then get some tapes made up and hawk them about. A good bet is getting a

PUBLISHING

The power and flexibility of Atari hardware coupled with the superb software that exists makes the ST – and its big brother the TT – an ideal desktop publishing engine.

Professional results are easily attainable. Although you can get good output from a laser or an inkjet, if you plan to get serious, you really need to use a bureau for your final output. A bureau translates your PostScript files – the industry standard language for describing a printed page – and sends the result to the output device. The better DTP packages have the option to translate your pages to PostScript files, so look out for this option when buying a DTP package. *Calamus* uses its own special format which a few bureaus can also handle directly. Desktop publishing is a heavyweight enterprise that needs lots of hardware – hard drives are a must – as is plenty of extra memory. It's easy enough to set up as a one man outfit doing small scale stuff like business cards or the menu for your local pub.



■ Paul Hruza hard at work using his TT and *Calamus*. The project here is the Newbury Directory. Once it's knocked into shape the files are sent to a bureau for the final output.

■ Castle Print and Design - Paul Hruza, Robin Williams and Ron Hill, weddings and barmitzvahs a speciality. They also do a spot of DTP. Well, quite a lot really. Actually, loads of it.

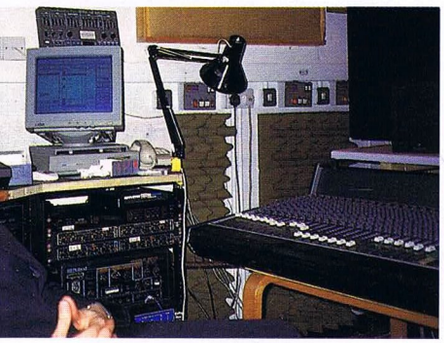
Like all businesses, you are offering a service and to really succeed you need to put yourself about in the market place and offer something more than your competitors. If you've some contacts in the trade, you can pick up freelance work, typesetting or laying out pages. If you want to make it big, get a team together and offer a wider range of services – this would give you a much better chance of succeeding.

Paul Hruza originally started out as a professional musician using his ST for MIDI sequencing. "The ST is a bloody good machine. Having found out what it was capable of led onto other things."

These "other things" turned into running a typesetting and DTP service on an STE for 18 months before joining forces with two other companies to form Castle Print and Design. They offer a full DTP service from letterheads to complete magazines. Paul's setup now runs to a TT, hard drive, scanner and a 21 inch Eiso Flexiscan monitor. All this juicy kit runs *Cala-*

batch of white labels pressed – 12 inch plastic things. You can get 500 done for around £350. Start distributing them to DJs and all the happening shops and people then see how your little baby goes down. That long white limo and screaming fans are only a hit or two away – er, well, taxi and a few staunch supporters perhaps.

The music business has its fair share of sharks, so be careful about the deals you make. You are probably better off with a small record company who has more time and is prepared to take more risks with your music and style. Your ST can take you from your bedroom studio right up to the professional circuit. So, get funky.



■ **Here in the centre of the room lies the brains of the whole operation... the Mega ST running *Notator*.**

PRO 12

Making an appearance on our famed Cover Disk was the full version of *Pro-12* – the little brother to Steinburg's *Pro-24* sequencer. As the name might suggest, you have 12 tracks to play with. You can build songs from patterns which can be shuffled about. It's been around for a while now, but remains a useful workhorse with the power to reach all parts of your synth. What better way is there of getting a taste of the real thing?

STF RATING: 80%

● **Cover Disk 39, see page 44**

● **Info: Harman Audio ☎ 0753 576911**

■ ***Pro 12's* main screen running in medium resolution. From here all you need is a MIDI instrument, bags of musical ability and an ambitious record executive. Not much really.**

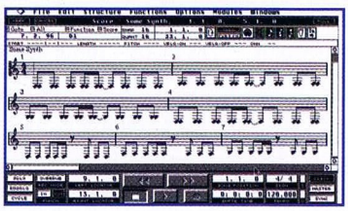
CUBASE

A real barn-stormer of a package used in the top studios. It's very powerful and includes score editing and graphical editing. You can fiddle with velocity, quantize and all sorts. It has a super-high resolution of 384 pulses per quarter note and runs to 64 tracks.

Despite its capabilities and numerous features, *Cubase* is surprisingly easy to use. It's well supported and can be expanded with extra hardware to give more MIDI ports and SMPTE support. If you're on a tighter budget there are less ambitious versions, *Cubase Lite* at £90 and *Cubeat* for £199. A serious piece of software that can turn your MIDI files inside out.

STF RATING: 91%

● **£399, Harman Audio**
☎ 0753 576911



■ **If you're the type of musician who can handle musical notation - hint of sarcasm there - then you can use *Cubase* to edit the score of your MIDI song.**

ALCHIMIE JUNIOR

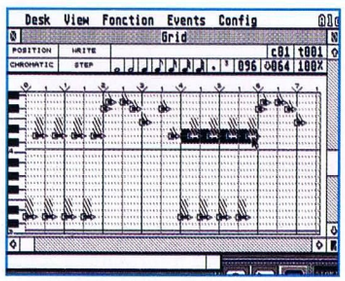
A smashing 16 channel sequencer, this runs on STs with high resolution monitors and 1MByte or more. It uses a slick GEM interface with the mouse applied intelligently for most of the functions.

Your tour de forces are built up from up to 256 patterns and 256 tracks. All the functions you'd expect are here; grid editing, transpose, and plenty of cut, paste and move operations.

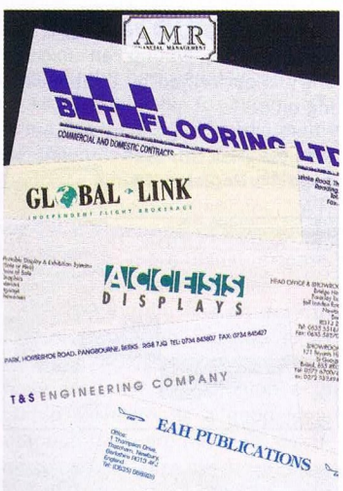
There's a set of cassette-style controls to move back and forth and separate windows for each function. Stunning value.

STF RATING: 92%

● **Check out your favourite Public Domain Library listed on page 90**



■ **The most acceptable face of MIDI on the cheap, *Alchimie Junior* is a Shareware sequencer that's easy to get a handle on and powerful enough to take you places, groovy.**



■ **With vector fonts and graphics with professional software, your ST can produce great output like this.**

mus with the proofs printed out on a laser before the files are sent to a bureau for the final output on bromide or film. "The TT is excellent, the extra speed really helps when using lots of fonts. There is a lot of hype around the Mac, but it's the quality of the output that counts – and the ST is spot on."

With time and a smidgen of effort you could soon progress from doing the parish magazine to the heady heights of serious DTP. Your ST can handle it, can you?

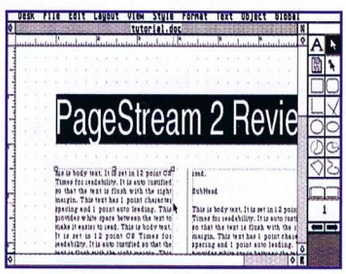
PAGESTREAM 2

There are a few top end DTP packages that really bring professional results to your ST. *Pagestream 2* supports a wide variety of graphic file formats including EPS, TIFF and PICT, giving it the sort of power previously reserved for very expensive systems. It can also deal with colour – using the CMYK (Cyan, Magenta, Yellow and Kayo) or Pantone systems.

You need to sit down with the manual and lots of real coffee to learn your way around it, but once you do, you've got the tool to take you all the way. Lovely jubbly.

STF RATING: 94%

● **£169, Silica Systems**
☎ 081 3091111



■ **The serious end of DTP with *Pagestream 2*. It fully supports PostScript and can do all the clever things associated with vectored graphics and fonts.**

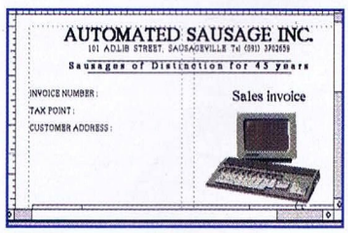
EASY TEXT PROFESSIONAL

A full DTP program on the cheap – using GDOS, all the fonts and graphics are bit-mapped. It has all the basic functions you need to get off the ground. If you've ever seen the original *Timeworks,* you're going feel at home with this one. There are a few flash bits like text run-around, but it is basically a straightforward DTP engine.

There is a wealth of GDOS fonts available from the Public Domain. It's easy enough to have you up and publishing in no time. An excellent introduction to desktop publishing without the wilting price of the power players.

STF RATING: 87%

● **£39.95, zzSoft ☎ 0254 672965**



■ **Quite an improvement on the original, *Easy Text Professional* enables you work on multiple page documents, like all serious DTP you need lots of memory and a hard drive.**

PRINTING PRESS

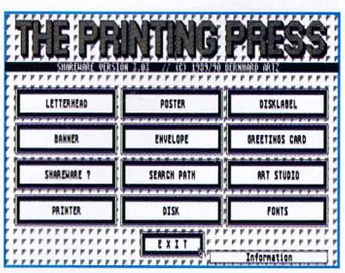
To get a fully-fledged desktop publishing package from the Public Domain is a tall order, but if you need relatively simple stuff then look no further.

Printing Press can handle business cards, letterheads and the like. Graphics can be imported using *Degas* high resolution pictures or IMG files. There is a number of printing drivers and it comes with a selection of fonts.

This doesn't enable you to produce any good quality magazines but it can do the odd flier for you – no sweat.

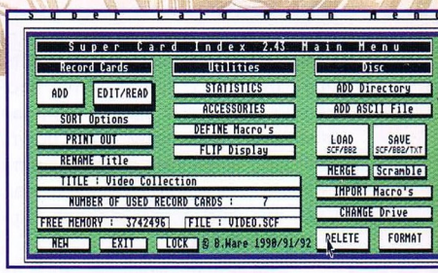
STF RATING: 82%

● **Check out your favourite Public Domain Library listed on page 90**



■ **The main menu from *Printing Press*, there are a number of set formats catered for. Everything's very simple, a quick spot of design, import the odd graphic and print.**

DATABASES



■ The suitably packed main screen from *Super Card 2*. Clicking on any of these options takes you deeper into this complex card file database.

Picture a filing cabinet containing records in a particular order, but instead of employing a person to classify, search for and update your records, you get your trusty ST to do it all for you.

Your ST is perfectly suited to catalogue and organise all kinds of data into neatly sorted lists, collated and reduced to bits and bytes and stored as a file. The details of each separate database file can be defined individually.

Anything that can be listed can form the basis of a database file and can be searched for and accessed quickly and efficiently. Using your ST, you aren't restricted to looking for a book by searching for the title. You can ask your ST to search for all the books written by Graham Greene with the word "Agent" in the headline and it then displays those records for you. Try doing that manually in less than two seconds. Having your data to hand in this way is a hell of a lot quicker than traditional data storage methods. Linking database files to word processors for mail merging and to spreadsheets can save you and your company precious time and money.

STF Warning: If you intend to hold personal information on a database – other than names, addresses and telephone numbers – the Data Protection Act affects you.

To ensure that you're not in contravention of this Act you can either write to and obtain permission from each person whose information you intend on including, or you must contact the Data Protection Registrar and register your use of a computer to store data – the necessary forms are available from all Post Offices.

SUPER CARD 2

This is an excellent card file database that should be sitting snugly in your disk box because it appeared on Cover Disk 35. This program is a very powerful enhanced card file database with a wide assortment of features enabling you to enter and store up to 32,000 records in one file. Other

DATABASE JARGON BUSTERS

CARD FILE – A card file is the most basic type of database and is relatively inflexible. Each "card" in the file has exactly the same structure as all the others in the file and can normally only be sorted by one field.

FIELD – the name for a line in the database that contains information. A field has a title and a set number of character spaces to insert the information. The contents of a field are not limited to text, you can also enter dates, figures, prices and other numeric information which can all be defined as fields – some databases even have the capability of displaying graphics.

FILE- A collection of all the records in a database relating to a particular subject.

MAIL MERGE – A system which enables you to customise letters so each one bears the correct name and address of the recipient.

RECORD – An individual entry into a database. Each record in a database is stored in the same format, although each entry is different. Typically, a record consists of several fields which build up into all the information you want to keep in that record.

RELATIONAL DATABASE – The big buzzword when it comes to databases these days. A relational database can access and combine data from many different files.

SORTING – One of the great things about a good database is the ability to sort the records by any of the fields. You would normally sort an address book style database by surname, however, if you wanted to print personalised leaflets for a particular area, you would sort the file by street name.

ACCOUNTS

We don't need to tell you that accounts are a vital part of your business. If you ignore them, they don't go away, but your business might! It is paramount that you keep track of all your business accounts to ensure that you have enough capital to pay those niggling little things you'd rather let slip. Stuff like bills, rates, community charge and your employees' wages. A spreadsheet is fine for your profit and loss reports, but to really keep on top of your accounts you need a dedicated package.

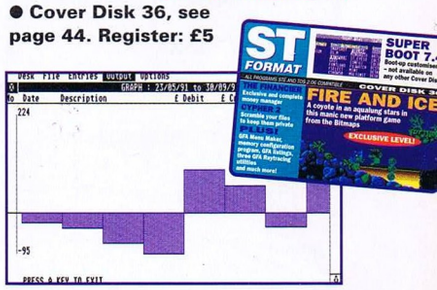
An accounts program combines features from databases and spreadsheets, concentrating on keeping an eye on cash flow and pinpointing exactly where and when it is flowing, enabling you to organise your budget efficiently on a day to day basis.

FINANCIER

A basic add-it and subtract-it package to balance your bank book, but it contains all of the functions you need to keep a comprehensive check on your cheques and basic small business accounts. The program contains a mass of extra features such as a printer output, bar graphs and printing templates to produce invoices. New transactions are entered from a drop-down menu, while editing an existing entry is performed by double-clicking on it.

***STF* RATING: 83%**

● **Cover Disk 36, see page 44. Register: £5**



■ If you want to really depress yourself, you can display your overdraft in the form of a bar graph. We have chosen blue rather than red.

ACCOUNTING JARGON BUSTERS

ACCOUNT – This refers to your source of money and can be a bank account, credit card account or building society account.

APR – Annual Percentage Rate of Charge. The true cost of borrowing taking into account all charges made, the frequency of payments and the interest rate.

BUDGET – Amount of money available for use as a whole or on a particular project.

CREDIT REFERENCE AGENCY – Independent organisations which gather information about consumers from publicly available data. This information is used by banks, building societies and credit card companies to ascertain if you are a good or bad risk.

MANUAL TRANSACTION – A single transaction performed by the account holder.

RECONCILED – Transactions that you know have taken place and that have been confirmed by a statement.

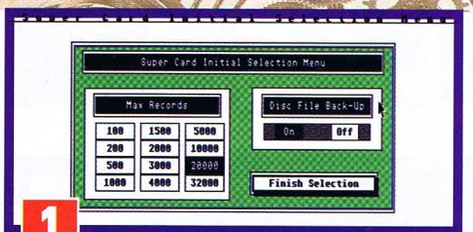
REGULAR TRANSACTION – Transactions taking place automatically on a regular basis.

TOTAL AMOUNT PAYABLE – Total amount you have to pay when you fill in a Consumer Credit Agreement Form. Consists of the total charge for credit and the amount of the loan.

WIN! WIN! WIN! WIN! WIN! WIN! WI

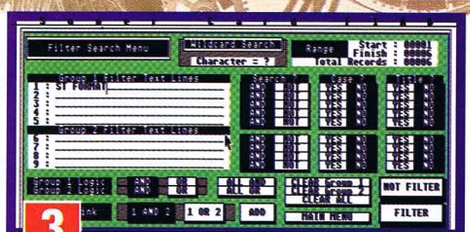
We've got five copies of the brilliant *Home Accounts 2* package to give away – it's earned a truly stunning 90% and is undoubtedly the best small accounts program for your ST. Just answer the questions opposite and post your entries, on the back of a postcard please, to Quack, Quack Oops!, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW by Friday 11 June.

With *Super Card 2* you too can sort out your 32,000 piece yogurt pot collection



1 **Using *Super Card 2* you can assign up to 32,000 records to a file. The Initial Selection Menu is the first screen you come to when running the program.**

2 **The main menu screen is the hub of the program. From here you can create new cards, read directories, merge ASCII files, sort, save and load card files.**



3 **Probably the most powerful functions are the filter options, using this page you can filter out and not display cards containing specific words like Amiga and PC.**

features include the usual ASCII file import and export options, the ability to merge databases, definable macros, the ability to read a disk directory straight into a card and password protection.

Registering with B Ware also provides you with an excellent and very detailed manual.

***STF* RATING: 89%**

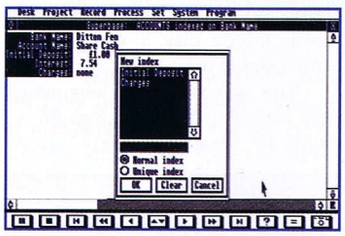
- **Cover Disk 35, see page 44**
- **Information: B-Ware ☎ 0455 613377**

SUPERBASE PROFESSIONAL

Probably the most comprehensive relational database available for your ST. *Superbase* has an easy to use VCR style interface for skipping backwards and forwards through files. It also has the ability to create customised forms and import graphics, so you are not just limited to boring lists of text. *Superbase* can import text files and convert them to database format so you can create your files on a word processor, or export database files as ASCII text files for use in other programs. Unlikely to be surpassed until a Falcon version arrives later in 1993.

***STF* RATING 86%**

- **£99.95, HiSoft ☎ 0525 718181**
- **1MByte RAM recommended**



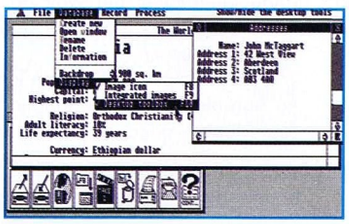
■ Don't panic. *Superbase Pro* has a system of large friendly VCR style buttons across the bottom of the screen to enable you to move easily through a database file.

FASTBASE 2

Working in all resolutions, *Fastbase* has the added bonus of including graphics as part of your database. The main features of the program include the ability to have multiple databases in memory, import and export ASCII files, multiple databases open on-screen and the ability to add images to files. Its built-in programming language (FBML) and editor enable you to create customised databases.

***STF* RATING: 83%**

- **Shareware – check out your PD Library listed on page 90**



■ With *Fastbase* you can list everything that exists in your own personal reality.

HOME ACCOUNTS 2

Probably the best small accounting package available for your ST, *Home Accounts 2* can handle multiple income accounts, customised reports, investment accounts, details of cheque numbers, VAT, and varying investment types as well as the more usual income, payment and balance utilities.

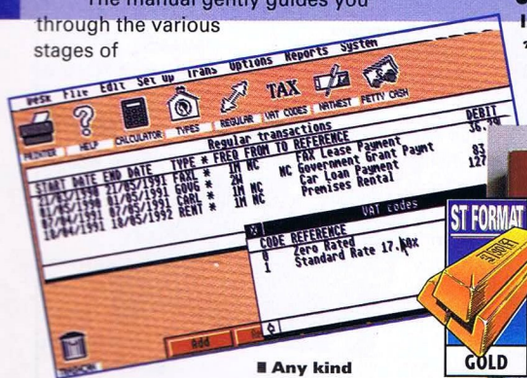
The program has an easy to use interface with Desktop icons providing access to most of the major features. The addition of a built-in calculator is a good idea, although there are many PD calculator accessories available.

The manual gently guides you through the various stages of setting up your own accounts with well written easy to follow instructions. The built-in on-line help facility is also a definite plus point. Keeping track of reconciled and unreconciled transactions is a boon for businesses that have small budgets to work with.

If you are not too enamoured of studying long lists of text, then you can display the information in a variety of graphical formats – graphs, pie charts, bar graphs and 3D bar graphs can all be generated by *Home Accounts 2*. This is undoubtedly the best small accounts program for the ST.

***STF* RATING: 90%**

- **£54.95, Digita International ☎ 0395 270273**
- **See competition**



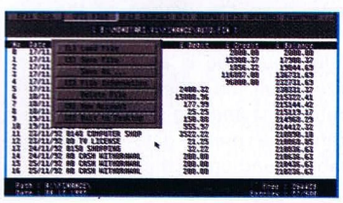
■ Any kind of account and transaction can be displayed by *Home Accounts 2*, even those dreaded VAT rates can be included in the system.

MONOTARI FINANCE MANAGER

The *Monotari Finance Manager* is a competently written PD accounts package designed to be used in high res only, this is because it uses the ZeST interface to create a NeXT-like 3D environment. The program is a basic home accounts package which enables you to keep a tight rein on your spending, you can enter details of all of your bills, credits, debits and pools winnings. In fact this program is more of a cheque book balancing program but is well worth a look.

***STF* RATING: 78%**

- **Check out a PD library from the list on page 90**
- **High res only**



■ Always remember to pay that TV licence on time with the *Monotari Finance Manager*, you can enter 500 transactions in each file.

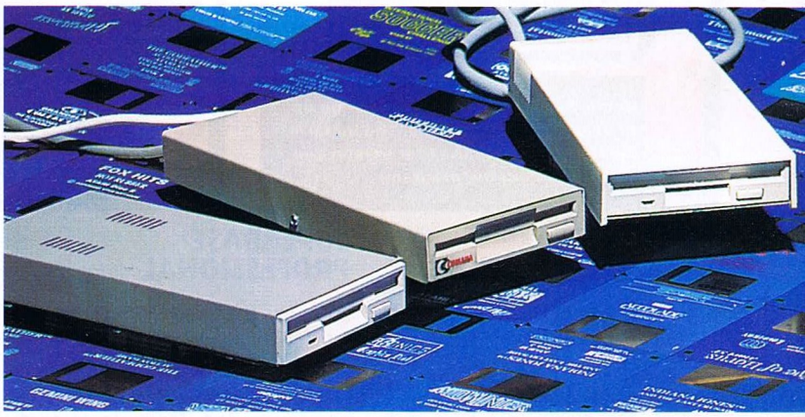
ANSWER THESE QUESTIONS

1. What does ASCII stand for?
2. What is "probably the most powerful accounting tool on your ST"?
3. What is Wayne Smithson working on at the moment?
4. Who are in Beat System?
5. Spell the sound a duck makes.
6. What sort of machine does Paul Hruza describe the ST as?
7. Who were Donald Duck's nephews?
8. What's "undoubtedly the best small accounts program for the ST"?
9. What piece of furniture does a database do the same job as?
10. Which male character collects glasses in the Rover's Return?

Remember there are always a few rules to follow:
No multiple entries, no entries from employees or relations of anyone who works at Digita International or Future Publishing, and absolutely no cheating whatsoever.
Thank you very much.

DRIVEN TO

Fed up swapping disks on your single-drive system? Go with Clive Parker and check out the best of the floppy drives



Single drive ST setups are great for games players, but if you intend to use your ST for more serious pursuits, then you're going to find your capabilities severely limited.

You can spend a disproportionate amount of time swapping disks in semi-professional and professional applications to access data. This is because large applications like DTP programs tend to have the main program, fonts and work files on separate disks.

Hence the need for a second floppy drive. The most common setup is to boot the program from drive A with the fonts and other system files disk in drive B. Once the program has loaded, you can leave the system disk in drive B and use drive A for your work disk. So we've established the need for a second drive when using DTP packages and other programs like graphics applications or programming languages, but why do you need two drives just for a humble word processor?

Well, most WPs are no longer so humble, many are supplied on four double-sided disks and need to be installed onto your own working disks. Although you can install programs to work just from drive A, it usually takes an hour to install a large program such as *Redacteur 3* onto floppy disk if you're only using a single drive.

The constant disk swapping while installing a major program is bound to drive you crazy. Even more modestly sized applications make good use of a second disk drive. Some, admittedly older, applications need the disk containing the main program in the disk drive at all times, otherwise it refuses to let you carry on with your work. This means that you must have the disk write-enabled so that you can save data to it, not

Cumana CSA 354

DENSITY: 720K DOUBLE DENSITY
MACHINE: ALL STs, MEGA STE, TT
PRICE: £59.99
FROM: 1ST COMPUTER CENTRE
CONTACT: ☎ 0532 637988

The justly famous Cumana CSA 354 drive was the best you could get five years ago and is still the best today, but at about half the price.

The Cumana external drive has long been the darling of the ST world, and for good reason. Physically, the drive is about the same size as all the others, with a steel outer case and the seemingly standard one metre data connection cable found on all the drives tested – enabling easy positioning of the drive on your desktop. Unlike all the other drives, the Cumana has an internal power supply unit (PSU) with a long mains lead attached complete with plug containing a three amp fuse – the right rating for the power consumption of an external floppy drive. We used the drive for over an hour and it handled all the tests without effort. The drive is a little noisier than the others, with a distinct clunk-clunk as the stepper motor moved the drive heads between tracks. The average disk rotation speed was well over the minimum at 304.023 rpm and this drive is the only one able to format disks to 84 tracks capacity. The drive remained cool at all times even when in continuous use. The on/off switch is not marked which can often lead to you having to re-boot before getting the drive up and running – apparently the power switch is in the on position when supplied.

This is probably the best specified drive available, it is not that much more expensive than the others and has a built-in PSU. If you can afford the extra tenner, then get this drive.

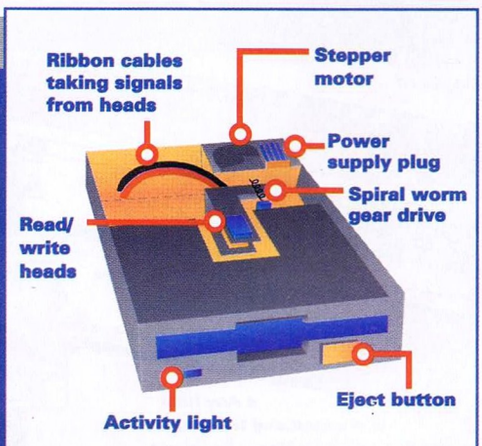
***STF* RATING: 90%**

HOW DOES A FLOPPY DRIVE WORK?

A floppy drive has a slot at one end and some wires at the other, and it's able to read data from and write data to a floppy disk. How is this apparently magical feat accomplished?

Well, a floppy disk is simply a disk of Mylar coated with a thin magnetic sensitive layer of ferric oxide contained in a protective shell. When formatted, a standard ST disk is split up into 80 concentric rings called tracks, and each track is split into nine sections called sectors – each of these holds 512 bytes of data. Therefore an ST disk can store 512 bytes x 9 sectors x 80 tracks x 2 sides making 720K. The floppy drive consists of two motors, some electronics to convert the data to a useable form and an interface to connect the drive to your ST. One motor rotates the disk at over 300 rpm, the other motor controls the movement of the read/write heads over the disk surface – this motor makes the disk heads move precisely from track to track and is called a step motor.

The heads write data to the disk when an alternating current is passed through them creating a magnetic field, this field alters the structure of the particles of the magnetic coating so it represents data in binary format. Data is read from the disk by the magnetic field from the disk surface inducing a current in the head. If a wire moves through a magnetic field, a current is generated in the wire. The strength of the current depends on the strength of the field, so the strength of current representing a binary one is greater than that representing a binary zero.



EXTREMES

■ The task: take six external floppy drives and display them in a different, but relevant way. We went for the "drives on a bed of floppy disks" idea rather than the more usual "stack of drives" routine. Excellent.

a recommended procedure for application disks – it is all too easy to make a silly mistake and destroy your word processor if it is not write protected, and even if it is a back-up copy you are using (and you are using a back-up disk, aren't you?) you still have the hassle of recreating a working disk. Everything becomes so much easier if you have a second drive to store all your valuable data files on.

Instead of running the risk of constantly saving to the program disk, you simply stick the data disk into drive B and save and load data as you want. It also makes it easier to keep track of different types of correspondence; personal letters on one disk, business on a second and financial on a third. The same applies to graphics software, a separate library of images can be built up for each file type.

In fact, a second floppy drive makes any application that saves or loads to disk easier to use and a pleasure to work with. Apart from making it easier to use desktop publishing programs, graphics packages, word processors, music software, databases, spreadsheets, accounts programs, MIDI sequencers, sound samplers, video grabbers, animation programs and TV titling programs (convinced yet?), what else can a second floppy drive do for you?

Disk swapping while installing a major program is bound to drive you crazy

Basically, all standard file maintenance procedures are simplified. Normally, copying a file from one disk to another is a tedious, boring process. You open the drive A window, swap disks and open the drive B window. Then you swap disks and drag your file from drive A to drive B, then swap disks a further three or four times following the on screen prompts. It's all gripping stuff.

This high level of swapping takes place for every file to be transferred. On a twin drive system all you have to do is open the drive A and B windows and drag the files from one to the other, then you sit back and watch while the files fly across. Easy life!

Now it's time to sit back and relax, read on and choose that essential second drive. ***stf***

Zydec 720K floppy drive

DENSITY: 720K DOUBLE DENSITY
MACHINE: ALL STs, MEGA STE, TT
PRICE: £52.99
FROM: 1ST COMPUTER CENTRE
CONTACT: ☎ 0532 637988

■ The Zydec drive is a well built and well specified floppy drive. A reasonably priced option that won't let you down.

The Zydec drive is a smart looking machine in an attractive grey steel case which should be proof against the most vigorous handling – although testing the strength of the case with the contents of your tool kit is not recommended. The case has ventilation slots in the top, whether they are required or not is, in fact, a debatable point because the drive doesn't even get remotely warm after an hour's non-stop use.

The drive connector cable is well over a metre in length, so it's very easy to install it wherever you want to put it on your desk.

The power supply is of the all-in-one plug-in variety and also has a long lead, it remains cool to the touch throughout use. The drive is virtually silent when formatting, reading or writing to disk. The average revolution of the drive per minute was well over the 300 revolutions per minute minimum at 303.877 rpm, and this drive also formats disks to 82 tracks. Zydec use Sony or Citizen drives so you can be assured of continued reliability from this brand.

There is a small on/off slide switch on the back of the drive, and even though the manual tells you to ensure the drive is on before you boot the ST, there is no indication which position is the on position and which is the off. Apart from this shortcoming, this drive is thoroughly recommended.

***STF* RATING: 82%**

Evesham Micros 720K drive

DENSITY: 720K DOUBLE DENSITY
MACHINE: ALL STs, MEGA STE, TT
PRICE: £52.99
FROM: EVESHAM MICROS
CONTACT: ☎ 0386 765500

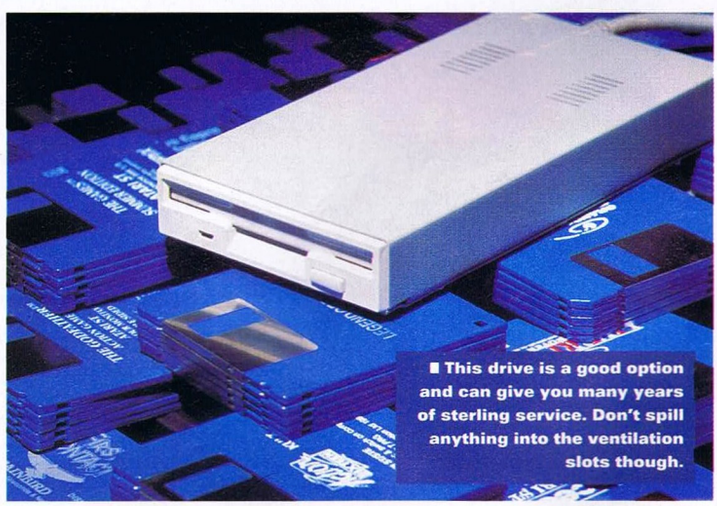
Another offering in a steel case, this drive is very similar to the Zydec drive above and performs just as well.

The connector is long enough for you to keep the drive on the floor if you want to, and the power supply is of the plug-in variety. External power supplies seem to be the norm at the moment which is a bit of a shame really, since an internal PSU looks much more professional.

This drive gives pretty much the same results as the Zydec; it's quiet, fast and able to format to 82 tracks. Once again the on/off switch is not marked, you're likely to find this a tad on the annoying side if you have booted your machine only to find you cannot access the B drive.

Despite this common failing of many floppy drives, we are pleased with the results obtained with this drive and it is well worth considering as a second unit.

***STF* RATING: 81%**



■ This drive is a good option and can give you many years of sterling service. Don't spill anything into the ventilation slots though.

Atin Electronics 1.44MByte HD drive

DENSITY: 1.44MBYTE HIGH DENSITY
MACHINE: MEGA STE AND TT ONLY
PRICE: £99.99
FROM: GASTEINER
CONTACT: ☎ 081 365 1151

This drive is a quality German import with continental power connections. Despite this, the drive is the perfect addition to a Mega STE or TT setup.

This high density (HD) drive for the Mega STE and TT is imported from Germany. It looks no different to any standard external drive but enables your Mega STE or TT to back up high density 1.44MByte capacity floppy disks in one operation. It gives excellent results and can format extra sectors and tracks to provide a "fat" format, although the same warnings about formatting disks beyond their capacities are the same for HD drives – there is still a risk of data loss. The data cable is one metre long, this is less of a necessity with the Mega STE or TT because the drive can sit on the hard drive housing – the floppy drive connection is behind the hard drive. An external plug-in power supply unit comes with the drive, but it has a two pin connector so you need a shaver adaptor plug, making the whole setup rather shaky. It would be sensible to supply a British PSU with the drive, so you should really get your own replacement. Apart from this rather silly oversight, the drive is a recommended add-on to any TT or Mega STE system, and it is the only one with a power supply switch with an on/off indicator. Well built, reliable and quiet.

***STF* RATING: 80%**

PC720B drive

DENSITY: 720K DOUBLE DENSITY
MACHINE: ALL STs, MEGA STE, TT
PRICE: £65
FROM: POWER COMPUTING
CONTACT: 0234 843388

The Power drives lost their steel cases for an attractive, but less durable shell. Still, the drive mechanism and special functions work fine

The PC720B is one of two add-on drives from Power Computing and is the higher specified of the two. It looks sturdy but it's made of plastic. The external power supply is not a one piece plug-in job so you can put a three amp fuse in the plug, and the connecting cable is of a sensible enough length so you can reach a nearby power point. In use the drive is quiet and efficient, we loaded, saved and transferred large and small data blocks continuously for over an hour.

The drive ran over one per cent faster than the minimum 300 rpm required, and it formats to a maximum of 82 tracks – 82 tracks is the maximum you should format your disks to.

The extra features of the drive include the ability to boot from drive B, handy if you have a single-sided internal drive, and it also has a special virus blocking mode. When the virus blocking mode is enabled it is impossible to write anything to either the internal or external drives, your ST is fooled into thinking that all disks are write protected. The B-boot option and the virus blocker are both enabled from switches on the back of the drive along with the power switch.

These extra features are worth the £10 price difference between this drive and the PC720P – that's if you need them. The fact that the case is made of plastic and that you have to supply your own plug lost it some points on its overall rating.

***STF* RATING: 78%**

Essential drive details

Drive	Supplier	Contact	Price	DD/HD	RPM	Max Capacity	Internal PS?	Rating
Atin HD Drive	Gasteiner	☎ 081 365 1151	£99.99	HD	303.247	82	Yes	80%
Cumana	1st Computer Centre	☎ 0532 637988	£59.99	DD	304.023	84	Yes	90%
Evesham 720K	Evesham Micros	☎ 0386 765500	£52.99	DD	303.754	82	No	81%
PC720B	Power Computing	☎ 0234 843388	£65	DD	303.431	82	No	78%
PC720P	Power Computing	☎ 0234 843388	£55	DD	302.092	82	No	74%
Zydec	1st Computer Centre	☎ 0532 637988	£52.99	DD	303.877	82	No	82%

PC720P drive

DENSITY: 720K DOUBLE DENSITY
MACHINE: ALL STs, MEGA STE, TT
PRICE: £55
FROM: POWER COMPUTING
CONTACT: ☎ 0234 843388

This drive is physically identical to the PC720B drive, apart from the extra hardware features and the simple on and off switch on the rear of the PC720P – the switch, as on the other drives, gives no indication of whether it is in the on or off position.

The connecting lead is sturdy and long enough for easy positioning of the drive, the power supply is identical to the 720B unit and runs for several hours without getting too hot. It's a shame that the power supply has not been included within the drive casing, because it is certainly long enough to house an internal PSU, although fitting it internally could push the price up.

■ **This is the same as the other Power drive but without the special features of the PC720B. Shame there's no mains plug provided with it, otherwise it's fine.**

We repeated all the tests with the following results. The drive is just as quiet as the 720B (opposite) and coped with the file transfer tests without any problems. In the rpm speed tests the drive ran slightly slower than the 720B but was still over the minimum 300 rpm, and the drive also formatted disks to a maximum of 82 tracks.

Perhaps not the best drive available but we found it to be perfectly reliable in use, again points are lost because of the plastic case and lack of mains plug.

***STF* RATING: 74%**

Very testing

To assess how good each of the drives were, we put them through some rigorous tests. We compared the number of tracks drives can format, the average disk speed in rpm, the construction and finish of the drive, internal or external power supply and drive noise. We used PD programs to check the drives: *DC Max Track* from *STF* 23, *ST Drive Speed Test* and *ST Disk Drive Diagnostic* from the *ST FORMAT* BBS (0225 465977).

■ **This handy little utility from Double-Click tests each of the drive to its maximum capacity.**

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 despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping cutomers 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 10/03/93 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery.

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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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Tel: 9 am - 5:30 pm (5 Lines)
(0772)203166

DataPulse Plus

Hard Drives

- All Data-Pulse Plus Drives are formatted, partitioned and tested before despatch.
- Autobooting and Autoparking, Extremely low noise.
- DMA device selector & On/Off switch on front of case, DMA Out port.
- Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand.
- We only use quality ICD controllers with clock.
- All drives include 12 months warranty & free expert support.

Data-Pulse + 42Mb	£ 319.99
Data-Pulse + 85Mb	£ 379.99
Data-Pulse + 127Mb	£ 429.99

Floptical Drives

- Stores over 20Mb of data on a 3.5" Floptical disk, Reads/Writes 720K and 1.44Mb 3.5" disks.
- Average access time 65ms, Data transfer rate 200K per second (6 times faster than Floppy disk).
- Available as a stand alone unit, an upgrade to Data-Pulse(Plus) or as a combination unit with Hard drives. 21Mb Floptical diskette included with every drive.

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Datapulse upgrade	£ 299.99
21Mb 3.5" Floptical Disk	£ 24.99

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520 STE Discovery Xtra	£219
1Mb STE	£229
2Mb STE	£275
4Mb STE	£329
1040STE Curriculum 2	£289

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter.
- 32 MHz 56001 Digital Signal Processor.
- 1.44Mb 3.5" Floppy, up to 14Mb RAM.
- Displays 65536 colours from 262144 palette at 768 x 480 resolution.
- 8 Channel, 16 bit, higher than CD quality, stereo sound sampling.
- Multi TOS MultiTasking Operating System.

FALCON 1Mb No HD	£ 579.99
FALCON 4Mb 65Mb HD	£ 979.99

Budget Hard drives

Limited Offer Bargain basement hard drives based on a GEsoft controller and 42Mb Quantum Mechanism. The Hard drive has no on board clock and is not compatible with an Atari Laser but will daisy chain to any existing Data-Pulse Plus drive. This is an ideal low cost introduction to Hard Drivin.

42Mb Budget Drive	£249.99

Printers

Star

Star LC100 Colour	£ 165
Star LC20	£ 124
Star LC24/100	£ 179
Star LC24/200 colour	£ 259

All printers include 12 months warranty.

Starjet SJ48 Bubblejet	£ 210
SJ48 Sheetfeeder	£ 69

Citizen

Citizen 120D+	£ 119
Citizen Swift 240 Colour	£ 270

Hewlett Packard

HP Deskjet 500	£ 339
HP Deskjet 500 Colour	£ 449
HP Deskjet 550 Colour	£ 580

Triumph Adler

JPR7825 Bubblejet	£ 224

Lasers

Seikosha OP104	£ 549
Seikosha 1Mb RAM	£ 69
Seikosha Toner (2 units)	£ 19
Seikosha Drum Unit	£ 79
Ricoh LP1200	£ 759

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

Monitors

Atari SC1435	£ 179.99

The SC1435 comes complete with cable and tilt/swivel stand.

Philips 8833MKII	£ 229.99

Includes 12 months on site warranty and free Lotus Turbo challenge II.

Philips 15" FST Tv	£ 229.99
Philips 15" Cube Teletext	£ 259.99

- SCART input Tv
- Fastext teletext

8833 MKII-ST cable	£ 9.99
Philips SCART to ST	£ 9.99

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 using LanNet device.
- Ethernet compatibility and E-Mail coming soon.

DataNet with PowerNet	£ 99.99
LanNet with PowerNet	£ 89.99
MidiNet with PowerNet	£ 59.99

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- Will fit any ST(F)(M) or Mega ST. Solder in design for higher reliability.
- Extremely compact in house designed Multi-Layer circuit board, smaller than a credit card.
  Upgradeable in stages from the base 512K to 2Mb then 4Mb.
- All Aries RAM upgrade boards come packaged in a 10 capacity disk box, complete with full fitting instructions and memory test software.

512K Board	£ 39.99
2Mb Board	£ 79.99
4Mb Board	£ 129.99
512K SIMM's STE	£ 9.99
2Mb SIMM's STE	£ 49.99
4Mb SIMM's	£ 94.99
2xSIPP to SIMM adaptors	£ 3.00

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

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TOS 2.06 + Switch STE	£ 65.00
Courier Pickup	£ 11.00
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GI Brush Mouse

"The Natural way to draw"

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- Opto/Mechanical mechanism.
- 500mm/SEC tracking speed.
- Switchable between ST/Amiga.
- Direct Mouse replacement.

GI Brush Mouse	£ 19.99

Mice

Golden Image Mouse	£ 14.99

The Golden Image Mouse was recently given an Amiga Format Gold Award with 90% and offers 290 Dpi resolution, 2 high quality microswitched buttons and a free mouse mat.

Optical Mouse	£ 24.99

The Golden Image Optical Mouse is a high quality, 3 button, replacement mouse. The fully Optical mechanism means no moving parts offering far higher reliability. Includes Mat.

Jin Mouse	£ 7.99

Don't be deceived by the low price of this mouse. Mass production of the Jin mouse has resulted in a high quality Opto/Mechanical mouse featuring 290 Dpi resolution.

Ladbroke's Mouse mat	£ 2.98

Please add £2 for P&P on mice.

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	£ 44.99

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.
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Golden Image Scanner	£ 119.99

Silhouette

- Autotraces bit image graphics to resolution independant vector graphics.
- Produces Beziers, B-Splines, High resolution grey scales.
- Imports IMG, DEGAS, TINY, MacPaint, GEM, SGF files.
- Exports IMG, GEM(1,3), SGF, DXF, EPS(Postscript) files.
- Requires 1Mb ST, Hi-res monitor.

Silhouette	£ 60

Calamus CVG support coming soon.

COME TALESPIN WITH ME

Build a fantasy world with *Talespin* and read Clive Parker's hints and tips

WHAT EXACTLY IS *TALESPIN*?

On Cover Disk 40, we gave away Talespin, but do you know what it is?

The games in *Talespin* are created using a series of pages and each page is built from stored graphics. You can have boxes of text popping up with more lists of options or sampled sounds can be played. You can define a series of variables which are altered depending on the player's actions. These can modify which drawings appear on each page, what text appears and which page the player is taken to next. The game system develops in a flow-chart sort of way.

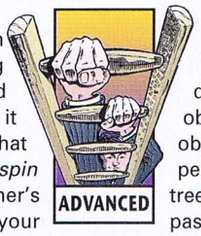
It's the simplest game creation system and you can get games together relatively quickly. The biggest drawback is that each page is loaded from disk, so games tend to play slowly. Since the system is so simple the results aren't very sophisticated but budding game creators get to test their mettle without undue programming pain.

DRAWING OPTIONS

Graphics can be imported into *Talespin* in either *Degas* or *Neochrome* low res format so you can design your pictures in practically any paint package. Selecting the Drawing definition option from the main development menu takes you to the drawing sub-menu which enables you to load, delete, draw new pictures and edit drawings in memory.

The Modify function has a few basic drawing features built-in and ready to use. You have a choice of drawing modes, a spray can, a magnify mode and the ability to change the palette colours. Enough to get you by.

Selecting the Modify option from the Drawing sub-menu enables you to alter pictures to suit your requirements. While not a fully fledged drawing package this option is good enough to get you by if you don't have a graphics program.



Before you dive in and start loading graphics and sounds into your game, it pays to plan exactly what you want to do. *Talespin* works like a programmer's flow chart, you start with your title page and move from page to page through your game.

Each page is equivalent to a process in the flow chart, with variables and options within each page creating branches to other pages. It helps if you draw a plan and decide what you want to achieve at each stage of the game.

Keep the game player busy and make sure there are plenty of options on each screen. If a screen ends up having only two possible exits and a single object to examine, your game is boring. Clever use of variables and conditions can create different options – if you have a dragon-musk potion, for example then a dragon can appear in a location that was previously empty. Variables can also be used to display what you are carrying – all you have to do is design a set of icons representing all the items that can be collected. You then set the variables on each location to display the items held at the bottom of the screen.

When creating graphics remember that you can use one main background for several scenes by overlaying different features and objects on it. Foreground objects such as pots, pans, people, animals, vehicles, trees and buildings can all be pasted onto the same backdrop. All the pictures displayed on the same page must have the same palette, if not they assume the background colours and look distinctly odd. Using lots of small pictures and pasting them onto backgrounds saves space.

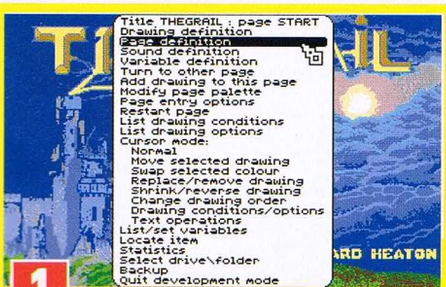
When planning your adventure make all of the actions logical – don't kill someone if they pick up a marble without giving a valid reason for the death, for instance. Avoid sudden unexplained deaths because if players get killed for no apparent reason they won't want to play your game again.

Don't be too ambitious with your first game, try about ten different locations and keep the options simple. Take a look at the demo games supplied on the disk and see how they have been put together and how the variable options work – studying someone else's work gives you fresh ideas.

Sound

Many of the features of *Talespin* are pretty hard to get to grips with if you don't have the manual

How to create your very own fantasy world in easy steps (the first three)



1 ***Talespin* is controlled by a series of menus popping up when you click on the left mouse button. This is the main Development mode menu. It might look a little daunting at first, but everything is relatively straightforward and accessible.**

2 **As expected in a graphics based game, the first thing you need are... yes, some graphics. You can import pictures from other packages or use the rather crude built-in painting functions. The same graphics can be used any number of times within the adventure.**

3 **Pictures can be resized, recoloured and moved about at will. Since memory space is limited, it pays to re-use graphics. Clever use of the palette and sizing also helps. It pays to build pictures from small components that you can mix and match to make up various main pictures.**

DON'T FORGET TO USE THE VARIABLES AND OPTIONS

What makes Talespin such a powerful package?

The variables and options are really what let you define when and why an action occurs on a page or location. Using the variables may seem complicated at first but it is really quite simple to get to grips with them after a bit of practice. At the main Development menu select Variable definition to set up a list of variable names and possible values.

Make sure that the name you give to the variables are connected with your game, something like "Stamina = 100" can be used to control the energy of the player. These variables can be used to control all aspects of the game. You can set up a variable to display a certain picture if the variable Giggle is equal to 1 and a completely different picture if the variable Giggle equals 0.

Adding an option to either a page, a text entry or a drawing can cause an action to take place – either a sound can be played, a drawing can appear, a variable value adjusted or a new page moved to. For a conversation between characters to flow, clicking on the text boxes must be set to alter variables so that the subsequent text boxes are enabled. Another use is to adjust the Stamina variable mentioned above, if you click on an item of food it can cause your energy level to increase, alternatively clicking on another object (the poisoned marble) could cause the stamina to decrease. It may seem a long and complex process but it is the only way to ensure that your game flows correctly.

In this stunning example the giggling guard at the bottom left is only visible when the variable Giggle is equal to 1 and the variable Hysterical is set to 100.

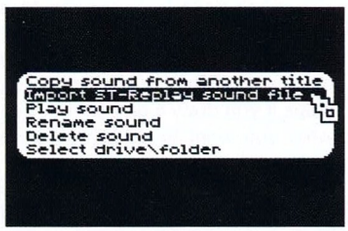
If the variable Giggle is changed to 0 by an option being triggered, then the original picture disappears and a different one replace it. This could be used for magical transformations.

handy, the greatest problems seem to be with importing and assigning sounds to frames or text. Follow these simple rules which enable you to easily add external sound samples to your games.

1 Prepare yourself a disk to save your *Talespin* files on, this is the disk that we refer to as the workdisk throughout this article. Once you have loaded *Talespin* put the workdisk in Drive A.

2 When importing sounds they must be in *Replay 4* file format with an .SPL file extender. These can be saved either by the sound sampler software itself or converted using the *Soundlab* program featured on Cover Disk 42.

3 To import sounds into *Talespin*, you must have them ready on a separate disk. If you have an external disk drive, then you can import them by using the Select drive/folder option available from most of the menu screens – you also determine the exact path to import files from.



Selecting this option enables you to import custom made sounds into your story - if you have a sampler, that is. Or a PD disk of .SPL files, or somebody elses sampler.

4 If you only have one disk drive, then you have to swap disks before selecting the Sound definition option, the program automatically searches the current directory for .SPL files.

5 Once the sample is loaded into memory, you then re-insert the workdisk (*Talespin* prompts you for the disk if it can't find it) into the drive.

When you save the game you are creating, the sound samples you want are incorporated into the game data file.

OTHER SOUND TIPS

1 Keep your samples small, this leaves more game space for everything else.

2 Use the same sound for different effects, playing a sample at different speeds alters the way it sounds.

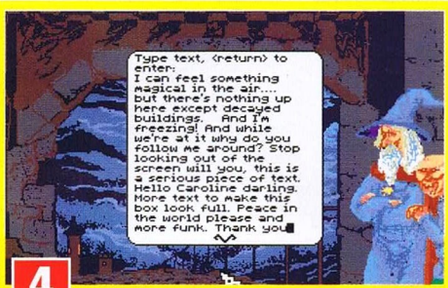
3 Don't go mad with the number of sounds and samples you use – use sounds sparingly for spot effects.

4 Assign appropriate sounds to text such as screams, groans and speech. Sounds assigned to text are only played when the text is selected.

5 Sounds assigned to drawings play every time the drawing is selected so this is not suitable for speech. Bells and other background sounds are best assigned to drawings.

Don't assign a sound to a complete page unless you only want it to play once, in this case use the Page entry option to assign the sound. Clicking on this option enables you to choose the sample to play along with the replay speed.

How to create your very own fantasy world in six easy steps (the last three)



4 **Once you've sorted out a batch of atmospheric graphics it's time for the typing fingers to move into action. Each graphic can have a text box assigned to it. Which text appears when you click on the graphic depends on a set of conditions.**

5 **Along with text, you can assign sound effects to pages or pictures. You can import *Replay 4* samples directly and replay them at up to 31 KHz. If you don't have your own samples, then there are disks full of the things littering the Public Domain.**

6 **The final result, the crowd cheers wildly and carries you through the streets. Well, your mum will probably play it for a while anyway. As with any game creator, *Talespin* is only a tool and *you* have to supply the creative bits.**

BREAKTHRU

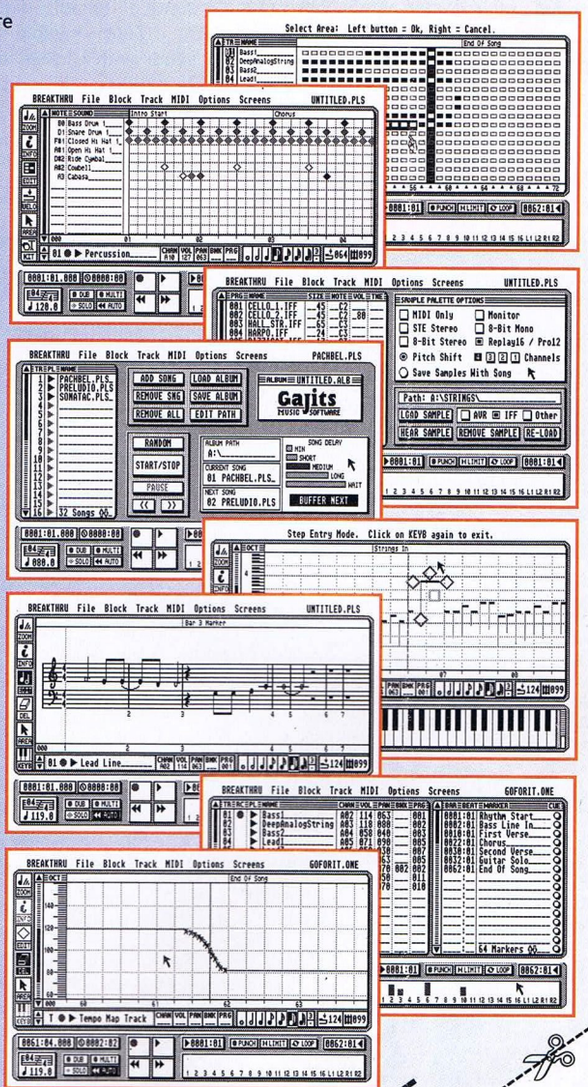
Q What should you expect to pay for a 16-bit sampler, advanced sample editing software, and a powerful 64 track sequencer?

New from Gajits and Audio Visual Research; a low cost 16-bit hardware and software combination for the Atari ST range. It could transform the way you make music...

Breakthru is a 64 track professional quality MIDI sequencer with a difference. At the same time as it plays your MIDI instruments, Breakthru will play back 16-bit samples through a Replay 16 sampler plugged into your Atari computer! (If you don't have Replay 16, Breakthru can play samples through your monitor or TV speaker, through the computers' DMA sound output sockets where available, or through the Microdeal range of 8-bit sample cartridges.)

In fact, Breakthru is a MIDI sequencer, a sample sequencer, or both at the same time! Add to that a host of highly graphical and user friendly editing screens, unique and innovative features like Gajits' Diamond Drag note editing system, and an ease of use which might surprise you if you've not used Gajits' software before, and you'll see why we called it Breakthru!

For Atari ST/STE/MegaST/MegaSTE/TT Computers • Mono and Colour Screen Modes Supported • Minimum 1 Mbyte RAM Required • Up to 4 Sample Channels With Stereo Output Where Supported by Hardware • Sample Output Via AVR Replay 16, Pro Series 12, Microdeal Mono & Stereo 8-Bit Cartridges (eg. Replay & Playback), Atari PSG Sound Chip, or Atari DMA Stereo Sound Chip • Real Time Pitch Shifting of Samples According to Note Value • 16 MIDI Channels (32 with Breakthru Plus) • VU Meter Style Channel Display • 64 Music Tracks Plus a Control Track • High Resolution Real Time Recording From MIDI Instruments (192 PPQN) • Loop Mode, Overdub & Punch-In/Out Recording • Simultaneous Multi-Track Recording • Auto Count-in Facility • MIDI or Audio Metronome • Step Time Recording of Music Over MIDI or Using Mouse Entry • Track & Cue Sheet Screen (64 Tracks/64 Cue Points) • Sample Palette Page (Loads AVR, IFF & Other File Formats) • Step Editor Screen with Diamond Drag Note Editing ("... by far the easiest grid edit system I've seen..." Ian Waugh, Music Technology review of Gajits' Sequencer One Plus) • Insert Program/Volume/Pan/Control Changes Graphically at Any Point • Score Editor Screen for Conventional Music Display • Drum Editor Screen for Easy Drum Programming • Song Arranger Page • Tempo Map Screen for Graphical Display of Tempo Changes • CD Juke Box Screen for Chaining of Separate Songs • Flexible Quantize Options to Improve or Fully Correct Timing • Many Different Types of "Global" Operations (eg. Transpose, Strip) • Sends & Responds to MIDI Clock & Song Pointers (External Sync) • MIDI Filtering & Re-Map Options • Imports & Exports Standard MIDI Files for File Exchange with Other Programs • MIDI System Exclusive (Sys Ex) Handling to Backup Instrument Memory • Undo Last Operation Facility • Keyboard Shortcuts for Many Options • Supplied with a Selection of Pre-recorded Samples & Demo Songs • Telephone Helpline Support Included



Breakthru Plus has all the features of Breakthru, but supports 32 MIDI channels instead of 16. Very handy if you have more than one MIDI instrument! A hardware interface is included with the package to provide an extra MIDI output socket. This simply plugs into the serial port of your computer.

If you are a registered user of Sequencer One Plus, you can obtain a substantial discount off the price of Breakthru or Breakthru Plus (see the order coupon).

Replay 16 from Audio Visual Research and Microdeal represents a giant step forward in sampling technology. It plugs into the cartridge port of your Atari, turning your computer into a 16-bit sampler and sample replay unit. Unlike dedicated samplers, Replay 16 makes use of your computer's built in RAM, so it costs considerably less than its nearest rival. Replay 16 comes with all the sampling and editing software you will need to record samples at rates of up to 48 kHz (higher than CD!). You can record samples direct from a CD player or other sound source and then edit them with the most versatile software you can buy. A phono output socket provides a standard connection to a wide range of sound systems.

"If MIDI and sampling's your thing, this is a must." Clive Parker, ST Format.

A See coupon or call the number below.

Gajits Music Software
I-Mex House,
40 Princess Street,
Manchester.
M1 6DE.

Access VISA AMERICAN EXPRESS

Prices include VAT & UK 1st class postage.
All trademarks acknowledged. Breakthru & Breakthru Plus UK release date 31.10.92.
Despatch normally within 3 working days, but allow up to 28 days. Credit cards are not charged until date of despatch. Products are sold subject to our standard licence agreement. E & OE.

ORDER LINE 061-236 2515

ORDER NOW! Send letter or coupon to Gajits, I-Mex House, 40 Princess St., Manchester M1 6DE.
Please send me: ❑ Breakthru £129.95 ❑ Breakthru Plus £159.95 ❑ Replay 16 £129.95
❑ I enclose my Sequencer One Plus manual as proof of purchase and claim £39.95 discount against Breakthru or Breakthru Plus

NAME _____ TEL _____
ADDRESS _____
POSTCODE _____ CHEQUE/PO ENCLOSED FOR £ _____
PLEASE CHARGE MY CARD NO _____
EXP. DATE _____

FM 3/93

HIGH-HEELED TEASERS

Love 'em or loathe 'em, platform games are here to stay. Rob Mead takes a look

Imagine. You're sitting in a fast-moving, somersaulting rollercoaster with a real cream chocolate fudge cake in one hand and a tin of Golden Syrup in the other. You have one minute to eat the lot. You stuff it down mercilessly, ignoring the waves of nausea building in the pit of your stomach. Suddenly, it all becomes too much... Recognise the symptoms? Then welcome to the sickest genre of 'em all – platform games.

Cute lovable sprites hold hands with hackneyed plots and go gambolling in primary coloured worlds. Even people who eat petrol engines for a living couldn't stand that type of punishment. *Bubble Bobble* started it all – Bub and Bob, two cuddly brontosauruses, wandered around blowing bubbles at baddies and causing alliteration in the process. It proved to be a huge hit and launched a thousand imitators. Each screen consisted of a series of platforms set at different heights. You had to make your character jump around each level, collecting power-ups and bonus objects while avoiding the various meanies who tried to stop you.

Couple this premise with a plot involving chaps rescuing hapless girlies and you've got a recipe for virtually every single platform game ever released. Only death-or-glory shoot-'em-ups are more popular on your ST, so how do you tell the classic from the dross?

The chief prerequisite for any platform game is playability. Scrolling has to be smooth – jerky graphics and poor animation ruin games where timing and player dexterity are crucial. For example, *Indiana Jones: the Arcade Adventure* is doomed to bargain bin hell by its lack of responsiveness – Indy has an alarming propensity to ignore your most frantic joystick gestures and fall to his death. This becomes extremely aggravating – after all, you don't mind dying when you've made a genuine mistake, but when the program's lack-

ALL TIME STORMIN' GREATS

Fire and Ice

£25.99 RENEGADE ☎ 071 702 3644

The best platform game ever, this is packed with playability and, although it's cute, it tastefully never lapses into that often-seen puke-provoking tweeness.

***STF* Rating: 94%**

Parasol Stars

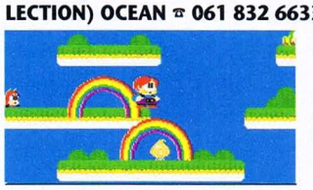
£25.99 OCEAN ☎ 061 832 6633

Another cutesy adventure starring Bub and Bob, though this time they're armed with brollies instead of bubbles. *Parasol Stars* is brilliant – even the usually dreadful chip music's catchy.

***STF* Rating: 91%**

Rainbow Islands

£19.99 (PART OF RAINBOW COLLECTION) OCEAN ☎ 061 832 6633



Otherwise known as the *Son of Bubble Bobble*, the game that started it all. *Rainbow Islands* is cute, it's tricky and it's got rainbows in it. Where's Bungle when you need him?

***STF* Rating: 93%**

Magic Pockets

£25.99 RENEGADE ☎ 071 702 3644

Unusual in-trouser adventure with the streetwise Bitmap Kid. Betty Boo wrote the intro music and it's packed with joystick fun. How much more of an incentive do you need to play this?

***STF* Rating: 90%**

Gods

£25.99 RENEGADE ☎ 071 702 3644

Forget Ulysses and the Cyclops, this is what you call a classical Greek adventure - there are puzzles, hard-to-beat baddies and artificial intelligence lurking in this great game.

***STF* Rating: 92%**

Prince of Persia

£24.99 DOMARK ☎ 081 780 2222

Although this has been around for some time now, the well-animated, realistic sprites and incredibly fiendish gameplay still makes *Prince Of Persia* one of the best platform games you can get for your ST.

***STF* Rating: 90%**

ing you've a right to feel frustrated and cheated.

It's also in the programmer's interest to provide you with worthwhile rewards. There's no point leaping around a complex set of platforms if you only get a piece of fruit and an insubstantial ping from your ST's sound chip – a good platform game rewards you with bonus weapons and zillions of points. It makes you feel good and spurs you on to complete that next level. Many of the best platforms games include a puzzle element, for example, Cool Coyote collects pieces of a key in *Fire and Ice* so he opens the exit door and escapes to the next level. Other puzzles – like the ones in *Gods* – enable you to get into a part of the game which was previously inaccessible.

There's no such thing as an original platform game. However, there are plenty of interesting heroes and heroines. Characters like James Pond and Baby Jo appeal because they're quirky, funny or cute and you feel a genuine empathy for them. After all there's no point playing a hero who's got about as much personality as a beige carpet. Chuck Rock's a perfect example of the extraordinary hero – he attacks people with his beer belly and has such a woebegone expression on his face that you can't help but feel sorry for him. Others, like Bub and Bob – the heroes of *Rainbow Islands* and *Parasol Stars* – are so cute you want to take them home, while the Bitmap Kid and Cool Coyote – with their shades and baseball caps – appeal to streetwise ST owners.

Magic Pockets, Gods and *Elf* also toy around with the platform game's conventions by having unusual themes or methods of doing things. *Magic Pockets* finds you rummaging around inside the Bitmap Kid's trousers, *Gods* embroils you in a mythical underworld populated with suitably devilish monsters and *Elf* offers you an action inventory so you can interact with objects and characters.

Shoot to kill

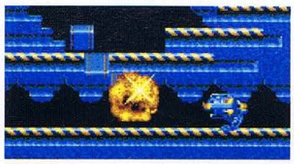
There's a whole sub-genre of platformers filled with vicious monsters and gun-totin' superheroes who wouldn't touch a fluffy bunny with a cattle prod. The platform shoot-'em-up is a bloodthirsty romp first, and a platformer second. Games like the *Killing Game Show* and *Strider* give you an excuse to engage in a spot of gratuitous violence without feeling guilty about a lack of sentiment.

In *Strider* you have to hack and slash your way through the KGB zone of Red Square while performing acrobatic leaps around a series of platforms. T*he Killing Game Show* places you in a Pit of Death filled with nasty aliens and a deadly liquid from which you have to escape. Both games are extremely violent and all the more playable for it – the threat of an impending and gruesome death only adds to the thrill of the gameplay, the hairs standing on end on the back of your neck. Other games like *First Samurai, Switch Blade 2* and *Lethal Weapon* also manage to avoid falling into *Bubble Bobble's* syrupy trap by using more "realistic" scenarios and characters.

Whether you like your platform games to be brutish or cute, you can't deny that they're fun to play. They might not have the brain-stretching powers of RPGs or the gung-ho spirit of beat-'em-ups, but they can provide you with some of the greatest times you can have on your ST. ***stf***

Killing Game Show

£25.99 PSYGNOSIS ☎ 051 709 5755

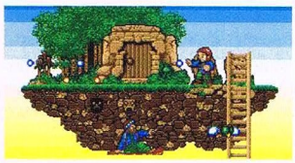


Bullseye taken to its ultimate conclusion. You have to fight for your life in this four-way scrolling platform shoot-'em-up.

***STF* Rating: 90%**

Elf

£25.99 OCEAN ☎ 061 832 6633



Corny boy-rescues-girls plot which avoids being twee thanks to some tough gameplay and the inclusion of plenty of puzzle and strategy elements. The graphics are also pretty attractive as you can see on the left.

***STF* Rating: 89%**

CHARACTER REFERENCE

Platform games are filled with cute heroes and heroines. Here's your chance to meet the wildest, the wackiest and the sweetest

BABY JO
The ultimate in cute infants, likkle Baby Jo eats sweets, drinks milk and fills his nappy. His only defence against the baddies who spite him is a rattle and the whiff coming from his bottom.

BART SIMPSON
Riding high on a tide of hype, Bart invaded the nation's consciousness and proved to be more than a one-minute wonder. Surprisingly, *The Simpsons vs the Space Mutants* turned out to be an exciting platformer.

CAPTAIN DYNAMO
A floppy-eared lettuce-grower from the Happyvale Home for Retired Superheroes, *Captain Dynamo* is one of the ST's most unlikely stars and a worthy foil to Von Flyswatter's exploits.

CHUCK ROCK
A fat slob in Fred Flintstone mould, Chuck belly butts anyone who gets between him and Gary Gritter, the lizard who stole his wife. Chuck's an anti-hero's hero, a Neanderthal for the '90s.

DIZZY
Dizzy's eggcellent adventures have kept a whole generation of kids amused. Tough, resourceful, hard-boiled, the little egg has launched a thousand puns and a whole host of spin-off cuties like CJ the Elephant and Captain Dynamo.

JAMES POND
Old fish-lips has to be one of the most popular game characters ever invented. Look out for his cinematic debut in the film of Ian Lemonsole's gripping spy novel *The Carp Who Loved Me.*

QUIFFY
Quiffy is the dinosaur hero of Bullfrog's sick, but cute platform game *Flood.* Can you help Quiffy rescue loads of trash before the screen fills with water?

ROLLING RONNY
Bearing more than a passing resemblance to Chris Evans, the Big Breakfast's erstwhile host, Ronny turned roller-skating into a computerised art-form.

THE TOYOTTES
Even black rats are lovable in platform land. Cornelius has to save a baby rat from turning into a monster's breakfast in the toyottes's adventure.

TOKI
See yourself as a laser-spitting gorilla? Then Ocean's *Toki* is the game for you. Transformed into an ugly ape by a deranged magician, you leap around various platforms in a variety of fashionable headgear. Mad.

The train now leaving Platform 13...

Some games are so bad, they're good. Some games are so bad, they're awful. Here are five that even British Rail has a job keeping up with

4. GHOULS 'N' GHOSTS
£7.99 KIXX ☎ 061 832 6633
Depressingly bad conversion of the old coin-op game. Deadly.
***STF* Rating: 44%**

2. DALEK ATTACK
£16.99 ADMIRAL ☎ 0977 797777
Dr Who was deliberately crap, right? All those dodgy special effects and metal dogs. This game follows suit.
***STF* Rating: 43%**

5. KID GLOVES
£7.99 GBH ☎ 0742 753423
Another cute kiddy who ought to have stayed in the nursery. Unoriginal and tacky with it.
***STF* Rating: 44%**

3. PREHISTORIK
£10.99 TITUS ☎ 071 700 2119
A crap platform game ruined by a dodgy concept. Buy *Bignose the Caveman* or *Chuck Rock* instead.
***STF* Rating: 44%**

1. INDIANA JONES AND THE LAST CRUSADE
£7.99 KIXX ☎ 061 832 6633
How could the world's greatest hero appear in something so shoddy?
***STF* Rating: 38%**

ST ANSWERS

With 150,000 new ST owners by the end of the year, there's bound to be a sudden increase of questions to answer and problems to solve. Clive Parker and team are waiting – meanwhile...

THE *STF* ADDRESS
Send all your ST related problems to ST Answers, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW. Please indicate the type of problem on the envelope.

BEGINNERS
If you have bought your ST recently and you're not quite sure about which bit goes where, you need help.

COMMS
Communication is the buzz word for the '90s and is becoming a buzz word for ST Answers. Check it out here.

DISKS
Floppy disks spin at incredibly high speeds, so something's bound to go wrong with them at some stage.

GAMES
If cheating at games is your thing (tut, tut) you're better off turning to page 46 for Gamebusters.

GRAPHICS
Having a few problems with your graphics package? And youre not quite sure where to turn to. Well, look no further.

HARD DRIVES
It's hard, very fast and can store a hell of a lot of data. Sometimes though, it causes unsolicited errors.

PRINTERS
Using a printer is the easiest thing in the world... until your paper gets chewed and big black blobs start appearing.

PROGRAMMING
Whatever language you use, at *ST FORMAT* we have the experts to tackle your particular programming nightmare.

SOUND
You're lost in music, no turning back... and all that Sister Sledge stuff. Look for this logo if you're into sounds.

ST PROBLEMS
If you're not quite sure what your looking for, or not quite sure what your problem is, look out for this logo.

RAMdisk solution

ST FORMAT £25 WINNER

I have a couple of points to make in response to your answer to Richard Young's letter in *STF* 44 – this concerned running *Timeworks 2* from a RAMdisk. I have been using *Timeworks 2* from a RAMdisk with 20 fonts in various point sizes on my 2MByte STE for some time. I use *Maxidisk* to create a 1,200K RAMdisk because it compresses all data stored within the RAMdisk. I also use COPY.TTP to automatically copy the desired files to the RAMdisk when I boot up, and *Trimfont* from the ST Club to compress my font files.

I use one disk for startup and overlays, and a second for fonts. On booting up I use COPY.TTP to transfer the relevant files to the RAMdisk. If fewer fonts are required, then all the data can be stored on one floppy. Use the following procedure to copy all the files to the RAMdisk;

1. Place MAXIDISK.PRG in the AUTO folder of the startup disk.
2. Put MAXIDISK.INF and COPY.TTP in the root directory of the startup disk. Edit MAXIDISK.INF as follows using a text editor.

Note: If you only use a single floppy disk system then you should find that a 1MByte RAMdisk is sufficient, although the number of fonts you can use is limited.

```
1000 D                  Sets RAMdisk
                        size and drive
COPY.TTP A:\COPY D:
                        copies files in
                        folder "COPY"
                        to drive D
COPY.TTP A:\GEMSYS D:
```

or to copy font files from drive B on a two drive system;

```
1200 D
COPY.TTP A:\COPY D:
COPY.TTP B:\GEMSYS D:
```

3. Create a folder on drive A called Copy, and move all your *Timeworks* files to it, except the AUTO folder and ASSIGN.SYS. Then copy the files PUBLISH.WID, SCREEN.WID and FONTWID.STR from the *Timeworks* fonts disk.
4. Edit the path for fonts in the ASSIGN.SYS file so that it reads

```
PATH = D:\GEMSYS
```

5. Use the Install Disk Drive option from the Options menu of the Desktop to create a Drive D icon – save the Desktop to your boot disk.

The only disadvantage of this system is that it takes about four minutes to boot up ready to use, but once you are in *Timeworks*, there are no pauses for disk access,

GFA BASIC ANSWERS

If you find that* GFA Basic *gets you down, there's only one thing to do... talk to Mac Marsden

MOT test

In *GFA Basic*, what is the best way to store typed text and be able to retrieve it for future editing operations? I am writing a database for car servicing and MOT checks and I need a piece of text for comments after each record. This data needs to be edited/updated. Arrays seem to be an awkward way of achieving this.
J D Chamberlin, Essex

stf: *JD, we don't see any way out of using arrays for saving and loading your text. You mention that you have a hard drive, using this and saving your data sequentially enables you to have fast access to your data. To save sequential data you need to specify the exact size of each record, as in the example below;*

```
OPEN "r",#1,"PERSONAL.INF",62
FIELD #1,24 AS NAME$,↵
    2 AT(*HOUSE&)
FIELD #1,24 AS ROAD$,↵
    12 AS TOWN$
FOR i%=1 to 3
    INPUT "NAME :";N$
    INPUT "HOUSE NUMBER.↵
        :",HOUSE&
    INPUT "ROAD    :";R$
    INPUT "TOWN    :";T$
    LSET NAME$=N$
    LSET ROAD$=R$
    LSET TOWN$=T$
    PUT #1,i%
    CLS
NEXT i%
CLOSE #1
```

OPEN "r" ..... indicates to your ST it is a random access file that you want to open and use. PUT #1,i% is the command which saves the data to the file, on the first pass i%=1, so that the data is saved as file number one, then two and then three, and so on. As the file is already opened, it takes no time to save data to the file.

To load in data, the command GET #1,x is used – where x is the record or file number to be read. It is absolutely crucial for the first three command lines of your read and write routines [OPEN, Field, Field] to be identical.

Once you have your data loaded, you want to amend, in this case NAME$. Well, the easiest way is to use the command FORM INPUT 30 AS NAME$, this places whatever NAME$ is holding on the screen and enables you to alter or delete the already inputted text. The included number [30] limits the text string to a maximum of 30 characters in length.

Checking the resolution

Donald Canton from **Powys, Wales**, wants to know how to stop a compiled *GFA Basic 3.5v* program loading into low resolution? He also wants to include an alert box to tell the user that he is in the wrong resolution.

stf: *The following procedure should help.* a% *returns a value of either* 0, 1 *or* 2 *corresponding to low, medium and high res respectfully. For clarification of using the ALERT box command see the* GFA *section of ST Answers in* STF *45.*

```
PROCEDURE resolution
a%=XBIOS(4)
SELECT a%
CASE 0
ALERT 1,"Medium or High↵
    | rez only",0,"OK",c|
END
CASE 1
ALERT 1,"Low or High |↵
    rez only",0,"OK",c|
END
CASE 2
ALERT 1,"Low or Medium↵
    | rez only",0,"OK",c|
END
ENDSELECT
RETURN
```

For the latest game hints, tips and cheats turn to this month's Gamebusters on page 46...

no disk swapping and printing starts within a few seconds of selecting the Print option. Because there is more space within the RAMdisk than on a floppy, there are no printing problems due to lack of disk space. The final cherry on the cake is the fact that *Maxidisk* is reset proof, so if there is a crash, all your files are still in the RAMdisk when you re-boot.
Nigel Harrison, Notts

stf: *Thanks for that interesting and helpful tip, Nigel. In fact, it was so interesting and helpful that we are sending you a crisp £25 cheque as a reward.* Maxidisk *is available from Goodmans International (☎ 0782 335650) on disk GD1791 (£2.75), and while COPY.TTP is not on this disk there are three other utilities that do exactly the same thing.*

Adventures with games

Do you know if *A320 Airbus* runs in high res, or if there are any other large plane simulators that do?

In *Ishar*, I am stuck and can't defeat the white knight near the beginning. Please could you help me in this part. Where can I find the transparent flask?

With the Formula One season changed this year, do you know if Microprose are going to bring out a data disk for *Formula One Grand Prix* to cover the new circuits, new rules and extra teams?

Do you know of any other adventures like *Indiana Jones* and *Monkey Island* that also run in high res? Is *Indiana Jones and the Fate of Atlantis* coming out for the ST?
Jonathan Hern, Scotland

stf: A320 Airbus *does run in high res, but it's the only large plane flight sim we're aware of that does.*

■ **"Oi Skorl! Where's this temptress then? And what's so 'luring about her?" "Wait while I put my nightie on and you'll find out."**

To defeat the white knight in Ishar, *you need to build up your character's abilities before you take him on. When you finally confront him, use all your magic spells and arrows first, then get all your party to bash him repeatedly. The transparent flask is probably the magic phial which can be found in Rhudghast Dungeon. For additional help on* Ishar: Legend of the Fortress, *see the first part of the solution that starts on page 46.*

Microprose (☎ 0666 504326) have no plans to release any data disks for Formula One Grand Prix *in the near future.*

Apart from the ones you've mentioned, the only other game we can think of is Lure of the Temptress. *Other high res games like* Magnetic Scrolls, Wonderland *and* Legend of the Sword *are no longer available. Text adventure games – like those found in the Public Domain – are also a good bet.*

Compatible?

I have a few queries about the Falcon030 which I would like answered before I go ahead and buy one.

1. Can I use my existing Stereomaster cartridge?
2. Does the Falcon have any cartridge ports?
3. Does the stereo headphone socket on the back of the Falcon work in the same way as the two jacks on my STE?
4. Do I need a VGA monitor if I want to get the full benefit of the screen modes?
5. Where can I get a cheap VGA monitor from?
6. Is the shape of the case going to be the same as the STE?

James Gordon, Worcestershire

stf: *1. It is unlikely that ST cartridges are going to be compatible*

Pixel hunt

Is there an address that I could `PEEK` after using the `FILL(x,y)` command that shows how many pixels were filled. If not, could you please show me how to write one that does return the amount of pixels filled as a numeric variable?
Clinton Harris, Maidstone, Kent

stf: *We know of no* `PEEK` *address that returns the number of pixels filled. Quite simply, the* `FILL` *routine looks for a change in pixel colour on either side of the x coordinate, then looks to the next y coordinate either side of the x coordinate and continues this until it can move no further in either direction.*

USART

Can you please explain how to configure the RS-232 port in *GFA Basic* using the command `XBIOS(15)`?
Malcolm Wilbior, Reading, Berks

stf: *This command configures the Serial or RS-232 port. The full* `XBIOS(15)` *command is as follows;*

```
XBIOS(15,b%,h%,u%,r%,t%,s%)
```

Where;
`b%` *= The baud rate.*
`h%` *= Handshake mode.*
[0: Without, 1: XON/XOFF, 2: RTS/CTS, 3: Both]
`u%` *= USART* control register of the MFP.*
`r%` *= Receiver status register of the MFP.*
`t%` *= Transmitter status of the MFP.*
`s%` *= Synchronous character register of the MFP.*
** Universal Synchronous-Asynchronous Receiver-Transmitter.*

The above parameters remain unchanged and have a value of -1. If you are going to program an RS-232 I/O port we suggest that you read up on the USART chip and Synchronous-Asynchronous addressing modes.

A better understanding of these subjects enables you to use `XBIOS(15)` *to its fullest capability.* `XBIOS(14)` *is also of great interest because it returns the address of the I/O table,* `r%=XBIOS(14,d%)` *where;*

`r%` *= Address of the data buffer for the serial interface I/O table.*
`d%` *= 0:RS-232, 1:IKBD, 2:MIDI*

Passing the buck

How do I pass variables between procedures? I can't get them to work in *GFA Basic*. I thought it would be the same way as procedures are passed in Pascal, which I use at college.
Andrew Love, West Lothian

stf: *There are three ways of passing variables to* GFA *procedures;*

Method 1

```
GOSUB s_print("**↵
    ST FORMAT **")
@s_print(" BEST READ OF↵
    THE MONTH ")
s-print(" AT A VERY REASONABLE↵
    PRICE ")
'
PROCEDURE s_print(t$)
LOCAL i%
FOR i%=1 TO LEN(t$)
PRINT MID$(t%,i%,1);
PAUSE 3
NEXT i%
PRINT
RETURN
```

The first three lines are different ways of calling the procedure, `@` *is the preferred method as it distinguishes a procedural call from a variable and takes less energy to type in than the* `GOSUB` *does. The first call to* `procedure s_print` *makes* `t$="** ST FORMAT **"` *and then it is printed out one character at a time. The procedure is called twice more with* `t$` *taking up new characters strings and printing them on the screen.* `LOCAL i%` *uses* `i%` *within the procedure and its value is not passed outside of the procedure.*

Method 2

```
A=8
@CUBE_ROOT(A)
PRINT A
'
PROCEDURE CUBE_ROOT(VAR x)
X=X^(1/3)
RETURN
```

`A` *is given a value of eight, and is passed into* `procedure cube_root(VAR x)`, *and* `x` *now holds the* `A` *value – its cube root is then evaluated, returned back into* `A` *and printed on the screen.*

Method 3

```
MAC=12
CLIVE=24
@DO_SUM
'
PROCEDURE DO_SUM
MUL MAC,CLIVE
PRINT MAC
RETURN
```

`MAC` *and* `CLIVE` *are given values,* `Procedure DO_SUM` *is called, the variable* `MAC` *is then multiplied by* `CLIVE` *and the result returned into* `MAC`, *which is then printed on the screen.*

Finding out exactly where you are can sometimes be a bit of a nightmare in adventure and role playing games. We're going to help you decide what game to go for and what to do when you get there in next month's incredible foray into the world of ST adventures.

As well as investigating role playing games, we're also going to be showing you how to upgrade your ST to a higher version of TOS, following up Atari's STFM's price drop news and reviewing a huge selection of serious hardware and software

ST FORMAT

ON SALE TUESDAY 11 MAY 1993

with the Falcon, our dongles for Cubase *and* Notator *certainly don't work. Anyway, you don't need a separate sound sampler with the Falcon, the built-in ADCs and DACs can sample sound at up to 49.2KHz just by using software like* Musicom *from Compo (☎ 0480 891819) or* Falcon D2D Edit *from D2D Systems (☎ 0223 420252).*

2. The Falcon030 we have in the office has a cartridge port, we don't yet know if the consumer version of the machine has one or not. Don't hold your breath though.

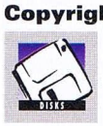
3. Yes, the stereo 3.5mm headphone socket on the Falcon can be connected to a stereo or a set of speakers in the same way as the STE can.

4. You need a VGA monitor to get the higher screen resolutions, but the true colour modes in medium and high resolution are available on any ST monitor or TV. An interlace mode is also available on standard monitors and TVs, but this can be rather flickery when using text.

5. Any shop that sells PCs can sell you a VGA monitor, or you can get one through mail order from any PC magazine. Try looking at the ads in PC Plus, PC Answers *or* PC Format.

6. Our Falcon is in an STE-style case. The consumer machine is in an unknown style of case, you could speculate that there is going to be a streamlined matt black case. Then again, you may not want to bother.

Copyright or copywrong?



I am concerned with the status of previously commercial software after it appears on your Cover Disks. I understand that the copyright still exists on the software, but is this true for Shareware and PD software which is also freely distributed? Admittedly, we have to pay extra for the second disk, but doesn't this mean we have bought the software along with the licence to use it? Or are the disks free, along with the software on them? Does this mean that the software can be given away to anyone or posted on a bulletin board? Is it legal for a BBS to upload all software upon your Cover Disks for callers to download, and can copies of the disks be distributed by Public Domain libraries? Many PD libraries stock copies of *ST FORMAT* Cover Disks, are they breaking the law?

Mats Högberg, Sweden

stf: *The commercial software packages we provide on our Cover Disks are not PD or Shareware and may not be copied or distributed in any way. We are allowed to publish the software on a one time only basis and this software should be treated in the same way as if you had bought it from a shop – you can usually make a backup copy for yourself but you are not allowed to distribute it. PD libraries may use the PD or shareware games on our Cover Disks because they are freely available, demos of commercial software and games can't be distributed on PD disks or by BBSs without the permission of the copyright holder.*

Is that right?

Having seen the article regarding the use of hard drives in the March issue, I felt that I must point out a problem if you turn on the ST before the hard drive. This problem is that if your hard drive auto-boots, turning your ST on first means that the drive does not get up to speed before your ST boots from drive A.

When this happens, you then need to run a boot program to initialise your hard drive, somewhat negating the point of owning an auto-booting hard drive in the first place. You could possibly get by if your ST has quite a slow boot and the drive gets up to speed quickly, but with my system this is not the case. So, I switch on the ST when the drive is up to speed giving me fairly instant access to *Superboot* and *Headstart* (my ST is an early TOS 1.2 STFM). I have never had any problems caused by booting in this manner and I suppose that the switching order finally comes down to personal preference rather than any hard and fast rule.

Craig Oldfield, via the *STF* BBS

stf: *You have made a valid point here, Craig, and there has also been a heated debate on this subject on the* ST FORMAT *BBS with the net result that about half the people with external hard drives turn them on first while the other half turn them on second, a few people used the "turn it all*

ASSEMBLY POINTERS

Assembly, hey? If you're stuck, you really are stuck! Tony Wagstaff lends a hand

Screen wiper

I have been programming in BASIC, and I've recently started to learn assembly. Could you tell me how to clear the screen, and how to print a string at an x,y coordinate?

James Newton, Berkshire

stf: *There are various ways of clearing the screen, perhaps the easiest is to use the VT52 escape code. This is equivalent to the BASIC command* `PRINT chr$(27)+"E"`*. To do this you need to use the GEMDos command* `Cconws`*:-*

```
move.l #cls,-(sp)
move.w #9,-(sp)
trap #1
addq.l #6,sp
```

In your data section you would store the following null terminated string:-

```
cls dc.b 27,'E',0
```

To print text at a specific screen position, use the VT52 codes again. You need the following in the data section:-

```
cursor_pos dc.b 27,'Y'
x   dc.b 0
y   dc.b 0,0
```

Always keep these three lines together. Move the x and y coordinates into `x` *and* `y` *– as byte values having added 32 to each. Then call* `Cconws` *twice, first with* `#cursor_pos` *as the first parameter, instead of #cls, and then with the address of your string. Your string can then be stored in the data section:-*

```
string   dc.b 'This is a
   string',0
```

Undivided attention

I have written a routine that uses the `divu` instruction but it doesn't always seem to do the division. Why?

Julian Goodyear, Leeds

stf: *Both* `divu` *and* `divs` *divide a 32-bit number by a 16-bit number. The answer, however, is stored in the bottom half of the data register as a 16-bit number, leaving room for the remainder to be stored in the high 16 bits. This could spell trouble if the answer didn't fit into 16 bits, which would happen for* `divu` *if the dividend was more than 65535 times the size of the divisor.*

To get round this problem the processor sets the overflow flag, leaving the two registers as they were. You need to add a routine which deals with an overflow and branch to it with `bvs` *immediately after the division. The other trap to watch for, which is what caused your problem, Julian, is to make sure the top half of your register is clear, using* `ext` *or* `clr`*, if the divisor is initially a word or byte.*

Redirection

I'm trying to redirect a program's output from the screen to the printer using `Fforce`, but I can't get it to work. Could you give me some advice on this function?

T Barrie, Newcastle

stf: `Fforce` *redirects output sent to a standard handle – ranging from nought to five – to a user defined handle – from six upwards.*

The first point to note is that it doesn't affect calls such as `Bconout`*. To send data to a standard handle, use* `Fwrite`*, GEMDos call number 64. For example, the C function* `printf()`*, which generally prints to the screen,* `Fwrites` *to handle number one.*

The first thing that needs to be done is to create an alternative handle for the standard output, so that you can redirect output back when you've finished. For this, `Fdup` *is used. An alternative handle for the parallel port, standard handle three, is created in the same way. You can then use* `Fforce` *to redirect output from standard handle number one to the alternative parallel handle. Finally use* `Fdup` *once more to redirect the alternative standard output handle back to one. The following shows you the basics:-*

```
Fdup     equ $45
Fforce   equ $46
   move.w #1,-(a7)
   move.w #Fdup,-(a7)
   trap #1
   addq.l #4,a7
   move.w d0,old_stdout
   move.w #3,-(a7)
   move.w #Fdup,-(a7)
   trap #1
   addq.l #4,a7
   move.w d0,alt_printer
   move.w alt_printer,-(a7)
   move.w #1,-(a7)
   move.w #Fforce,-(a7)
   trap #1
   addq.l #6,a7
   bss
alt_printer ds.w 1
old_stdout ds.w 1
```

Output to handle one is now sent to the parallel port. To restore the output, use the following call:-

```
move.w old_stdout,-(a7)
move.w #1,-(a7)
move.w #Fforce,-(a7)
trap #1
addq.l #6,a7
```

Basic timer

What command similar to the *GFA Basic* `TIMER` command do I use to time events in assembly ?

J.S. Harley, Beds

stf: *The system variable stored at address* `$4BA` *is a counter which is incremented every 200th of a second. By loading the counter into a data register at the start and end of your timed event, and then subtracting them, you can make yourself a simple timer. The counter needs to be accessed in supervisor mode, so:-*

```
move.l #0,-(a7)
move.w #$20,-(a7)
trap #1
addq.l #6,a7
move.l $4BA,d5
```

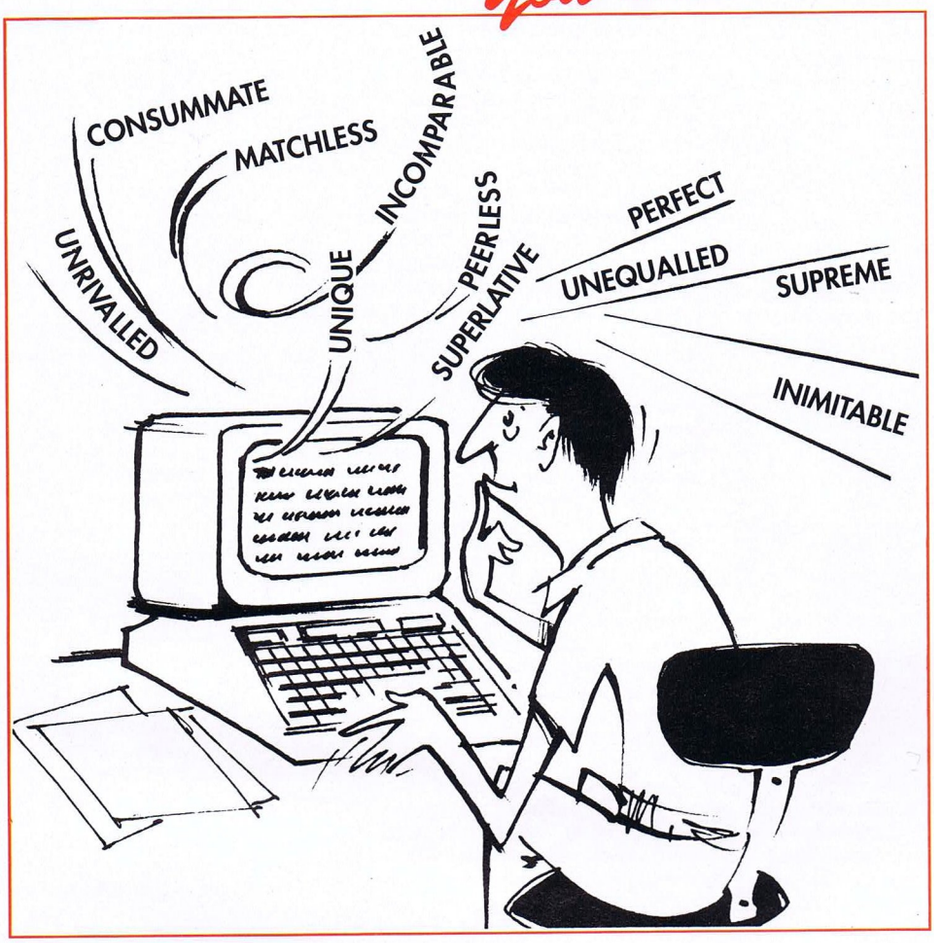
the event to be timed goes here, make sure `d5` *and* `d6` *don't alter.*

```
move.l $4BA,d6
sub.l d5,d6
```

and `d6` *contains the time taken in 200ths of a second.*

PROTEXT 5.5

"You won't be lost for words" . . .



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on at once" method possible by using four way adaptors. Everyone said that they had no problems using their own preferred method.

When researching information for the hard drive article, Clive contacted a computer engineer to check up on this exact point, and his advice was that the ST (or any type of computer) should be turned on before the SCSI hard drive because of the (admittedly slight) risk of spurious data being sent to the drive, causing unwanted disk over-writing on your disk. Older hard drives (over three years) often take 25-30 seconds to initialise, while more modern devices can get up to speed in about ten seconds. Most STs take quite a while to boot if there's no disk in drive A.

Finally, the article was not intended to imply that you turn on your ST and pause for a few seconds before you turn on the hard drive. We simply meant that if your normal turn on sequence is; monitor, hard drive and then your ST, just change the order to monitor, ST then hard drive. Besides, if your hard drive does not initialise straight away you can always reset your ST which does not cause a potentially hazardous current surge in the same way as if you turn it on from cold.

Dark torch

I have an ST and a Seikosha SL 92 printer. Although I can print text perfectly from within word processors, I cannot print graphics from art programs such as *Degas Elite* and *Deluxe Paint*. When I press <Control> and <Help> all I get is a dark band, what is the problem with my setup?
A M Gomes Sousa, Portugal

stf: *The main problem is that most printers produce a screen dump from pressing the <Alternate> and <Help> keys – not <Control> and <Help> – because it is set up specifically for use with 9-pin Epson printers. Have a look at your printer manual to see what emulations your printer is capable of and set it up for Epson (all Seikosha printers have these) or IBM emulation – you can do this by altering a couple of DIP switches.*

Kenny Dalglish

I'd be very pleased if you could help me get started in the Kenny Dalglish game *Soccer Match*, because I've lost the instructions to it.
Mr R Frost, Felixstowe, Suffolk

stf: Soccer Match *is now available as a budget game on Impressions' Energise label, price £7.99. To get a new manual you need to send your original disks back to Impressions as proof of purchase. Their address is Unit 2/12, Chelsea Market Garden, Chelsea Harbour, Lots Road, London SW10 0XE, or you can contact them by phone on ☎ 071 351 2133.*

High speed connection

As an entirely new modem and BBS user I was wondering if it is possible for the *ST FORMAT* BBS to increase its baud rate to 9,600 or even 14,400 baud and include the error correction protocols. On a few occasions I have been unable to get connected to the BBS and there has been data corruption while I have been on-line because of line noise.
Mark Preston, Keith, Banffshire

stf: *The* ST FORMAT *BBS is already running at 9,600 baud although the error correction and data compression routines have been disabled because of problems encountered by users of straight modems trying to connect. Although we have contacted BT several times about the line noise on the BBS line they have been unable to find the problem and correct it. We have, therefore, changed the BBS number to ☎ 0225 465997 as of Monday 1 March – the new number was displayed on the BBS for the four weeks running up to that date, giving you, hopefully, enough time to get used to the idea.*

Root of the problem

On some of the *ST FORMAT* Cover Disks that I have, the instructions tell you to copy the files

MUSIC AND MIDI

Getting confused by your sequencer or troubled by your keyboard? Andy Curtis is here to sort things out

Studio blues

Our clarinet teacher makes extensive use of his 520 ST in his teaching. He uses the software *Music Studio* and we play along to the many hundreds of tunes he has programmed over the years. It seems sensible to have similar systems at home for practice purposes. The problem is, our teacher's software does not appear to be available and it is very limited in what it can do. Is there any software that we could all use which is compatible with his software?
Christine Walker, Reading

stf: *Well, Christine, we went down into the* ST FORMAT *basement and managed to dig out a 1986 version of* The Music Studio *by Activision. Hopefully, this is the program to which you refer. We were, unfortunately, unable to load any of the .SNG files into the other packages that we tried. This means that you have to use a different package for your new tunes to be compatible with your music teacher's pieces since* The Music Studio *is no longer available. Why not make a tape recording of the existing pieces and use it to rehearse with?*

On a brighter note, there are many excellent chip music programs currently available in the Public Domain. If your music teacher is keen to use music stave notation, then have a look at the XBIOS *program (£1 + SAE Ad.Lib PD ☎ 091 370 2496). The beauty of using PD is that you are free to copy the program for anyone who would like to use it.*

Fading Out

Let's say I've recorded on my sequencer a few bars of music and while playing the last note I gradually withdrew my foot off the volume pedal, you call it the velocity pedal, so that the note gradually dies away. Now I want to sequence some music to follow that. That's where I get trouble. When I start to record the next part of the music I usually want to start the new note with a louder volume than the faded volume of the last note. But as I start the new piece of recording I cannot get a smooth start. Either it's too quiet, or if I try to increase the volume with the foot pedal the volume jumps about and the note crackles, as though it can't make up its mind what volume it wants to be.

I've got a Korg M1 with an Atari 1040 and a *Studio 24* sequencer. Perhaps you can advise me ?
Ron Newman, Stowmarket

stf: *Actually, Ron, we don't call it the velocity pedal at all. We call it the volume pedal – because that is what it is! Let's make a distinction from the outset between volume and velocity:*

Volume (MIDI volume) is independent MIDI data which governs the maximum output volume of a sound from your synth. This data can be sent at any time regardless of whether a sound is being played. Velocity is a part of the MIDI data associated with each individual note. This value tells the computer and synth how hard the note in question was struck.

This means that if you play a chord through your sequencer, all the individual notes may have different velocities but the volume is a constant which acts on every note in the chord at the same time.

If you play a sustained chord on the keyboard and reduce the volume via the pedal, it is the volume and only the volume that you are decreasing. The velocity was set and is unchangeable after the chord has been first sounded. Assuming that you fade the volume to a value of zero in the piece you are playing, the sound on that channel continues at that volume until you tell it to do otherwise.

The answer to your problem is to make sure that there is a volume statement at the value you require before the next section starts. If your software is not handling the change too well from a pedal input then use the Grid Edit feature of your sequencer to manually boost it to the desired level.

Whatever the problems are from a performance point of view, they can often be fixed later by careful editing. That is what MIDI sequencing is all about and that's why it is so powerful.

Local problems

I use the Yamaha SY22 Keyboard and *Prodigy* from The Digital Muse. When I'm recording I hear a constant guitar-plucking sound through every single bar. Also, when I am sequencing I get an extra sound breaking through into the mix from the Voice area of the keyboard. Please could you tell me how to set up my sequencer so this doesn't happen.
Phil Sterling, Durham

stf: *Actually, Phil, only one of your problems is caused by the sequencer itself. We suspect that the plucking sound you are hearing is, in fact, a MIDI metronome assigned to one of the MIDI channels. Have a look in the Set Up section of* Prodigy *– you can turn this feature off completely. What is far better is to set the MIDI pulses to appropriate sounds on your drum machine by selecting the correct MIDI channel and note values. These sounds, although heard while recording, are not included in the sequence itself.*

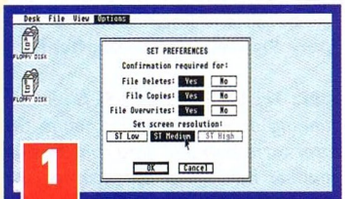
The other problem you are experiencing is due to the keyboard not being set to MIDI Local. Press the Edit/Utility button followed by the MIDI button and use the cursor to select MIDI Local. When you return to the Multi section there are no longer any problems. If you want to play the keyboard independently from the Voice area again, all you have to do *is switch back to the original setting.*

Sustained problems

I have just bought a Roland D5 and the sustain pedal from my old Yamaha keyboard doesn't work with it. Why is this? I thought all the pedals were the same.
Jonathon Walsh, Surrey

stf: *The problem here is that Yamaha like to be that little bit different from the majority of keyboard manufacturers. If you get the recommended pedal for the Roland then all is well. However, by switching the contacts on the Yamaha pedal so that they are the opposite way round, you should be able to get it to work with the Roland keyboard.*

Copying to the root directory

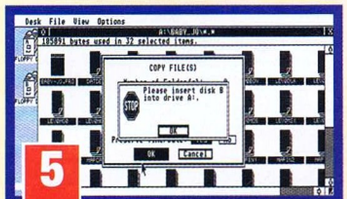


1 Format a disk and mark it as Disk B. Go to the Options menu on the Desktop and select Preferences, now select medium res. Mark the backup copy of your Cover Disk as Disk A - place it in the drive.

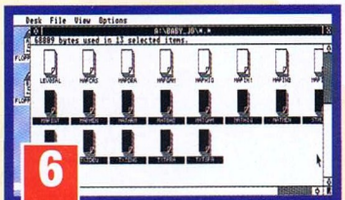
2 Double-click on the Drive A icon so that the window opens and you can see the folders, double-click on the BABY_JO folder so that you can see all the files within, there should be 37 files altogether.

3 Click on the box at the top right of the window and the window fills the screen. Use the small box in the bottom right corner to make the screen narrower and move the window to the right till you see the icons.

4 Move the pointer just above the first file. Press the left mouse button and *keeping it pressed* drag a box over all the files in the window, then release the button. The files turn black, meaning they are selected.



5 Move the pointer over the file nearest the Drive B icon, press and hold the left button and move the pointer over the Drive B icon. Your ST starts copying all the files and prompts you when to swap disks.



6 Follow the instructions till all the files have been copied. Now click on the long bar on the right so that all the files scroll up. Drag a box over the bottom two rows and drag them to the Drive B icon.

in a folder to the root directory of a blank disk – *Baby Jo* on Cover Disk 30 is one example. I am a beginner and don't know what this means or how to do this, could you please describe the procedure?
James Potter, Oxford

stf: *Copying to the root directory means that the files are not in a folder on the destination disk and you can see them as soon as you open a drive window. Remember to use the* Backup *program supplied on our Cover Disks to make a copy of all your disks. Always work on a backup copy and not on the original Cover Disk – you don't want to lose any of those brilliant programs. On a single disk system the procedure is as shown in the walkthrough (see boxes, left).*

Another DC question...

I am after *DC Showit* from Double Click Software to use with *NeoDesk 3*, but I have not seen any adverts for it, where can I get it from? I have also heard that Double Click Software are no longer trading in the US, does this have any effect on the availability of DC utilities?
Ross Burton, Stansted, Essex

stf: *Double Click have ceased trading, and, as far as we have been able to find out, all Shareware is still available from PD libraries. We do not know the status of their commercial products such as* DC Desktop, DC Data Diet *and the DC Port, but we do try to print any news we get concerning Double Click.*
STF plea: If anyone has a DC Port they no longer want then please contact* ST FORMAT *on ☎ 0225 442244. We need it to add an extra line to the* ST FORMAT *BBS.

GDOS bother

I have *Timeworks 2* installed on my hard drive and I have encountered problems when using other programs if GDOS is installed. I have an STE and have trouble with several programs when GDOS is auto-booted – this includes the *VIP Professional* spreadsheet and *STDCAT 4*; both programs bomb. Is there a solution to this problem so that I do not have to disable GDOS manually and re-boot every time I want to use these programs?
John Connors, Exeter

stf: *What you need is a boot manager program like the commercial* X-Boot 3 *utility (*STF *Rating 91% –* STF *45) or* Superboot 7.4 *from* ST FORMAT *Cover Disk 36. Both of these programs enable you to select which AUTO folder programs and Desk Accessories you wish to run whenever you boot-up your machine. This type of utility is vital for hard drive systems, because if you add a DA or AUTO program which causes your system to crash, it is practically impossible to access the hard drive to delete the offending program.* X-Boot 3 *is available from HiSoft (☎ 0525 718181) for £34.95 and you can get* Superboot *by turning to page 44 and ordering issue 36, unless you have it already, of course.*

Old man of computing

At the ripe old age of 30 I have bought a 1040 STE, and although I am very pleased with the games I have bought, I would like to get a better understanding of the more serious side of computing. I do not know the first thing about computers because when I

STOS SELECTION

In desperate need of some* STOS *help? Billy Allan helps where others have failed

Don't interrupt

Could you tell me how to install interrupt vectors in memory so that they stay on once you quit to the Desktop?
Shaun Flynn, Plymouth

stf: *Unfortunately,* STOS *does not let you write this sort of program (called TSRs). If you know enough 68000 to write interrupt routines you should be able to write it in assembly using the GEMDOS function* `Ptermres()` *which does the job.*

Reading directories

I am writing a program where I need to read in all of the names and sizes of the files in a directory. My problem is that the program treats folders as files and tries to load them in, resulting in an error. I am using `DIR FIRST$` and `DIR NEXT$` to read the directory. Can you help?
Brian Scobie, Manchester

stf: *The easiest way of filtering out folders is to check the attributes which are returned after a call to* `DIR FIRST$` *or* `DIR NEXT$`. *The attributes are held at position 42 of the returned string. This program reads in a directory, ignoring all the folders.*

```
10 dim NAME$(112),SIZE(112)
20 F$=dir first$("*.*",-1)
30 T=0
40 while F$<>""
50 if val(mid$(F$,42,3))=16↵
    then goto 100
60 NAME$(T)=left$(F$,12)-" "
70 SIZE(T)=val(mid$(F$,13,8))
80 print NAME$(T),SIZE(T)
90 inc T
100 F$=dir next$
110 wend
```

No sex please...

I have made a sample sequence from various looped samples. It plays back OK in the sampler, but when I try and use the routine which came with it for *STOS*, there are clicks between the samples. How can I stop these?
B Norton, Malton

stf: *The easiest way is to call the playback routine for the next sample in the sequence just before you would normally do so. For instance, if you were playing a 5K sample you would start the routine for the next one during the 4th Kilobyte of the current sample.*

Extended courtesy

Could you please tell me how to use the STE's soundchip and how to do palette-splitting and border-removal? Could you write an extension to do this for me?
S Coton, Cornwall

stf: *If you want to do this sort of thing then you have to learn assembly language. There are many free sources of information about these subjects in the Public Domain – have a look on page 90 for suitable PD libraries. We're afraid that we have one or two other things on at the moment which prevents us from writing you an extension. Still, it doesn't hurt to ask...*

was at school, computing was not a subject available to anyone! Have you any ideas about manuals or programs I can buy to help me understand a bit better? Could you also tell me why some disks I put in the drive cause the message "drive not responding: please insert disk" to come up? It is very annoying.
J West, Gravesend, Kent

stf: *We're not quite sure if you want to learn about your ST in particular or about serious applications that you can use on your ST. If it is your ST you want to find out more about, try* Your Second Manual to the Atari ST *from the ST Club (£7.95 ☎ 0602 410241) or* The Atari ST Explored *from Kuma (£8.95 ☎ 0734 844335), they can both help you to understand your machine. If you want to find out more about some of the serious software your ST can deal with, then turn to page 18 for our feature on the serious side of computing on your ST.*

Your disk problem is probably caused by putting non-standard formatted disks in the drive, in other words games disks! Most games disks are formatted in a special way to prevent copying and can only be read when the machine is booted-up they cannot be read from the Desktop by putting the disk in the drive and clicking on the Drive A icon.

Prince of pokes

How do I use the cheat on *Prince of Persia?* Apparently, it involves making changes to my save game file. How and in what circumstances would I use pokes?
Steve Hill, Middlesex

stf: *The easiest way is to make a backup of your save game disk and then edit it using a disk or file editor, such as* MEMFILE 2.0. *Alternatively, you can always check out the tips in* ST FORMAT *37, just turn to page 44 to order your copy. The only other piece of advice we can offer is that pressing <Shift> and <L> enables you to skip levels. To use pokes you need to type them into* ST Basic *and incorporate them into a game's .PRG file.*
STF Warning: *ensure you make a backup of the .PRG file before you start messing around with it, otherwise you could corrupt the data. If in doubt, don't do it.*

READ MY TIPS

Sticky business

On reading an ancient issue of *ST FORMAT,* I have noticed that people have trouble removing disk labels. There is a chemical called Isopropyl Alcohol which can be obtained from most chemists for about £3.75 for 500ml, this is also known as head cleaning fluid. When applied to disks this enables the labels to be removed in one piece nine times out of ten, and you can even re-use them.
P Vincent, Lowestoft, Suffolk

stf: *Just be extremely careful not to get the Isopropyl Alcohol into the disk casing when peeling off the unwanted label – this is not the friendliest of liquids to treat yoor disk to.*

Write On tip no. 4581

Mr Régis Gronoff *of* ***Argenteuil*** *in* ***France*** *has this clever tip for using* C-Font *from within* Write -On v1.0 *on a 512K machine with the help of* M-Disk *(yours free on* STF *Cover Disk number 44).*

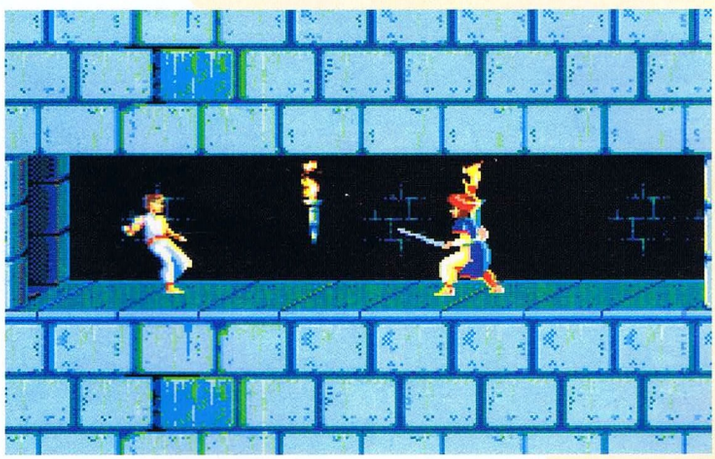
1. Copy *M-Disk* onto your working copy of your *C-Font/Write On* disk.
2. From the Desktop, install a 100-150K virtual disk using *M-Disk.*
3. Run *Write On.*
4. Remove the RAMdisk from the Accessory. You now have a sufficient amount of RAM to convert your *Calamus* fonts.
5. Use *C-Font* Accessory.

Now you can test your freshly converted fonts and use them without the pain of having to leave *Write On* every time you want to use *C-Font.*

Beware the Snatcher!

David Dickson *of* ***Newlands*** *in* ***Glasgow*** *has a handy tip for all graphic package fans.*

"The *Screen Snatcher* program on Cover Disk 44 works with most programs and applications but it does not function with games. To grab an intro screen from a game, press reset when the picture appears and then insert your backup copy of Cover Disk 44 in the drive. Run *Screen Snatcher* and then take a picture of the Desktop when the program has booted. Press <F1> to see the picture and use <Clr Home> and <Insert> to scroll around to find the picture you want. The colour palette may not be correct but this can soon be sorted out in an art package. This method also works with auto-booting games."



■ **"Is that the Sultan's scimitar or are you just pleased to see me?" "You're going to die the death of a 1,000 not living things for that joke at my expense." "Made you laugh though, didn't it?"**

HD positive?

Can I use high density disks in a normal 720K disk drive if they are formatted as normal from the Desktop? Do I risk data loss or damage to my drives?
C Charles, London

stf: *Although you can use HD disks formatted to 720K, there is a risk, as you said, of losing data. This is because of the denser magnetic coating on a high density disk which cannot be formatted correctly by the heads of a 720K drive, the magnetic field generated is just not strong enough. The disk may well work at first, but after a while it may lose data. The drive though, should not be damaged by the disk.*

Speed freak

I am in the final stages of writing a *Boulderdash* type game, but I have a problem – the game is very slow. It currently updates once every 3.5 seconds. The main loop checks through each element of a 32 by 32 array which is the main reason for the slowness. Would the Compiler speed things up? Also, do you have any tips on adding inertia to sprites?
John Levon, Yorkshire

stf: *Get the Compiler (£20.99 from Mandarin ☎ 0625 859333). The main speed increase it gives you is in dealing with loops so your program should benefit. You should also keep an eye out for a new extension extremely useful for this sort of problem may appear on the Cover Disk soon. This little BASIC routine should demonstrate how to add inertia to a sprite. It assumes you have a* STOS *sprite bank loaded into memory.*

```
10 X=0 : Y=0 : SX=0 : SY=0
20 MX=12 : MY=12
30 sprite 1,X,Y,1 : update
40 X2=x mouse : Y2=y mouse
50 if X<X2 and SX<MX then inc SX
60 if X>X2 and SX>-MX then dec SX
70 if Y<Y2 and SY<MY then inc SY
80 if Y>Y2 and SY>-MY then dec SY
90 X=X+SX : Y=Y+SY
100 wait vbl : goto 30
```

TOS problem

I've written a program in STOS and I'd like to make it run from the Desktop. I've made up a disk using the *STOS Copy* Accessory and saved my file as a .PRG file, but when I run it I get an alert box saying "TOS ERROR #35". What is wrong and what can I do to sort this out?
Graham Fereday, Reading

stf: *The only thing we can think of is that you have forgotten to copy your BASIC file into the* STOS *folder before running the program. We would recommend that you get the Compiler rather than use this method though, as your program runs faster and you don't need to copy the whole* STOS *folder around with your program.*

Grout free area

Could you please tell me if there is a quick way to fill the screen with a tile? I am currently using SCREEN COPY and a double FOR.. NEXT loop to copy each tile up.
Andrew Brown, Leicester

stf: *By far the quickest method is to take advantage of a bug (or as we call it – a "feature") in the* SKOPY *command which is in the Misty extension – yours if you didn't miss* STF *38 'cos it was on the Cover Disk. This "feature" means that if you copy a bit of the screen over itself, either right or downwards, it leaves a trail of the image around the screen. This routine should demonstrate the principle.*

```
10 ink 1 : box 4,4 to 12,12
20 skopy 1,logic,0,0,304,16,↵
   logic,16,0
30 skopy 1,logic,0,0,320,183,↵
   logic,0,16
```

This copies a 16 x 16 pixel block from the top-left corner all over the screen. Line 20 drags the block to the right, then line 30 drags it downwards.

SUBS!

BACK ISSUES

We have these issues available in small numbers, so please phone ☎ 0458 74011 to check availability before ordering: 22 (desktop publishing, word processing, *Devpac 1*), 23 (15 programs, 3D, comms), 24 (*Llamatron*, ST video, digitisers), 25 (memory upgrades, classic games, emulator roundup), 27 (graphic details, games to last a thousand years)

ISSUE 45

April 1993

Disk: *Nigel Mansell's Grand Prix, No Second Prize* demos, adaptable demos, *Protext* dictionary, address book.

Inside: Get into programming, graphics cards, the best multi-player games, *Protext* masterclass, and get inside your printer.

ISSUE 44

March 1993

Disk: 15 programs, including *Picture Concept, Grav 2, Insectroid*, five Accessories – and more!

Inside: art on your ST from the masters, scanners roundup, games for the '90s, over 35 Desk Accessories, advanced *GFA Draft*.

ISSUE 43

February 1993

Disk: *Noddy's Playtime; Fractal Landscape; Animation Tool; Centipede*

Inside: Start creating your own full screen animations; huge printer roundup; be the most megalomaniacal of them all; basic disk safety – and more!

ISSUE 42

January 1993

Disk: Four games; *Fractal Engine; Improvisor* demo; *KnifeST, Michtron BBS*

Inside: 50 best games; virtual reality; identify your TOS version; That was the year that was; Rant with Archer Maclean; inside the *STF* Bulletin Board.

ISSUE 41

December 1992

Disk: *Air Support, Hyperbase* – create your own multi-media applications. *Protext v4.3, Sound Lab.*

Inside: Multi-media on your ST, samples and monitors analysed, Falcon and Falcon games reviews, films tied into ST games.

ISSUE 40

November 1992

Disk: *Trip-A-Tron*, the powerful light synthesizer, *Cybernetix, Talespin*, the interactive adventure creator.

Inside: Battlemania, samples roundup, Lynx games roundup, interview with Archer Maclean, movers and shakers in the ST world.

ISSUE 39

October 1992

Disk: *Magic Story Book, Captain Dynamo*, multi format slideshow; *Pack Ice; Pro 12* sequencer;

Inside: Sequencer roundup; make some noise feature; hard drive roundup, DTP masterclass. We ask Are Games Too Hard?

ISSUE 38

September 1992

Two Disks: *Spectrum 512, Spec Code, Sensible Soccer* demo, *Mapper 2.*

Inside: Get closer to your ST with Summer School, Falcon and Mega STEs investigated, *STOS* tutorial, getting professional with MIDI music.

ISSUE 37

August 1992

Two Disks: *STOS Basic* language and *Animaster* sprite designer, *International Sports Challenge* demo, *3D Picture* modelling package.

Inside: How to create great games, monitor roundup, *Calamus SL* reviewed and rated.

ISSUE 36

July 1992

Two Disks: *K-Spread 2* spreadsheet package; *Fire and Ice* demo, *Super Boot 7.4, The Financier* money manager, and more.

Inside: 50 ways to soup up your ST; what happened to the games heroes of yesterday? HP inkjet printer review.

ISSUE 35

June 1992

Two Disks: *GFA Basic v3.5, GFA Assembler, GFA Raytrace complete; Pacific Islands* demo, complete database and astrology programs, and much more

Inside: memory upgrades step-by-step; ST astrology; start to program fractals.

ISSUE 34

May 1992

Two Disks: *GFA Draft Plus 3* complete 2D vector drawing package; *Campaign* demo; *Intro Designer; six* more full programs

Inside: 21 pages of art guides; ST Book portable tested; weird games; 120 tips; Buyer's Guide.

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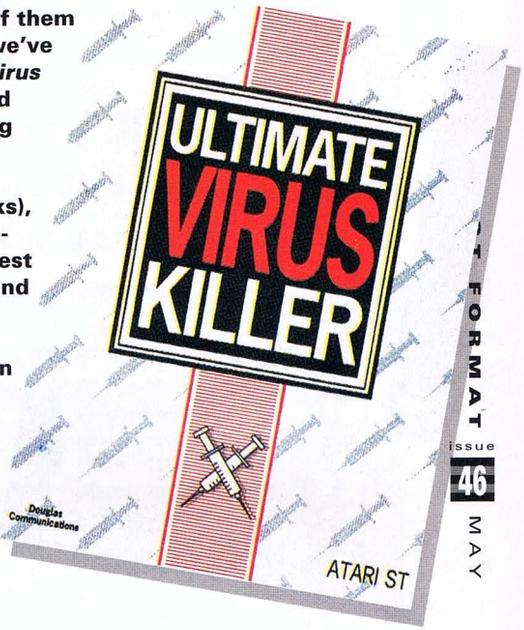

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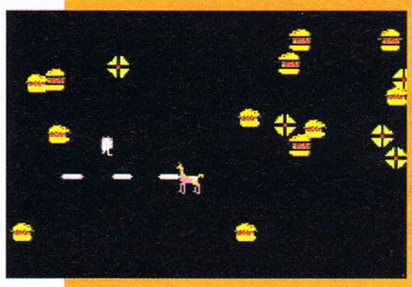
GAMEBUSTERS

LLAMATRON LLAMASOFT



Llamatron - Jeff Minter's classic Shareware shoot-'em-up.

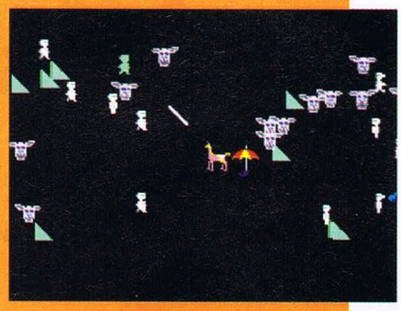
Nick McDonald of Cheltenham, reckons he's passed the 2.1 million mark on this sheepy shoot-'em-up and has sent in some hints and tips so that you can do the same

1 Never play with the droid. You gain millions more points playing solo.

2 Always leave one beastie, then collect all the remaining sheep and then kill the last beastie. Easier said than done, but it does hold great bonuses like three-way fire and double points.

3 Never take warps unless you're around Level 85 and upwards. You can gain more lives and more points by trudging through the levels individually.

4 On levels like Level 51 where you have a large number of fast moving beasties, it's always a good idea to try and run around them. This has the effect of bringing them together and slowing them down. They're now easy prey for a few hot bullets.



Can you save the goats and blast all the bear heads? Is *Llamatron* the product of a sane mind? We should be told, don't you think?

OK, you know you're crap, so what harm is a bit of cheating going to do? After all, if your granny can get away with it at bridge club, so can you

ISHAR: LEGEND OF THE FORTRESS DAZE

We had loads of solutions sent in for this role-playing game, but many of them were suspiciously similar. Some of you even sent in a cheat book (tut, tut). So, the £25 prize money goes to Andrew Keyworth of Hedon, North Humberside who actually managed to write his own guide to this wonderful game

Welcome to Kendoria

As you start, go east to meet up with Borminh. Enlist him because he is useful in battle, but be careful – he is a traitor. Do not fall asleep with him in your party. Continue eastwards until you find a small pool of water, then continue south towards the birch trees where you find Kiriela. Turn south-west and continue until you reach the Angarahn village. Find the orcs and kill them. Visit the inn and recruit Kirian. There is a shop you can visit in the village and a course is on offer.

Business boomed after the innkeeper's successful and quite remarkable sex change operation.

Leave the village and continue south-west, skimming the bushes to the west, where a few orcs can be killed. Enter the house to find a chest full of gold. Going east back around the bushes you should find a teleporter. After entering the teleporter turn south-east to find a bridge leading to the Lake City. The bridge is guarded by a barbarian. Kill him and enter the city. There's not much to do here except for exploring the two inns and the merchants. Do not recruit Golnol or Nasheer because they are traitors. When you've finished, leave the city and go south along the river.

Ah! Busto stock cubes. Now available in chicken, beef, vegetable and human failure flavour.

Looking for white iron

Take the first bridge and go south. You should find a psychoanalyst's hut guarded by night-prowlers. Enter the hut and – as long as one of your characters is good at languages – the message can be uncoded. Leave and examine the nearby bushes to find a purse full of gold. Travel east as far as Rhudgast and then go due north to the ocean.

Return west towards Osghirod and scan the bushes to find a knight in white iron who is waiting for you. Kill him and take the helmet he leaves. Now go back to Rhudghast. Go south as far as the river and follow it up river to the east. Watch out for the occasional party of dwarves on the way.

Follow the river for a while and you find a purse. Take it and turn north, after a few steps to the west, you find the entrance to the fortress. The fortress is in two parts – east and west. When you first enter go east until you find a handle. Release the handle and enter the northern part of the fortress. There are many labyrinths and corridors to examine and they contain various pieces of treasure and monsters. Eventually, you come to a

Populous 2 ELECTRONIC ARTS

Why piddle around beating up baddies, when you can destroy the entire world. Alistair Cunningham of Maidstone, Kent shows you how with this selection of hints and cheats

Hints

Sprog early and often.

Use <Enter> to get the full sized screen. This stops you having to scroll around when raising and lowering the land.

Blowing papal magnets off the map changes them into the Medusa magnet. Your men also have to go off the map to get to it.

When your opponent creates a volcano, raising the land caps the lava duct, while lowering it or planting lots of flowers makes the volcano dormant and ineffective.

Make an island away from the enemy as high as you can. Isolate it by using the tidal wave a few times. Make the island very big, then build a city wall – this acts as your permanent settlement.

When you use the plague give it to one man, then blow your opponent's men towards him using the gale. You can also use the gale to blow people into baptismal fonts by making a long line of them.

Make very large forests by using the icon over and over again, then set light to them with the storm, rain of fire or fire column.

Kill the enemy leader, then stop the others from getting to his papal magnet by either placing baptismal fonts, batholiths or walls around it.

Using whirlwinds on ruins causes people to be sucked from them.

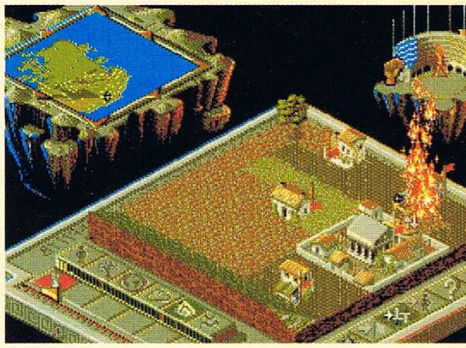
Use basalt as a path across water. It's more permanent and cannot be seen on the map.

To destroy basalt after a volcano erupts, you can flatten the land then burn, electrify or plant flowers on it. You can then lower the land and settle on it.

When using Helen of Troy, you should either electrify her followers, make fungus on them, create bogs or use baptismal fonts to convert them. Be careful, though, because Helen of Troy could also be converted.

When using tidal waves make then next to your land, since this stops it from being destroyed.

You can bet the inhabitants of Ramsey Street don't have the problems with their neighbours this lot have.



"There's nothing quite like a real fire in your home. Well, don't take it literally, please!"

Cheats

Press the following keys for a variety of cheats:

<[> for the Golden Man who creates earthquakes.

<]> for Neptune, the god of the sea, who eats land away.

<Shift> + <[> for the Flying Monster who makes whirlwinds, then whirlpools.

<Shift> + <]> for the Tree Monster who plants trees.

<Alternate> + <[> for the Golden Dragon who makes fire columns.

<Alternate> + <]> for Medusa, the goddess who turns people and houses into stone statues.

Hold down <F9> for more manna.

room in the north-eastern corner of the fortress. Pick up the treasure and the key. You find another handle in the northern part, but do not pull it or you are locked in. Now return to the western part of the fortress.

You find a large room with two main entrances to the north. By taking the eastern exit you come to a door guarded by a giant. Behind the door is a magic phial that you need for the rest of the game. There's also part of a key. Exit and take the western path.

This leads you to a room full of spiders. Kill them and take the rune tablet from the centre of the room. When you have the phial and the rune, leave the fortress and return to Osghirod.

The predator awaits

Carry on alongside the river to the west and take the bridge which separates Osghirod from Lotharia, killing the many panthers on the way. There is a merchant, an inn and a spell-making course in the town. If you have enough money make sure you buy a mace from the merchant. Leave the town and travel south until you reach the ocean. Head west along the coast.

For Sale: character residence in desirable country location. Heavily defended against orcs, boars and nosey game-players.

The spirit of Azalhgorm appears among four birch trees and talks to you. Continue east down the beach until you find a pedestal. Examine it and take the runic tablet that rests on it.

Before you continue on towards Fimnuirh make sure that you or someone in your party is wearing the mental vision helmet, which you took from the knight in white armour. If you haven't put on the helmet the predator remains unseen and can carry on attacking you as long as you're in the forest. As you reach the centre of the forest to the east, you come across a clearing totally covered in flowers, with an isolated tree in the middle. The predator stands by the tree. Kill him and take the five rings that protect you from the dragon's fire. Head due north as far as the river and continue east. After a while you come to a bridge which you must cross. After you cross the bridge, turn east and enter Aragarth. Make sure you keep 5,000 gold pieces. Keep on going east until you reach the river, there is a bridge that crosses the river, but it's guarded by a mean minotaur. Go south of the bridge to find Fragorn who can be enlisted. Then head north until you find a merchant. Give him the 5,000 gold pieces and he gives you a potion which makes a prescription.

The bridge guardian

Return to the bridge and kill the Minotaur. Cross the bridge and travel north-east until you find a giant waiting with his club for you. Kill him and search the beach for Ywgen the tortoise. Travel south until you reach the barbarians and then return south-east to Urshurak.

Keep going south towards the city and enter. When you've finished in the city, exit to the west and enter Kandmir. Continue west towards Jon's hut and kill a large group of orcs. Enter Jon's hut and take the parchment from him – this contains some of the prescriptions given at the end of the manual.

Part Two of Andrew Keyworth's solution to* Ishar *can be found in next month's Gamebusters. Don't even think of missing it.

Angarahn village. Filled with quaint shops, hostelries and people whose ears meet in the middle. Sounds a bit like Slough, doesn't it?

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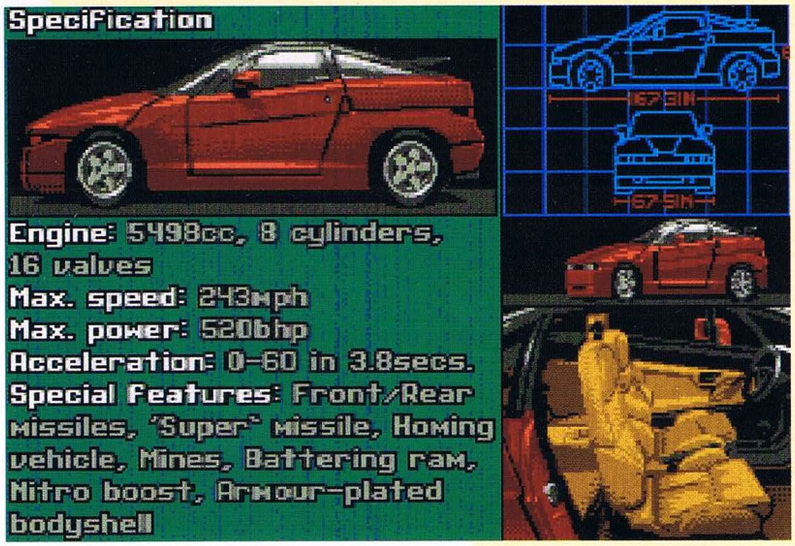


■ Shopping trollies are getting sophisticated these days. If this one doesn't get you to the front of the queue in Sainsbury's, nothing can.

■ "Don't pick your nose, dear. The cameraman doesn't particularly want bogies stuck on his lens now, does he?"

SUPERCARS 2

GBH

Paul Strugnell of Tadworth can makes you rich with this

On the options page, delete the names of players one and two, then type "I Walk the Hill" for player one and "Inwards" for player two. Include all the capitals and spaces, you don't need to press <Return>.

Now you've got grade three armour, engine and battering ram and 99 of each weapon, why not try this: on the trade screen, sell all the weapons you don't want – don't sell the armour, engine or battering ram – and you get over £100,000. Use the money to buy more weapons and repair damage.

TRASH

MICRONET

When Simon Barter's not mucking out the elephants at Chessington Zoo, he sends in completely nonsensical solutions to Gamebusters. See if you can figure this one out

At the startup screen type IWISHIDBOUGHTLEMMINGS while pressing the video rewind button. This gives you infinite patience.

On Level One, ask the taxman to give you a refund. While he is laughing, jump on to the chandelier. Leave the room by the west door. Eat all your greens. Go to the toilet. Raid the fridge. Collect the spinning chancellors for bonus tractors. Use the heaviest red bus to enter the whispering galleries.

Ring directory enquiries and ask for Vic the Viking. When Vic demands a potato, machine gun him and all the members of his immediate family *except* his grandmother, who you must pick up and sell to the plumber on Level 42.

Sit nearer the window.

Whatever the King Lizard asks, you must reply "in the bath." The screen fills with cobwebs and you're transported to the final level. Wait for the eagle to land. Go left, left, quick, quick, slow, eyes right. Follow the chicken across the road. Don't ask it why.

Inflate the porpoise. Pump up the volume. Blow up the queen's turret. Chase the dragon. Race the

SENSIBLE SOCCER RENEGADE

■ "We are Leeds, we are Leeds, we are, we are, we are Leeds!" "No you're not, no you're not, no you're, no you're, no you're not!" "Yes we are, yes we are, yes we, yes we, yes we are!" Footy supporters - great conversationalists.

Garry Kerr of Fife, in Scotland, puts a mean left-footer into the back of Tom Dart's tips in STF 40 with this selection of teams for* Sensible Soccer, *the all kickin', all headin' and all round best footy sim for your ST

Ajax, Holland

Best formation: 4-4-2
Star players: Bryan Roy, Dennis Bergkamp and Stefan Petterson

A good, quick passing side with plenty of skill. Bergkamp and Petterson are deadly and finish off the job from almost any range. The midfield has quick players, but the defence is slow. The goalie, Menzo, is quite good.

Real Madrid, Spain

Best formation: 4-4-2
Star players: Gheorgie Hagi, Robert Prosineoki, Emilio Butragueno

Probably the best passing team in *Sensible Soccer*. It is so accurate. One minute it's goal kick, three passes later it's a goal. They tear any defence apart whether it's AC Milan or Barcelona.

Kaiserslautern, Germany

Best formation: 3-5-2
Star players: Miroslav Kadlec, Uwe Scherr, Stefan Kuntz

A great team which is very fast. Their passing is perfect and the team's strikers always try a long range effort. Their defence always manages to clear the ball if the goalie makes a mistake. They are also good tacklers.

AC Milan, Italy

Best formation: 4-4-2 or 4-3-3
Star players: Franko Baresi, Marco Van Basten, Ruud Gullit

A brilliant team with good players all round. Van Basten is excellent up front and the midfield can link some great passes to him. Milan's defence is awesome with Baresi and Costacurta. Probably the best.

Liverpool, England

Best formation: 4-4-2
Star players: Mark Wright, John Barnes, Ian Rush

A good attacking side that likes to pass through the middle a lot. The central defenders are good tacklers, but a long ball over the top puts them in trouble. Rush is good.

Rangers, Scotland

Best formation: 4-4-2
Star players: Richard Gough, Ally McCoist, Alexi Mikhailichenko

A very good passing side. McCoist and Hateley are pretty deadly up

SNIPPETS

BERT THE SQUIRT
CALEDONIA PDL
Neil Davies of cuddly Dudley, West Midlands has sent in a few level codes for this Public Domain game.
Level 6 – TOYAH
Level 11 – SUNDA
Level 16 – QBERT
Level 21 – PHIEF
Level 26 – TECHI
Level 31 – SUNRI
Level 36 – BHIPS
Level 41 – MONDA
Level 51 – TENNA

BLUE LIGHTNING
ATARI LYNX
Blue Lightning. Sounds a bit like a lavatory cleaner, doesn't it? Mark McNeill of the Wirral has sent in these level codes.
Level 1 – AAAA
Level 2 – PLAN
Level 3 – AIFA
Level 4 – BELL
Level 5 – NINE
Level 6 – LOCK
Level 7 – HAND
Level 8 – FLEA
Level 9 – LIFE

CAPTAIN DYNAMO
CODEMASTERS
Type PURPLE RAIN for infinite lives. Press <_> to skip levels.

DEFENDER 2
ARC
Type GOATY for invincibility.

DOODLEBUG
CORE DESIGN
Type FIRE WALK WITH ME (including spaces) during gameplay for invincibility and an inexhaustible supply of pencils.

DYNA BLASTER
UBI SOFT
Type in UKKZSIKG to start on Level 2.4. You can now drop as many bombs as you like.

FINAL FIGHT
US GOLD
Press <Help> to go straight to the end of the game.

POPULOUS
ELECTRONIC ARTS
During the game, turn on the paint map. Now press:
<F1> for more good men
<F2> for more evil men
<F3> for more trees
<F4> for more rocks
<F5> takes rocks away
<F6> more manna

RUBICON
21ST CENTURY ENTERTAINMENT
For infinite lives pause the game then press <*>.

STREET FIGHTER 2
US GOLD
Pause the game, now type in 7KIDS for two players to play the same character.

STRIDER
US GOLD
Press <F9> to pause the game. Hold down <Help>, <L.Shift> and <1>. Unpause the game and use numbers <1> to <5> for the level.

THE DUEL: TEST DRIVE 2
ACCOLADE
Type GAS at any time during the game and you go to the next petrol station.

VAXINE
US GOLD
Start the game as usual and type in WILDEBEESTE.
When you press the following function keys you get to skip loads of levels;
<F1> you skip a level, <F2> repeats a level, <F3> skips ten levels and <F10> skips a level and picks up a bonus.

relations. Charge the bastards. Scratch the Yitch. And don't forget to mash the monsters.

Use your remaining credits to buy a new joystick.

When the fairy godmother appears, wish that you could spell "disappointing."

To complete the game, shout "Arthur!" at the top of your voice, while holding your breath.

Dungeon Master cheat routine

In *STF* 44 we printed a cheat routine from **Philip Spavins** of **Redruth, Cornwall** which supposedly gave an invincibility cheat for this game.

Some of you tried it out and had a few problems with it, so you wrote in to the *STF* offices saying that the cheat didn't work. We immediately contacted Philip Huff of PJH Publishing ☎ 0480 433455, who prints a virtually identical *Dungeon Master* cheat routine in the *Cheater's Digest*. He told us that that particular code only works on the Mirrorsoft versions of the game (as opposed to the current Sygnosis version), and then only on certain STs, something that we weren't aware of at the time of printing the cheat.

ST FORMAT apologises for any inconvenience this may have caused. If you have a complete solution to *Dungeon Master* please send it in. It could be worth £50.

EVEN MORE SENSIBLE SOCCER RENEGADE

front and finish off in style when possible. The defence is absolutely brilliant with Gough and Brown, but the goalie, Goram, does make the odd mistake.

Steva Bucharest, Rumania
Best formation: 4-4-2
Star players: Ilie Stan, Ilie Dumitrescu, Marian Popa

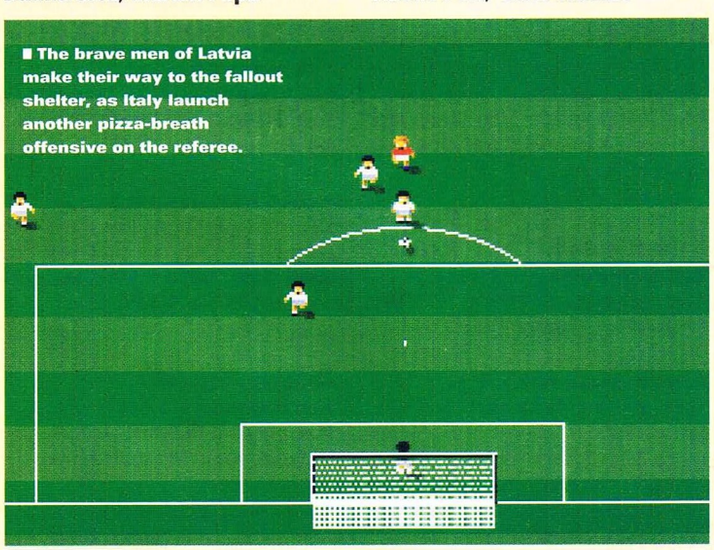
A good, but slow team. The best thing about Steva Bucharest is that they are great fighters off the ball and they always salvage a goal when needed.

Marseilles, France
Best formation: 5-4-1
Star players: Jean-Pierre Papin, Abede Pele, Chris Waddle

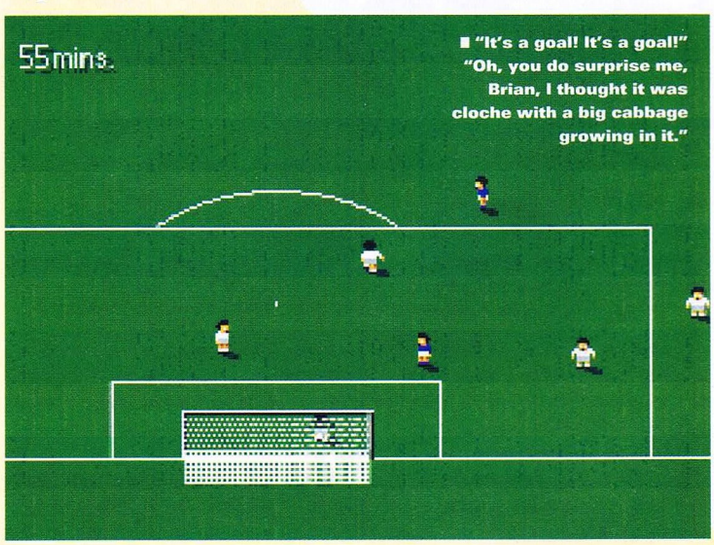
A fine team which has a brilliant passing ability and is very quick. They often lose the ball when running with it, but they tend to make up for it when passing. Papin is excellent up front and has a faultless final touch.

Red Star Belgrade, Yugoslavia
Best formation: 4-4-2
Star players: Miodrag Belodedic, Darke Pancev, Dejan Savecevic

A good side that can take plenty of pressure against most top teams. One minute Red Star can be playing rubbish, the next they've got the crowd going. Watch out for Lukic and Pancev because they really are brilliant.



■ The brave men of Latvia make their way to the fallout shelter, as Italy launch another pizza-breath offensive on the referee.



■ "It's a goal! It's a goal!" "Oh, you do surprise me, Brian, I thought it was cloche with a big cabbage growing in it."

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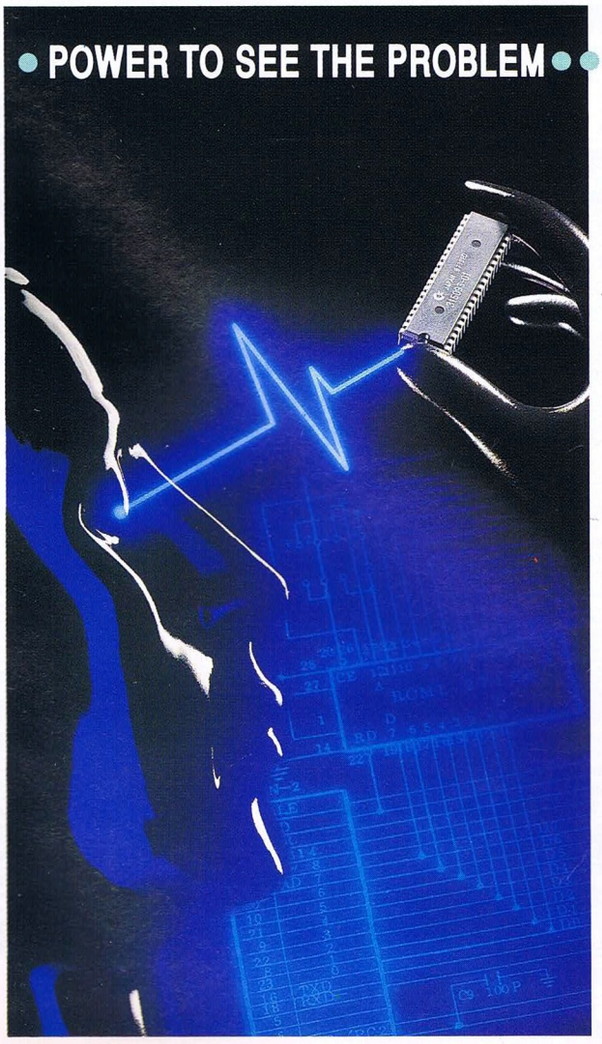

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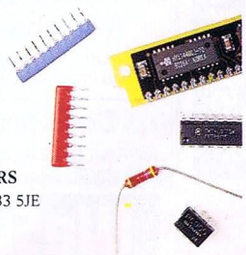

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The ST – smashing through the barriers

ST FORMAT issue 46 MAY

In theory the STFM's price drop is going to attract 150,000 new owners, increase the software support and, ultimately benefit you, the ST user. Is this realistic? Michael Roberts puts the theory to the test

ST to get more support

There is a school of thought within the games industry that believes the ST has about as much future as the average royal marriage. People parade around with their "The End is Nigh" boards held high – only they're looking a little ragged these days because they've been waving them around for years.

The thing is, despite the Cassandra community, the ST refuses to die. In fact, with Atari opting to slash the prices across the range, the old campaigner could even be in for a new lease of life. One thing Atari would like to get crystal clear from the start is that this is no panic measure, no last stand.

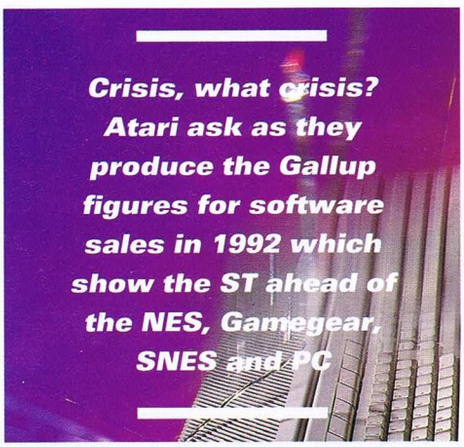
Crisis, what crisis? the firm asks as it produces the Gallup figures for software sales in 1992 which show the ST ahead of the NES, Gamegear, SNES and PC.

So far, Atari have only confirmed a price drop on the 520STFM which is reduced from £249 to £159. There are strong rumours, however, that the 520STE and the 1040STE will be reduced at some stage in 1993, probably by £50 each. Atari refuse to confirm or deny this, saying that, at present, the 1040 is available at £299 in the Family Curriculum bundle, the 520 is at £249 in the Discovery Extra pack and that is the end of the story.

Hyper-competitive

It is worth noting that the significant price drop and rumours of more to come have arrived on the agenda at the same time as Commodore have announced that they will be increasing their Amiga prices by £30 across the range. That noted, let's move on and presume that all three price drops come into affect by this autumn.

The STs at the new prices would be a leaner, meaner line-up than the one that stumbled along in 1992. They would be significantly cheaper than the equivalent Amigas and verging on the Mega Drive and Super Nintendo pricing levels. This makes them hyper-competitive and this is crucial.



There has been a feeling in the trade that the ST was being squeezed out. Above it the Amiga enjoyed some salad days in the late '80s and early '90s (inspired by clever bundling rather than any superior technical capabilities) while during the same period, the consoles built up million plus user bases below it. The ST looked stuck in the middle and Atari, busying itself with the launch of the Falcon and reasonably happy with the success of the colour handheld Lynx, seemed slow to respond.

What the firm was actually doing, it has now emerged, was talking to the trade; gathering opinions from distributors, retailers and software publishers as to what exactly they should do with the ST.

The ST has a real future

The main points to emerge from these discussions were the three new price points. The trade obviously believes that with all three models below £250, the ST has a real future. Perhaps the most surprising element of the ST range restructuring is the re-emergence of the STFM. Like Duran Duran and three million-plus unemployed, most people thought that the old warhorse was an '80s phenomenon. But suddenly, it's yesterday once more.

Atari have big plans for the STFM. They believe that at £159 it is a serious threat to the burgeoning consoles. The thinking is that Atari will re-focus their marketing campaign around the question "why not pay a few pounds more and get a real computer?" A real computer, after all, offers you the chance to take advantage of graphics and music programs, word processors and spreadsheets – and more than that, software is readily available from around £9.99 so owners won't have to spend a fortune getting into different areas. Compare that to the £39.99 price tag on most Mega Drive games and the STFM starts looking incredibly appealing.

98 per cent compatibility

The FM has also forced its way back onto the agenda for a rather more negative reason – the STE range did not capture the imagination of the software publishing community as Atari hoped it would. Marketing manager Darryl Still explains: "We hoped that they would write to the E and give us software that was better than the Amiga's line-up. That didn't happen, however, they just kept on writing to the base machine." As a result, Still believes that around 98 per cent of the ST library and the new games coming out will work with the STFM.

The problem comes with games written with more than 512K of RAM in mind. The new version STFMs are nearly impossible to upgrade and 1MByte games are therefore out of its reach.

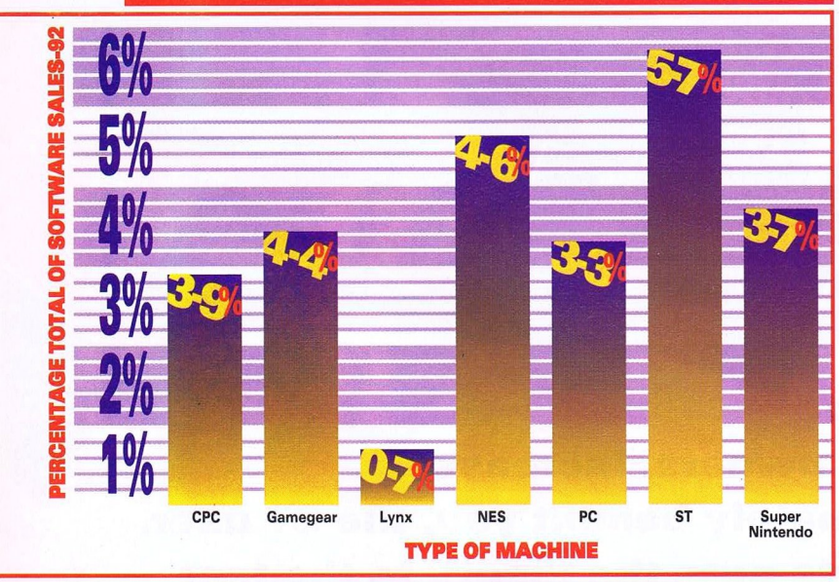
The games market has more or less decided that size is important and a lot of publishers are producing games that need at least 1MByte of RAM.

Still admits that "a handful" of games won't run on the STFM, but is quick to point out that there are hundreds that will and that the FM isn't trying to be the best games machine on the market, it's trying to be the best low-cost option for someone that doesn't just want a toy.

150,000 new ST owners

At its new price, Still believes that Atari will shift 150,000 units of the STFM by the end of the year. The other possible sales figure for the machine was zero. Completely pulling the plug on the FM was def-

Games software sales in 1992 (Gallup)



WHAT DO YOU THINK?

You, the existing ST enthusiast, are incredibly important to the industry - you help to create demand which dictates whether software houses will release more games or other software. Here's what a few of you had to say on the matter

More than just a console

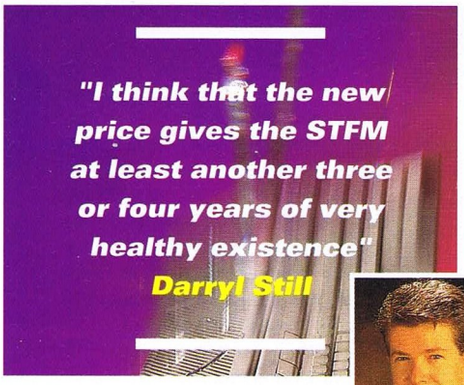
I think that the drop in price may help re-establish Atari. Pricing at around the same level as the consoles may just tip the balance in favour of a real computer which can do more than a games console. If this is the case then the user base will increase as will software support for something which will then be perceived as a growing market.
Craig Oldfield, Whitefield

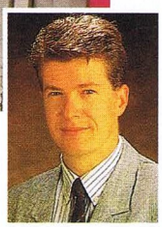
Newcomers welcome

A drop of that price would open up the market to a different customer base, and would therefore be a good move on the surface.
Rob Probin, Birmingham

Too little, too late?

Hooray! Atari have finally done the inevitable and reduced the RRP of STFMs to £159. But is it too little,





initely discussed. "We were thinking of using all our production capabilities on newer machines like the Falcon, but the market convinced us that there is room for an entry level computer that is a considerable step up from things like the C64 and Spectrum.

"This is definitely a move being made with an eye on the future. It is not a case of getting rid of stock. We didn't have any stock to get rid of, we had to go into production for this and we will continue producing the machine throughout the year and probably beyond.

"I think that the new price and the new attitude towards the machine from Atari, and the market in general, give the STFM at least another three or four years of very healthy existence."

Is the ST worth it?

It's a fine sentiment and one that Atari seem convinced by. The problem is, it's not entirely up to them. Publishers, distributors and retailers all have important roles to play in extending the ST's life.

Some publishers have abandoned the ST. They have limited resources and have decided to concentrate on console games and CD titles. The Amiga is suffering from the same lack of interest. Thankfully, the big publishers have decided that the ST is worth sticking with and the big name titles still appear – *Street Fighter 2* and *Civilisation* (reviewed on page 59) being two recent examples.

At distribution and retail levels it's a similar story. There is a particular problem in the chain stores. More of them are sacrificing space once allocated to ST games for more console or PC games.

Independent support

The bright spots at retail are that the independent sector is still very supportive of the hardware and software, and will provide an outlet for both for some considerable time to come. Independents are also perceived, at least by Atari, as being more likely to persuade potential customers of the advantages of the ST over consoles.

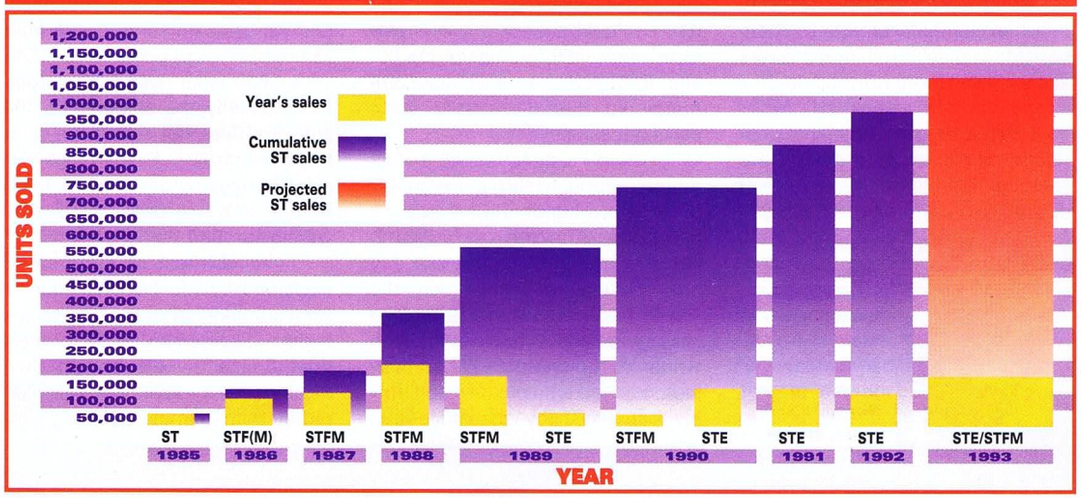
The dramatic STFM and potential STE price cuts, however, are perceived by some as a desperate measure in a desperate time – less places to buy ST hardware and software, less publishers making games for the machine. Atari deny the move is born of desperation in any way. Rather, Still insists, "we have seen an opportunity and we have the machine to take advantage of it." Then again, even if Darryl Still and Atari are wrong and this is a desperate measure; who's to say it won't work anyway?

WHAT DOES THE ST MEDIA SAY?

The news that Atari have decided upon such a massive price drop is great news for all ST owners. The fact that they've had to go into production to create more machines is a clear indication of Atari's continued support for the STFM. This is going to benefit us all. Seeing that Atari are supporting their own machine will give third party developers the confidence to produce new software for the machine. More ST owners – bringing the total to well over a million – means more people demanding games, software and hardware for their STs. You know how all those software houses have pulled out of the ST market because of a perceived lack of demand? Well, they're not going to have that excuse any more – more owners means more machines which in turn means greater demand. *ST FORMAT* will continue to support the ST as long as you are there wanting us to – watch out Amigas, your days are numbered!

Paula Richards,
Editor, *ST FORMAT*

The ST's actual and projected growth from '85 to '93 (Atari)



too late? Why couldn't they have taken this decision before Christmas to eat away at the console market? One of the reasons Atari have done this is because of the extorionate prices of console cartridges. People are complaining and will desert consoles. Atari have made a smart move in doing this and hopefully will ensure the base of ST computing for years to come.

Grant Reid,
Gosport

Keeping in business

It'll be worthwhile getting more STs around to sell more software and keep the third party developers in business.

Bruce Cook,
Paisley

Marketing support

£159 is a rather smashing price and STFMs will surely sell by the bucket load. A price reduction of this nature must be strongly supported by advertising to emphasise the continuining support for the machine... if indeed there is to be any.

Andy Curtis,
County Durham

Increased competitiveness

I think this will put the STFM at a much more competitive level within the marketplace giving it a price that competes with the consoles – many parents nearly choke when they see the price of the console game their offspring wants, and now, with a price drop maybe they might view a real computer as a viable option, particularly if Atari continue to bundle some serious type software with them along with the games.

Of course this is only likely to happen if the shops promote the merits of the machine. It will, of course, upset people who have machines they wish to sell on since the second hand machines will not fetch such high prices – this in itself could also be good for increasing the ST's circulation.

I believe the ST will survive for years to come, it has a cult following of enthusiasts, a variety of PD and Shareware authors still writing programs for it and it's slowly dawning in some quarters within the UK that Atari make excellent machines that are not just for games. Providing that the money-spending punters are convinced of the support, variety and wealth of software available at reasonable prices the budget-priced ST is good news.

Martin Stacey,
Stockport

Music for the masses

Excellent news! This price drop will enable even more musicians to take advantage of the ST's built-in MIDI interface. An ST runnning *Notator* or *Cubase* is already the professional's choice, but soon every budding musician will own one at that price. And that can only be good.

Nick Hopkins,
Cardiff

Both sides of the fence

It is an undeniable truth that there are less games appearing on the ST than ever before. It is also true that more and more ST games will not run on the STFM.

That's the bad news. The good news is that most of the major publishers have not abandoned the format and most of the really big titles do make it onto the ST. The new STFM price and the possible cuts across the STE range are unlikely to tempt any publishers back into the ST fold. What does seem likely, however, is that they will help convince the firms that are still around to stick at it for a good while longer.

Mindscape is the publisher of, among other things, the Renegade range of games including the works of star programming teams like the Bitmap Brothers and Sensible Software. *Sensible Soccer* has, of course, already been a massive ST hit and The Bitmap Brothers' *Chaos Engine* is due to hit the ST next month.

High demand

Mindscape's European managing director, Geoff Heath comments: "There are certain titles that I think will always suit the ST. We have become more selective in what we release for the machine, but good action arcade titles like *Sensible Soccer* will continue to appear.

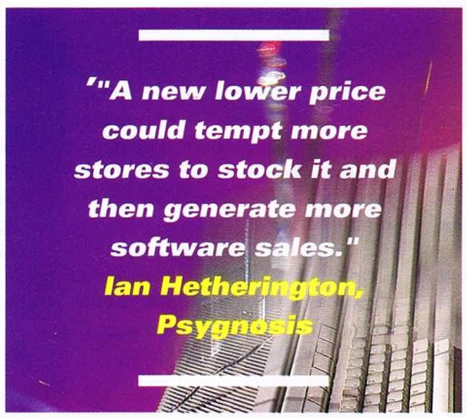
"What we don't release are the bigger strategy games from companies like Maxis."

He believes that the price drop will continue this process: "At £159 it will attract an even younger audience and the demand for the action games will be even higher. We welcome the drop. I don't think the machine can be totally revived but the erosion can be halted if the prices generate more excitement at retail. Then, hopefully, they'll sell more razors and we'll sell more razor blades."

Top drawer games

Heath claims that Mindscape are planning to release "a good half dozen" games for the ST in 1993 and all of them will certainly be "from the top drawer."

Psygnosis' boss Ian Hetherington is also quite happy to support the ST – but again his enthusiasm has definite limits. "We have to be selective. There are so many formats that not every game can appear on every one. With the ST, we look at how a game performs on, say, the Amiga or the PC, and if it performs well, as *Lemmings* did, then it's usually worth porting it across."



There's usually about a nine month gap between a Psygnosis game appearing on the Amiga then hitting the ST. With *Lemmings 2*, however, the game is due any day now having only been on the Amiga for a few weeks. *Lemmings* and *Lemmings 2* have both been written to run on the STFM. Hetherington is not, it has to be said, terribly convinced by the price cut.

"I don't think this is a price issue. It's a retail issue. If the chains start dropping the format that is worrying. Who's going to sell the games we produce?

"A new lower price could tempt more stores to stock it and then generate more software sales but I don't know. I think there's some danger that the ST has already been written off in some people's minds and dropping the price as low as this just degrades it further, pushes it even more downmarket.

"Perhaps a better idea might have been to come up with a *Lemmings* bundle, put in a suite of productivity software and a printer and try and regenerate interest that way."

Biggest threats

He also believes that it is the level of inactivity amongst existing ST owners rather than the lack of any potential new owners that is the biggest threat to the market.

"There must be hundreds of thousands of machines out there and yet sales on some of the titles can be very, very poor.

"But what we don't understand is why the shipment of ST software does not reflect the sales of ST magazines. Amiga mags outsell ST mags by about 2 – 3:1, but Amiga software outsells ST software by around 10:1.

"An element of that can be explained by the fact that, due to Atari's marketing of the machine, a higher percentage of ST owners than Amiga owners bought their machine for productivity purposes rather than games. "There's also

Sensible Soccer – probably the most popular ST footy sim – from star programming team, Sensible Software. Expect continued support from them as well as from the other Renegade teams like the Bitmap Brothers.

WHAT DID SEGA SAY?

Sega sold over a million Mega Drives last year and is looking to sell considerably more than that this year.

European president Nick Alexander seemed surprised that we even asked him about the ST. It really does seem to be a minimal concern.

"If people want to compute then they will buy a computer. That will always be the case. But I really don't think that lowering ST prices close to Mega Drive prices will have any impact because I don't think this is a price-led market. Consumers aren't stupid. They know that after they've bought their consoles, video gaming is going to be an expensive hobby because of the price of the cartridges.

"They don't buy Mega Drives for economic reasons, they buy them because they want to play games like *Sonic 2* or *Ecco the Dolphin* or whatever.

"I suppose there is a chance that the consumer that has his heart set on a computer might go for an ST rather than anything else now, but I shall be extremely surprised if we notice any impact whatsoever on our business."

THE VIEW FROM THE PEOPLE WHO

Alright, software houses are going to sit back and watch the STFM sales figures coming back from the all important retailers and distributors. So it's now down to the likes of Dixons, Menzies and the independent retailer network to sell the ST's strengths

The opinions of retailers and distributors are absolutely crucial. If no-one's going to stock ST software, no-one's going to produce it, and the same goes for the hardware support.

Unfortunately, the new year has seen a series of decisions by major chains to cut back or cut out ST software. This is possibly the most damaging trend of all and the one that Atari have to start reversing.

Boots has not stocked ST machines for some while. It currently has software in 100 of its game-stocking stores but has decided to phase it out.

A spokesman for the firm said sales had been "very poor" and that the price cuts were "unlikely" to make much difference.

W H Smith also dropped ST hardware a few years ago and is set to phase out the software during 1993. The chain told us that although ST games are currently in all its stores, they represent a very small portion of its business and they will definitely not be stocking ST software going into the autumn of this year.

Dixons support the ST

More encouraging is the attitude of Dixons – the single largest seller of computers in the country. It still carries STEs and purchasing director Alan Dickinson (one of the most influential men

WHAT DO COMMODORE THINK?

Commodore, not surprisingly, viewed the STFM re-introduction and the rumoured STE price cuts with a great deal of scepticism.

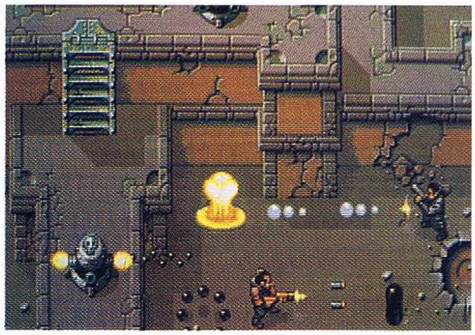
UK managing director Kelly Sumner argues: "My interpretation of such a low price is that they are liquidising stock with a view to dropping the thing altogether. A price point of £159 and STE prices below £250 would put them on a competitive footing, but only if they were maintained throughout the year and I don't believe they will be. This business isn't about selling 5,000 in a month. It's about selling 200-300,000 over a year – year after year.

"I don't think dealers or publishers are behind the range anymore and you can't fight against that. Atari hasn't been a competitor of ours for a long time and this doesn't change that. It might make the ST an irritant for a while but this is really just its swansong."

This sort of view is typical of what you might expect from Kelly Sumner bearing in mind the threat from Atari – the Amiga may have dominated the games market, but Commodore can't seriously expect the situation to remain the same with 150,000 new ST owners.

"A price point of £159 and STE prices below £250 would put them on a competitive footing"
Kelly Sumner

One of the best games released this year has to be *Civilisation* from Microprose - don't miss the review on page 59. Proof that the ST has not been written off since most top games are still being released.



From the same Renegade range as *Sensible Soccer*, the Bitmap Brother's *Chaos Engine* is out next month - check out the review in the near future. Along with *Sleepwalker* and *Lemmings 2*, next month sounds promising.

an element of Atari shooting themselves in the foot with their extreme bundling policies of 20 or so games in the late '80s. People who bought their machines then didn't need to go out and buy new games for years. And when they did they must have baulked at being asked to pay £30 a time when they were used to being given 20 for nothing.

"But underpinning it must be an extremely high level of piracy. That has to be the explanation – a very well organised piracy ring."

This year, around 25 per cent of Psygnosis' titles will appear on the ST, but that marks quite a decrease from 50 per cent last year and 75 per cent in 1991. Hetherington says that "unless something dramatic happens" he can see the day when Psygnosis is forced to leave the ST behind altogether and unfortunately he's not convinced that even such sweeping price cuts are dramatic enough.

Virgin Games still publishes games for the ST, but like all other software houses, it is re-evaluating its position. European managing director Tim Chaney explains: "At the moment, with games developed in Europe, we usually contract an ST version as part of the deal – but only if the porting over can be done without too much expense." Again, he believes that around 25 per cent of Virgin's home computer games will hit the ST – making a total of approximately four or five.

Chaney is doubtful, however, whether many of them will be squeezed into 0.5MBytes of RAM and therefore will not run on the STFM. He knows of only one – *MacDonald's Land* – that definitely will. Sadly, Chaney predicts that this could well be the last year that Virgin will support the ST. New formats such as the Mega CD and other CD based consoles are vying for the firm's attention and while he welcomes the price cuts, he is unsure of just what effect they will have on the market.

"We're interested and we'll get some intelligence from retail as to how the new prices impact influence sales. But our problem is that we develop for the global market so a price drop of £90 in one territory on an eight year old machine is not really going to have that much impact on our plans. Now if Atari were thinking of introducing the Falcon at £199..."

The story is the same at virtually every software house – those that have dropped the ST are adamant that they will not be tempted back. Those that are still pitching are cutting back their commitments and will now be watching very carefully and waiting to see if the new-look cut-priced range can arrest their decline in interest. ***stf***

DO ALL THE SELLING

in the games industry) told us that as long as Atari genuinely has something to offer, Dixons will give it room.

The chain doesn't stock the STFM at the moment – but then stocks have been extremely scarce recently – Dickinson says that he is currently evaluating the new version at the new price and will make a decision soon.

"It's pretty well known that the ST hasn't been breaking any sales records but it has been moving through. I think that repositioning the prices across the range, including the 520 STE and 1040 STE, would be a smart move that would help extend their lives.

"Dixons has sold a substantial amount of STs in the past and if Atari makes the right moves – which, with the price cuts it seems to be doing – we look forward to selling more in the future."

Unfortunately, Dixons does not sell ST software, but then it doesn't sell any home computer software, just console cartridges.

HMV is another chain that has recently opted to drop the ST from its line-up. The firm's Gerry Berkley offers: "Sales really were very bad. We have a limited amount of space and each format has to stand on its own two feet. In some stores Mac [software] was selling better than ST [software] and we just couldn't justify giving it space anymore."

The price cuts and promises of hundreds of thousands of machine sales this year look unlikely to reverse the decision. "We'll watch what happens but I honestly believe it's like trying to push water up hill. I think the cuts smack of being a panic measure.

"It's a shame because with all the STs sold over the years, there's the potential for a good market out there. One way of revitalising it might be to drop the price of all software to below £20 or even £15. I think then people might start thinking about regularly buying games for their STs again.

"Even if that happened though, a lot of people that were ST users have moved on. People that bought them for games have bought a Mega Drive or a SNES and people that bought them to compute with have bought a PC.

"Still, if the cut in price on the machine is followed by a drop in price of the games, perhaps the downward spiral can be slowed down or stopped."

Menzies does not stock ST hardware but is sticking with the software for '93. It believes that ST games "are still an important part of our overall mix."

Currently, ST games are in 144 Menzies stores but that number will be reduced to around 95 or, possibly 100. The firm claims sales are "substantially down" but not low enough to warrant total exclusion from their shelves.

Positive effects

Software buyer Andrew Rendall comments: "Logically, if the price of the hardware goes down then Atari should ship more machines and software sales should start to pick up. We will watch to see if that starts happening. But it has to be a big `if' when you're talking about regenerating an old machine."

SDL, possibly the biggest distributor of ST hardware in the country, is sure there will be a positive effect from the new price. Group marketing controller John Arundel senses "a lot of positive thoughts" towards Atari amongst independent retailers, even if the attitudes from the majors are a bit more sniffy.

He believes that the ST range is "far from dead" but does worry about the fact that the FM cannot be upgraded. "Some of the really good stuff is written for a higher RAM and that could disappoint some customers."

SOMETHING FOR THE WEEKEND, SIR?

TITLE	PUBLISHER	PRICE
3D CONSTRUCTION KIT 2	DOMARK	32.99
ANOTHER WORLD	U S GOLD	16.99
ARCHER MACLEAN'S POOL	VIRGIN	16.99
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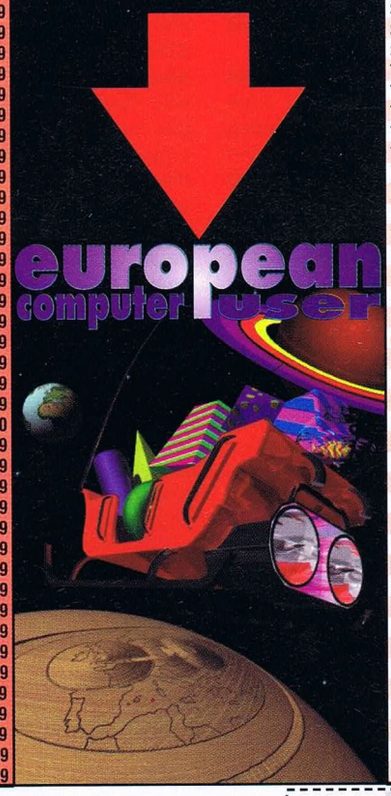

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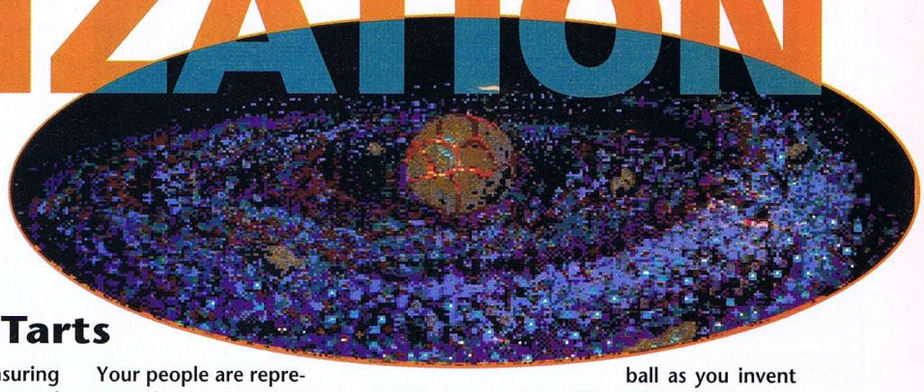
ST FORMAT MAY 93

CIVILIZATION



From neanderthals to astronauts, man's progress has changed the face of the planet... and brought us Pop Tarts

Ever since the first caveman invited the second caveman round to his dwelling for a pint of mammoth's pee and a gander through his erotic cave paintings, the human race has struggled to civilise itself. Philosophy, democracy, religion. You name it, people fought for hundreds of years to achieve it. Even McDonalds. Civilisation gave you your ST, now it's time to repay the compliment.

Civilization is a god game on a massive scale. Not content with enabling you to manage a city or railroad, this sim of life places you in control of a whole nation of people. You're responsible for ensuring their continued prosperity and progress over thousands of years, from their humble beginnings in 4,000BC to the hi-tech world of off-planet exploration. Naturally, you can't have it all your own way. Up to eight other civilisations are competing for the same piece of the cake. It's your skill as a military leader, diplomat and economist which is going to ensure your success over your rivals.

After an intro sequence which chronicles the development of your planet, you're placed in the middle of a black void on the main screen. As you establish your first city and send out foot soldiers to explore your surroundings, you start to uncover the secrets of your world, make scientific discoveries and encounter other civilisations. This is all starting to sound like a building society ad, isn't it?

Gameplay in *Civilization* is centred around an aerial map screen – made up of a series of squares – which gives you an overview of both land and sea. Your people are represented as a series of icons which you move around the screen with a limited number of moves. The number of goes increases with the sophistication of the means of transport – foot soldiers only get one move on "untamed" land, while a road-based chariot gets three or four moves. It's obviously an advantage to develop your nation's infrastructure as quickly as possible, so you can deal with invading forces and establish trading networks. Inevitably this means that gameplay is a bit tedious at first, but things soon start to snowball as you invent your first sailing ships and discover bridge-building.

You can also use the map view to attack your enemies. All you have to do is move one of your troop icons over their position and a battle ensues. This can cause problems for you if you take on a very aggressive power like the Zulus or Mongols, when it's usually better to sue for peace – you can always pile into them later.

Help is at hand

While all this rampaging, pillaging and double-dealing is going on,

Help! The Germans are revolting. Luckily you built a wall.

From time to time your forces are subjected to an invasion by gangs of Millwall supporters. Get rid of them by blowing up a crisp bag and popping it.

NEW YORK, LONDON, PARIS, MUNICH

There's a lot more to running a city than sweeping the streets and collecting the Council Tax, you know. There are all those Wonders of the World to build for a start. Your indispensable guide to your metropolitan pride starts here

1 Population: each person represents one population point. As well as ordinary workers you also get specialists including scientists, entertainers and taxmen. This box also tells you how happy your people are and the city's current population.

2 Resources: this box supplies information on your city's growth and reveals the extent to which food, trade, scientific research, raw materials and taxes plays a part in its development.

3 Home City Roster: shows you how many troops on active duty are supported by a particular city. These units can be disbanded by a city at any time if there are insufficient resources to sustain them. A unit's home city can be changed at any time for strategic reasons.

4 Food Storage: this box tells you how much food is being stored by a city. When the box is full the city's population grows and the process starts again. Granaries enable your population to grow faster because the food storage box only needs to be half full before an extra population point is added.

5 Information: tells you what trade routes your city has established, and how many troops are defending it. The Happy submenu enables you to see what effect the improvements you're making are having on the populace. The Map and View menus show you a world map and a bird's-eye view of the city.

6 Production: surplus resources can be used to produce items for your city – everything from troop units to temples. If you have the money you can use the Buy icon to speed up production on a job. Enemy diplomats and pirates can destroy or steal items currently in production.

7 Improvements: any improvements or Wonders of the World you have built in your city are shown in this window. However, you can always sell them if you think you really need the money and they can also be destroyed by natural or man-created disasters.

8 City map: tells you how much of the immediate area around the city is being exploited and for what purpose.

FROM HERE TO ETERNITY

Civilization's main map screen can get a little confusing at times, so here's a brief rundown of the history of man

1 Menu bar
Gives you access to *Civilization's* sub-menus.

2 Overall map view
Shows you the part of world you've discovered so far.

3 Status bar
Gives you information on your overall population size, the date and the state of your Treasury.

4 Location status
Gives you information about the territory you're in.

5 Unexplored territory
Large areas of the world remain shrouded in mystery until you enter them.

6 Friendly city
One of the many cities you've established so far. The number inside the box indicates its actual size.

7 Friendly troops
These troops have been ordered to fortify a position, close to their home city.

8 Road network
Crucial for the development of trade and the rapid expansion of your civilisation.

9 Irrigation network
Cities are unable to expand unless you irrigate the land around them to feed their populations.

10 Friendly ship
Uncharted waters are a major challenge to a fledgling population. Map-making skills are essential otherwise your ships and cargo are lost.

11 Enemy city
The Babylonian city of Ashur represents either an opportunity or a threat to your people. It all depends whether you want peace with its owners.

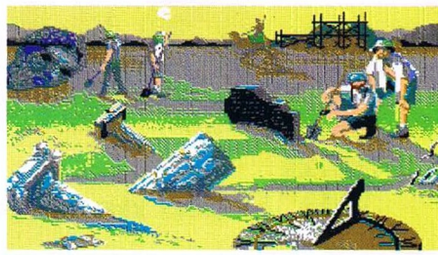
12 Rival fortification
Different civilisations often compete for the same patch of land. This fort is controlled by the good old American troops.

13 Friendly troop movement
A unit of your troops heads east from Rome in search of further riches and scraps with your rivals.

you must not neglect the happiness and decorum of your cities' populations. Fail to build aqueducts, temples or sufficient storage for your products and you could end up with a declining population with a taste for revolt. This becomes especially dangerous if enemy diplomats get involved and start to sabotage your industrial development or incite the people to riot. Defence of your city is also crucial. If you post all your home city's troops abroad this makes them susceptible to attack and leads to units being disbanded because of lack of support from their home base.

If all this sounds a bit complicated – and it is – there's plenty of help on offer. There's a Practical Advice option which gives you information about the best places and times to do things and you also have several in-game advisers – city, military, economic, domestic, attitude, trade and science – who keep you updated with your progress. There's also the Civilopedia which acts as a database of discoveries – for example, if you've just discovered the secret of Construction, it tells you how significant a breakthrough it has been for other cultures and what other discoveries you need to have made to put this new skill into practice.

As god games go, *Civilization* is more reminiscent of *Sim City* than *Populous*. It's all about strategic and economic management, not levelling the land and watching your opponents getting consumed by fire. This doesn't mean the game's dull, just that it demands more of your intellectual powers than some other games. In fact, *Civilization* becomes more and more addictive the further into it you get – once you've exhausted the possibilities of your immediate vicinity it's time to set sail for other lands and eventually other planets.



It's all over. Still, at least you had a good time. Chatted to lots of women, thumbed your nose at the French and invaded Stalinist Russia.

With five difficulty levels and nine different civilisations to choose from, this game could keep you at your ST for months.

Getting around the world of *Civilization* is simplicity itself. The game's controlled by a combination of mouse-controlled drop-down menus or keyboard shortcuts. Although it's hard drive installable, there's no multi-player option so you can't have any inter-continental battles between you and your pal's ST. Graphically the game looks like the map-based approach of *Sim City* or *Civilization's* predecessor *Railroad Tycoon*. There are very few animated sequences – the enemies' moves, and the peasants' revolts are a couple of the few examples. Even the meetings with the historical figures like Napoleon or Genghis Khan consist of stills. The game's so good though, it doesn't matter.

Verdict

It took a long time, but *Civilization* has made it onto your ST. This game is a corker. It's a real challenge trying to keep your populace on an even keel while putting one over on your enemies.

Even if you lose, think that you've outlasted some of the world's great civilisations and did a better job than the peeps in power. A game worth giving up those long hot summer nights for.

ROB MEAD

Civilization

£34.99 Microprose
☎ 0666 504326
All STs. 1MByte of RAM required.
Hard drive installable.

Highs
***Civilization's* a brilliant brain-meltingly wicked guide to life, the universe and everything.**

Lows
There's no multi-player option and the graphics are a bit puny.

ST RATING 92%

STRANGE INFO

The Rise and Fall of the Osmond Empire

The world has witnessed the birth of some truly great civilisations, but what of the ones that history forgot? Remember: if Rod Hull had been born king, we'd all be walking around with one arm up an ostrich's bottom now

The Men from Atlantis
Misled into thinking they could live underwater, the Men from Atlantis raided the Life's A Beach shop in Athens and built a city under the sea. Unfortunately, the shop was run by an illiterate practical joker who sold them woopie cushions instead of snorkels. This story was later turned into a long-running TV series, starring the fish-faced one from Dallas.

The Smurfs
Complete failures at expansionist imperialism, the Smurfs' philosophy was embodied by the line "From Smurfland where we belong" in their national anthem. The complete absence of a war-mongering spirit led to their eventual downfall at the hands of the Cabbage Patch Kids.

The Klingon Empire
Much admired throughout the universe, the Klingons came a cropper at the hands of James T Kirk, captain of the USS Enterprise and advocate of moist toilet tissue.

The My Little Pony Club of Great Britain
A Surrey landowner's obsession with leather straps and riding boots led to the formation of one of the 20th Century's greatest civilisations. They meet every Saturday in cinemas around the world, a My Little Pony in one hand and an autographed photo of Princess Anne in the other. The Poniites then wander around the auditorium stamping their hooves and neighing a lot. Famous Poniites include Virginia Bottomley, the sexy one in the Bangles and anyone with a double-barrelled surname.

RICOH PCL5 LASER PRINTER

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Ricoh, the world's second largest manufacturer of laser printer engines, have used their expertise to produce a 'first' in laser printers for the world market, the LP1200 with FLASH ROM. HP LaserJet III™ compatible, the LP1200 employs industry proven laser technology. Unlike LED printers, which use light emitting diodes, the LP1200's laser light source is able to produce the most accurate and intense printed images. It has a fast efficient processor and engine, together with a straight paper path design which allows printing at a full 6 pages per minute and, it can address a range of print resolutions up to 400 dpi. The 2Mb RAM version can print a full A4 page of graphics at 300 dpi and a full A4 page of text, or A5 page of graphics, using standard resident internal fonts and the alternate controller firmware supplied, at 400 dpi. A free Windows driver supplied enables the 2Mb Ricoh LP1200 to print a typical page of text at 400 dpi from Windows 3.1, using the alternate controller firmware supplied on the Windows Driver Disk and standard internal resident fonts. The 4Mb RAM version has the added advantage of being able to print a full A4 page of graphics at 400 dpi and makes full use of the LP1200's 400 dpi printing capabilities, such as using Microsoft Windows fonts.

Unique additional standard features include FLASH ROM 'future proof' technology and LAYOUT - a powerful document description language. The LP1200's unique internal FLASH ROM, which holds the printer controller firmware, can easily be updated as new developments in technology occur. This protects the investment you make in buying a Ricoh LP1200. Other manufacturers would require you to buy a new printer! Internal FLASH ROM and industry standard FLASH ROM IC cards can also be used to permanently store fonts, macros, graphics and extra emulations. Again, unlike the competition, the LP1200 includes LAYOUT a powerful document description language as standard, which offers unique opportunities to develop custom made printing systems. Forms and document templates can be designed and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

The LP1200 comes complete with a 100 sheet A4 paper tray and the facility to feed single sheets of paper and card up to 157gsm. An optional extra universal feeder provides the facility to automatically feed up to 150 sheets, from sizes of 98mm x 148mm to 216mm x 356mm in size, at weights of up to 158gsm. It can also feed up to 15 envelopes, overhead transparencies and labels automatically.

PC MAGAZINE UK EDITOR'S CHOICE OCTOBER '92

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THE LP1200 IS A GENUINE LASER PRINTER AND NOT AN LED PRINTER. MAKE SURE YOU CHECK THE COMPETITION!

See how the Ricoh LP1200 compares to its Laser Printer Competitors

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Average Street Price (excl. VAT) (*expected)	£569	£699	£699*	£750	£699
Official RRP (excl. VAT)	£945	£1,179	£1,099	£1,099	£1,195
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3.1 Driver @ 400 dpi	-	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	5ppm	6ppm
Straight Paper Path	YES	-	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	-	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	0.5Mb	1Mb	1Mb	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	33 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	20 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Upgradable Firmware	-	-	-	-	YES
IC Card Slot	YES	-	-	YES	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	0	8
Resident Bit-Mapped Fonts	11	14	14	16	14
AGFA Intellifont Scalable Font Technology	-	YES	-	-	YES
HP LaserJet III Emulation Included	-	YES	YES	-	YES
EPSON FX Emulation Included	YES	-	YES	-	YES
IBM ProPrinter Emulation Included	-	-	YES	-	YES
Standard Tray Capacity	100	70	100	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.65p	2.00p	1.71p	1.64p	1.65p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-131	60-157
Able to print on OHP Film	YES	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	-	YES
Standby -Noise Level	<40dB	31.7dB	<35dB	38 dB	<38dB
Printing -Noise Level	<50dB	43.3dB	<46dB	50 dB	<48dB

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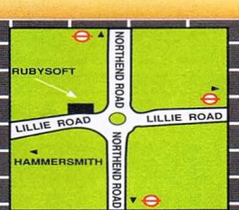

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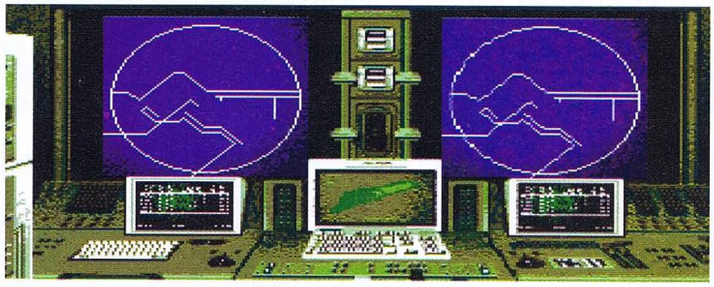
AV8B HARRIER ASSAULT

The Cold War's over and it's about time you joined the US Marines to see if you can help enforce the New World order



The USS Tarawa's control room, nerve centre of Operation Saber. From here you can access all the different aspects of the game.

Most flight sims enable you to build up your experience as a pilot, taking part in individual missions before embarking on an entire campaign. AV8B Harrier Assault is different. It drops you right in the middle of a major conflict, with everything you do helping to determine the outcome of events.

The UN have decided to intervene in the rapidly deteriorating situation in East Timor, where Indonesian forces are committing all kinds of atrocities against the indigenous peoples. Unfortunately, the only force in the immediate vicinity is a small squadron of American marines, based on the aircraft carrier USS Tarawa. As the carrier commander it's your job to deal with the situation until the UN can negotiate a peace settlement.

Strategic flying

The game combines strategy and flight sim elements to provide a rounded picture of the conflict. If you like charging about blowing things out of the sky, then you can embark on a series of air strikes in the famous Harrier jump jet; if you want to play the war game, you can opt to remain on the Tarawa and send ST-controlled planes off into battle, or you do both.

As a flight sim it's a reasonably accurate representation of the real thing – you can do short take-offs and vertical landings. There are plenty of targets for you to blow up as well as aerial sequences.

The game fails because flying around is made so difficult by the incredibly slow frame update rate and a jerky control mechanism. Twitch the joystick to the left and you experience a considerable delay before anything happens. When the aircraft finally does move, it's usually too far or too late. *F19 Stealth Fighter* this is not.

Graphically the game also leaves a lot to be desired. The 3D vectoring is appalling and, from the remote view, your plane looks like it's been put together by a three year old model-maker who's lost the instruction booklet.

The strategy element is far better – if you care for inter-racial conflicts in far-flung regions of the world – and retains some modicum of excitement. Because you can send ST-controlled planes out, you don't need to get involved in the air combat side of things. However, the odds are stacked against you and you have to participate in both sides of the game to get a result.

Verdict

What seems like a great idea in theory, is let down by its execution. *AV8B Harrier Assault* tries to combine flight sim and strategy elements, but fails because it's let down by shoddy graphics and indifferent gameplay. If you're a flight sim nut or a Harrier freak, then prepare to be disappointed.

ROB MEAD

GROUND CONTROL TO MAJOR TOM

Finding your way around a complex bit of kit like a Harrier takes some doing. Here's our indispensable guide to those cockpit dials and switches

1 Head-Up Display (HUD)
Shows you all your aircraft's navigational, flight and weapon-aiming information including your airspeed, altitude and angle of attack.

2 AWACS Information
The US Marines' airborne radar warning system tells you if there are any enemy aircraft in your vicinity.

3 Indicator Strip
Tells you the status of the undercarriage, wheel brakes and air brake.

4 Weapons Panel
Supplies information on weapon selected and salvo size.

5 Ejector Seat
Press <Ctrl> and <E> to eject from the aircraft.

6 Multi-Function Displays
Both displays can be set to show different sets of information about your aircraft, this includes on-board weaponry, laser-guided targeting, radar warning and waypoint T navigation.
Press the <[> key to toggle the left display <]> for the right.

7 Main Control Panel
Contains your main flight instruments comprising Air Speed Indicator, Angle of Attack, Horizontal Situation Indicator, Vertical Speed Indicator, Altitude and Attitude.

8 Nozzle Angle
Analog display which shows which flight mode the engine is in – hover, forward or backward thrust.

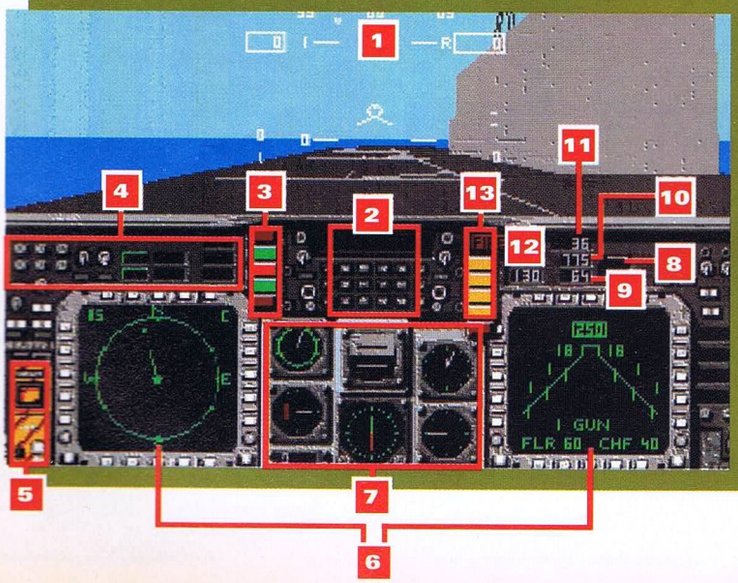
9 Fuel Flow
Tells you how quickly the engine is consuming fuel.

10 Fuel Gauge
Multiply the displayed figure by ten to get the amount of fuel you have left in pounds.

11 RPM
Displays your engine speed in revolutions per minute.

12 Jet Pipe Temperature
Warns you of possible problems in the engine compartment, like a fire or other damage.

13 Warning Lights
Warn of impending failure of any of your aircraft's major flight components, for example the Head-Up Display or if there's a fire in the engine compartment.



AV8B Harrier Assault

£34.99 Domark
☎ 081 780 2222
1MByte of RAM required.

Highs
The game features a lot of different elements and there's always a lot to do.

Lows
A good idea is let down by sloppy execution. There are much better flight sims available for your ST.

ST RATING 62%

THE GREATEST

Can *The Greatest* really live up to its name? Paula Richards approaches this compilation with trepidation

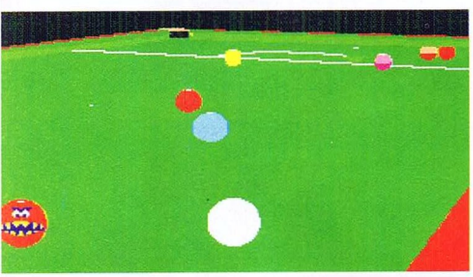
Compilations have often been things to be suspicious of – they almost always promise much but can very rarely deliver. This is one exception.

Jimmy White's Whirlwind Snooker

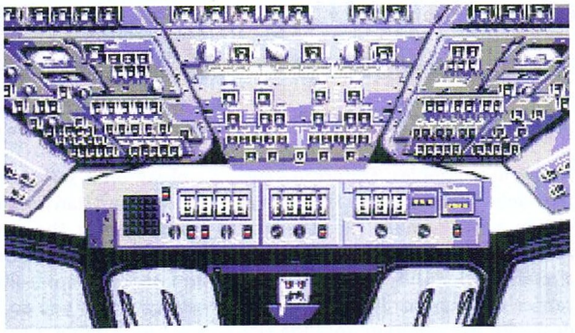
The differences between real snooker and *Jimmy White's* are quite noticeable. The real thing usually involves getting into awkward positions then hitting balls into pockets with a stick in draughty damp halls.

Jimmy White's Whirlwind Snooker, on the other hand, involves getting into virtually any position you fancy relative to the snooker table, then using precise and measured movements hit the ball with the chalked cue (without even getting your fingers messy) applying a back or side spin – and all without leaving the comfort of your ST. *JWWS* gives you the chance to practise your technique and even play competitive games against the professionals at whatever difficulty level you choose – although at even the easiest level you're likely to get thoroughly slaughtered.

This is an excellent game, which you can play with two people, that you're bound to enjoy even if you don't like snooker; the graphics are bright and clear, the sound effects of the audience clapping and the balls plopping into the pockets add to the atmosphere. There are plenty of features so you can finely tune your skills – and should you get bored with that, just sit back and watch. Your ST comes to life – flies start flying around the table and the balls begin to pull faces or wave flags at you. Never a dull moment.



■ If you get bored of playing, just sit back and watch as the balls start pulling faces at you.



■ The controls you are faced with are slightly more complicated than your average ST flight simulator. If you would like to learn how to use them, *Shuttle's* the game for you.

Lure of the Temptress

Unfortunately, you are Diermot. You are stuck in a cell with only a pile of straw and a rat for company. You're chuffed to be alive but you'd still like to get out of this smelly cell so you can overthrow the Skorl's leader Selena, then restore the country to harmony.

Once you've got out of your cell you can start your quest with the help of the ever-obedient Ratpouch. The adventure is huge with plenty of gently humorous turns, interesting things to do and people to talk to.

Lure of the Temptress is a huge RPG involving Virtual Theatre, so the characters have their own lives to live – they're more independent and carry on doing things even when you're not with them. You especially appreciate this when you get to look through windows or cracks and find other scenarios being played out. All the effects are excellent – the graphics are detailed and involving from the clothes the characters wear to the green leaves of the ivy; they are all carefully animated – as are the creatures and the natural effects like fires and waterfalls. Sound too is superb with incredibly evocative samples – it really makes you feel part of the game. This has to be one of the best adventures ever to come out for your ST – its combination of playability, humour and sensory appeal make it an old friend you're going to want to come back to time and again.

Shuttle

With two excellent games together in one box, there had to be some sort of catch. *Shuttle* is it. Although this is a fine piece of incredibly well-researched programming, it's very hard to get into, being more of a tutor in how to fly a space shuttle rather than a relaxing and entertaining game.

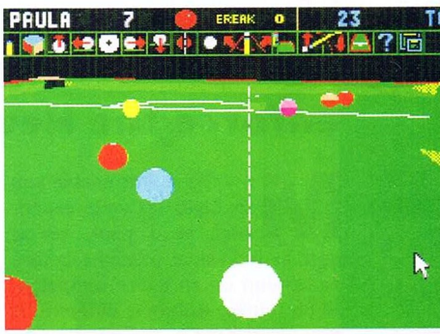
Although there's a quick start guide provided with the (very) comprehensive manual, it doesn't give you any indication of where you're supposed to start playing with the hundreds of daunting controls even for a mission that might sound relatively simple – launching from the back of a 747 transport plane near the glideslope for an unpowered landing.

You actually have to read the full instructions to get any sort of a clue about where on earth you should begin. If you have the patience, and the desire to fly a space shuttle – and don't mind taking several months over it – this is for you. Just don't expect to master it the first time you approach it.

Verdict

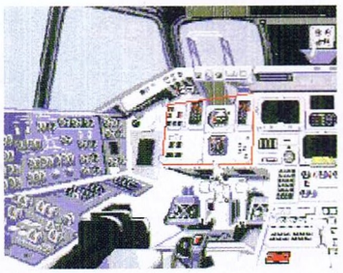
If you don't have any of these, you'd do well to get this – two stormin' games and er, a technical project with which you can while away a few months. The whole lot should keep you satisfied for quite some time to come. ***stf***

■ The torture room. Where people are forced to use an Amiga instead of their ST until they start whimpering.



■ When playing the real thing, it can be desperately difficult to hit the ball straight. *JWWS* does it for you.

■ Turn left, then right and start falling down some kind of rubbish shute. It's all fun and games in *Lure of the Temptress.*



■ "I'm pretty sure that's the slow motion lever over there. I might as well try it out... Aagghh!"

The Greatest
£32.99 Beaujolly
☎ 0737 222003
Highs
Three varied and absorbing games makes this excellent value for money
Lows
Shuttle's only going to appeal to you if you have true dedication to the idea of learning to fly one of the things.

ST FORMAT RATING 91%

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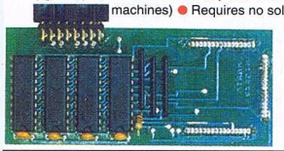

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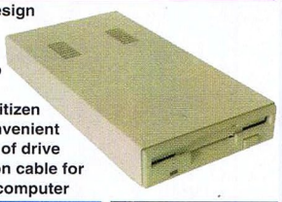

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NIGEL MANSELL'S WORLD CHAMPIONSHIP

White-knuckle rides don't get any more exhilarating than this, or do they? Rob Mead checks out Gremlin's latest racing sim

Race your way around the world in *Nigel Mansell's World Championship*, where the driving is hard, the women wild and the crisps crunchy.

Motor sport ain't what it used to be. Time was when greats like James Hunt, Nikki Lauda and Emerson Fittipaldi thrilled the world with their exploits on and off the track. By comparison, today's champs are faceless non-entities, pawns in a multi-million pound business. Nigel Mansell's no exception. He looks like he's strayed onto the track by accident, an accountant who has taken the wrong exit off the M25.

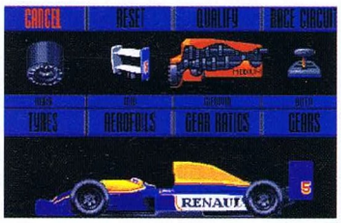
Nigel Mansell is a version of the man's climb up the motor racing ladder, taking place over 16 circuits in exotic locations like Brazil, Hungary and Monaco. Your job is to steer Mansell – or one of the other 11 drivers – to victory and the coveted world championship. You get used to the gameplay with the help of two practice options. The first is a driving school, where you bomb around a selected track against a time limit; the second – Improve with Mansell – gives you the chance to take driving tips from the man himself.

Mr Bean on a bad day

As you career around the circuit like Mr Bean on a bad day, Nige appears in the top left corner, pearls of wisdom dripping from his badly-animated chin. It's pretty laughable, especially when he says things like "avoid objects" after you've ploughed through a barrier. What's he like, eh?

When you've had enough comedy driving, it's time to get down to the nitty gritty of international Formula One racing. You can choose either a single circuit or a complete season with three difficulty levels – normal, professional or championship.

At the start of each race you're shown a map of the racing circuit and given a weather forecast, so you can match your car's setup to the prevailing conditions. There are three types of tyres, aerofoils and gear ratios to choose from, all of which affect your race performance. Once you've tuned your car, there's time for a couple of qualifying laps – which determine your grid position – before you enter the race proper.



"Nicole?" "Papa?" "What 'ave you done wiz your Clio?" "Papa! That's between me and my doctor." "What a funnee place to leave a car." "Papa?"

In Championship mode you get up to seven laps on each circuit and plenty of opportunity to play bumper cars with your opponents. Success or failure depends on your starting grid position, tyre wear and how good you are at taking corners at 300km/h. If you become world champion, you get a congratulatory screen, before going back to the beginning – there's no sexy animated sequence, despite what the manual says.

Once you get used to seeing Nigel's mug everywhere, this turns out to be a fairly average racing sim. It's not a million miles away from a whole host of other games like *Lotus Turbo Challenge*, which Gremlin also produces. Guiding the car is a question of getting used to the control mechanism – which is a tad sensitive – and timing overtaking manoeuvres and pit stops. On the easier levels, world championship status is fairly easy to achieve and even the hardest level won't provide too much of a problem if you're a hardened Formula One addict.

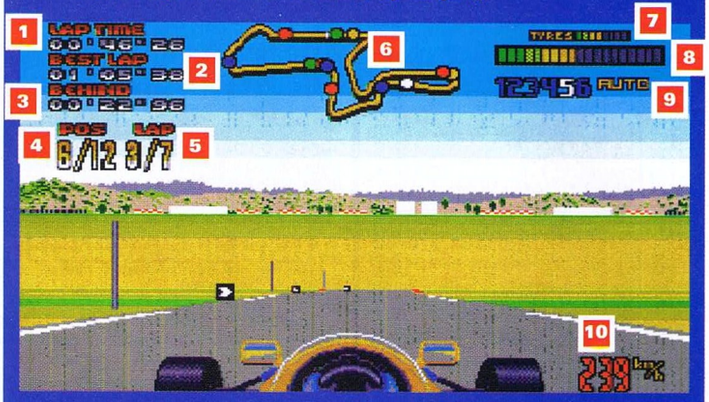
Your car can be controlled by joystick, mouse, keyboard or Logic 3's Freewheel – see the review on page 83. There's nothing inspiring about the graphics – they're just what you expect from a racing sim and the sound is reminiscent of a bee stuck in an echo chamber. You can't turn the irritating music off either, although it only makes an appearance between races.

Verdict

Only the kudos of being associated with the British racing champ distinguishes *Nigel Mansell* from any other racing sim. The features are fairly limited – especially when it comes to customising your car. *Vroom* or *Formula One Grand Prix* this is not. Having said that, it's reasonably playable and will endear itself to Nigel's fans. ***stf***

IN-CAR ENTERTAINMENT

Poor Nigel doesn't just suffer from flies on his visor, but the automobile equivalent of a head-up display



1 LAST LAP The others have gone on holiday to somewhere warmer, like Siberia.

2 BEST LAP Helga the reindeer-trainer is the best Lap, that's official.

3 LEADER TIME Reassuring when you're in front, depressing when you're twelfth.

4 POSITION Not rude, whatever you might think, but your place in the pecking order racewise.

5 LAP Tells you how many laps you've got left before you get to Father Christmas.

6 MAP Sound a bit like Lap, but tells you where you are.

7 TYRE WEAR A place in Northumberland... hang on, that's Tyne and Wear, isn't it?

8 RPM Rolos Per Minute. Eat too many – indicated by the red sector – and your engine blows up with the strain.

9 GEAR Tells you which gear you're in. Usually a flame-proof suit with matching gloves.

10 SPEED Anything less than 150 and you own a Reliant Robin.

Mansell's World Championship

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Highs
Mansell fans and racing buffs are going to love this.

Lows
Gameplay can be a bit jerky and there's no two-player option.

STF RATING 69%

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NO SECOND PRIZE

This is the smoothest, fastest most exciting racing game you'll have ever seen. Or is it?

■ *No Second Prize* is a rip-roaring whirlwind of a racing game. The vector graphics are some of the fastest you can see on your ST. Smashing into a bridge support at 300+ kph has you jumping out of your seat. There are 20 different tracks and five other highly competitive riders who never run into the bridge supports, making it a challenging ride.

Loony – you've got to be one to ride a racing motorbike, don't you? Think about it – great wodges of finely-tuned engines and highly-stung chassis with absolutely no concessions to anything other than speed – and lots of it. *No Second Prize* puts you in the dangerously vibrating hot seat of a racing bike and lets you loose for a season thrashing round the bike circuits of the world.

First off you have to choose to be one of the six riders from around the globe, and a rather glamourous bunch they are too. Each one has different strengths and weaknesses but, for your first attempt, it's probably a sensible idea to choose a rider with a strong bike and body to withstand the inevitable crashes. You can opt to do a few practice runs on any of the 20 different tracks before starting the season proper, the season consisting of six laps of each course; you get three points for a win, two for second and one for third place. The other riders compete against you, and they don't pull any punches either. Just to make things more exciting – and more frustrating – you can only save your progress eight times during the season. *No Second Prize* is mouse controlled and you can adjust the sensitivity before the race – and even opt for an automatic gearbox if you're a bit of a wimp. The manual box enables you to wind the revs up more and squeeze just that bit more performance out of your machine.

■ The unlikely looking cast of characters who audition for the part of your alter-ego, each with varying abilities. Whoever you choose has to see off the rest of them.

Fast, faster, fastest

It's when you actually start racing that the game shows its colours. The vector graphics are not incredibly detailed but they are very fast and the sense of speed provides buttock-clenching material when you wind the bike up to high speed. Braking into the corners, dropping a gear or two and laying the bike over sends the display whizzing around and has you leaning over in your seat. The mouse control is wonderfully responsive and, with practice, you can throw the bike around most gracefully. On the other hand, er, you might look totally incompetent – take the wrong line round a corner or at the wrong speed and you're sent careering around, on and off the track like a ping-pong ball. It can be a most frustrating experience. A useful addition is the ability to stop the action at any time and view your performance from various camera angles. There aren't many engine-twiddling sections as there are in more involved simulations, the game concentrates on what it does best – racing.

■ *NSP* has 20 representations of top bike tracks on which you can make a spectacle of yourself. Each of them needs plenty of practice before you can see off the competition. Races require lots of concentration.

Crash bang wallop!

There's one small drawback with all this blistering speed – hitting things. The tracks are fairly narrow and, apart from your opponents, there are numerous anonymous pace riders who plod round the course being overtaken by everyone – they're ripe for you to run straight into the back of. You can sustain a certain amount of damage before you have to retire, but it's the time you lose sliding about on the grass that raises your blood pressure. You can be leading for five straight laps then skid on the last curve and limp home in sixth place cursing. It's not a game in which you can blunder your way through at maximum throttle; it takes considerable practice to master and winning the season is going to take even the best of players quite a while.

Verdict

There's no doubt that *No Second Prize* is a dazzling game. The racing is a fast and furious business – in fact, it's almost *too* fast and furious. The races are quite long and one slip-up can ruin the whole thing, leading to infuriating I-nearly-had-it-that-time situations. If you're prepared to put in the work learning how to control the bike and you can handle the frustrations of race-losing smashups, you're in for an exhilarating ride.

CHRIS LLOYD

■ The straight bits are easy; up through the gears minding the slower bikes. The corners are a different matter - you need to choose your line carefully; get it right and you can sweep majestically through the curve a lot faster than the ST-controlled bikes.

No Second Prize
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Highs
Fast frantic racing with brilliantly smooth vectors with a real sense of involvement in the race.

Lows
Control a mite tricky at first leading to constant "crash misery" situation.

ST RATING 87

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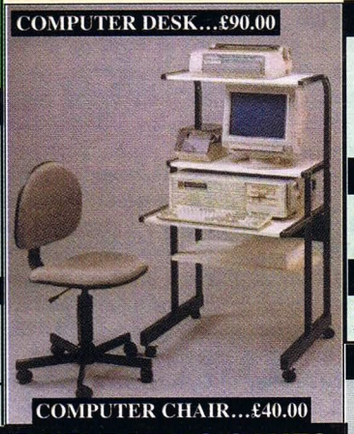

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RBI TWO BASEBALL

■ "This is the third strike... and if he misses this one... England will be all out for 256." Wrong game, again!

Sport sims, don't you just love them? Yes, thought so. But don't get over-excited about this one, 'cos you really need to be a hardened baseball fan to enjoy it.

RBI Two Baseball is a sim in which you pitch, bat, run, substitute players and eat hot-dogs – well, almost. If you're not remotely into high-speed rounders or if you don't know much about baseball, don't bother getting this one – it really is for the true baseball fan.

Once you get through the title screens, you can choose which team you want to be – check out the back of the manual before you make your choice, it has the 1989 statistics for the 28 teams. You can now edit your line-up – if you know enough about the game – and start batting. Now this is fun. In an attempt to make the game realistic and difficult enough your batter reacts as quickly as a Koala on a more than average diet of Eucalyptus leaves. Once you get to grips with these delayed reactions, however, you start hitting the balls quite regularly, but you have not much control over the direction or strength of your batting – so it's really down to luck.

■ The most important choice you are going to have to make is which team you want to be.

Fielding is more frustrating than batting. Once you've thrown the ball at the opposing batter, he hits it and you have to try to catch him out. Ha! Unlike in most sport simulations where you get to control the player closest to the ball, here you control all the players on your team at the same time. When you move up, everybody moves up keeping the same distance between each other. Not very realistic... and a real pain.

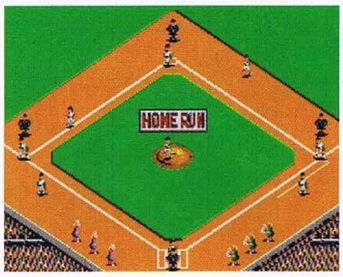
If you do manage to catch the ball when you're fielding, the batter is out, and the crowd cheers. If you catch the ball after a bounce though, you have to catch the batter out by trying to throw the ball to the baseman which the batter is running towards – you do this by hitting <Fire> quickly followed by the direction of the base on your joystick. Getting this right is also very fiddly and tends to be more a matter of luck than skill.

Home run

The graphics are quite good in the close-up modes, but when you're over-looking the field and trying to run after the ball, it is very difficult to judge the depth of the image, and you tend to spend most of your time diving to catch... thin air.

The sound effects are pretty pathetic and you really have to concentrate if you want to understand what the sampled voice is actually saying. There are some cute animations on the score board and there's a good "best of seven" two player mode. The team editor adds an essential function and breaks the potential monotony. Addictive if you're a baseball fan.

DAVID ROBERTS



■ When you hit a home run, the ball goes flying out of bounds and usually ends up in someone's hot-dog.

RBI Two Baseball
£7.99 – Hit Squad
☎ 061 8326633
Highs
The close-up graphics are good and the team editing functions add an essential element for the hardened baseball fan.
Lows
Too fiddly when fielding, crap sound effects and too much luck involved.
ST RATING 62%

VIDEOKID

■ Apart from the graphics, there's nothing much to scream and shout about this platform game.

Video killed the radio star and now it's sucked your kid into the television. Poor Billy is destined to spend the rest of his life hobnobbing with dusty diodes and tubes, unless you can save him from a fate worse than Jeremy Beadle.

Videokid is a cutesy platform game which spans five worlds, each with a different theme – mediaeval, western, science fiction, gangster and horror. You have to guide Billy through each level, popping off baddies and collecting bonuses, before confronting the dreaded end-of-level guardian. It all sounds a bit corny, doesn't it? There's nothing wrong with keeping to a well-established genre, but you expect games like *Videokid* to be either very good at what they do, or to be sufficiently novel to keep your interest. *Videokid,* however, does neither. It just plods along in the slow lane, failing to capture your imagination.

A major drawback is the game's difficulty level – it starts off tricky and just gets harder. You're given no time to ease yourself into the game, but are badgered by a lot of sprites and the kind of scrolling that kills you off as soon as you touch the edge of the screen.

■ Why do characters in cutesy platformers have names like Billy? Why can't they call them Gnasher, Slasher or Headbutt instead?

Unfortunately, no amount of special weapons, lives or continues can make up for the fact that *Videokid* is dead boring. The gameplay is joystick driven with the Spacebar being used when you want to activate Billy's smart bombs. Graphically, the sprites are well drawn, but the animation is slightly on the jerky side and is not very inspiring. The sound effects and music consist of the usual ST soundchip nonsense.

Verdict

Videokid is a mediocre platform game that manages to be both boring and frustrating. It is just like repeatedly dropping something on the floor – you really hate having to pick it up, but on the other hand, you just can't leave it festering for a couple of months on your carpet.

If you like your platform games to be original, exciting *and* fun (choosey, hey?), then steer well clear of *Videokid.* There are much better games in the ST platform world – *Fire and Ice, Wizkid* or *Rainbow Islands* are just a few examples of real platform games. They are undoubtedly better than *Videokid.*

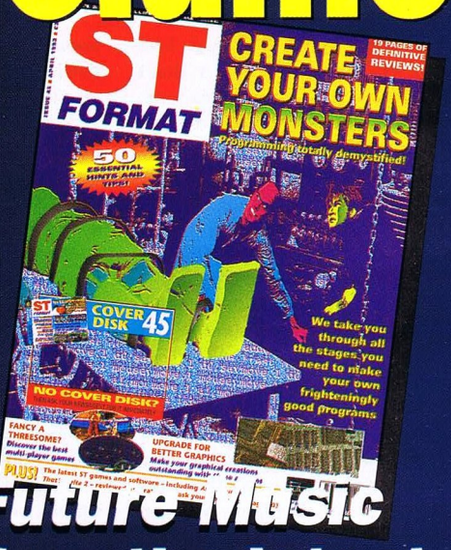
ROB MEAD

■ "Congratulations are in order - you've managed to get halfway through the first level without falling asleep." "..." "Erm, hello? Is there anybody there? Hello? Oi! I'm talking to you." "Zzzz"

Videokid
£7.99 – GBH
☎ 0742 753423
Highs
Well drawn sprites and difficult gameplay.
Lows
It's boring, frustrating and incredibly clichéd.
ST RATING 43%

Pump up the volume

Want more on music from your favourite monthly? Then tune in to the perfect companion magazine...



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ROBIN HOOD - LEGEND QUEST

Robin's got a problem. He can't decide whether to free the oppressed poor from the tyrannical grasp of the Sheriff of Nottingham, or go off chasing wenches with chainmail nighties. Luckily for you he chooses the latter and transforms Robin, hero of the people, into a man with his brains down his codpiece. *Robin Hood* is another cutesy arcade adventure from the Codemasters stable. Nottingham's evil sheriff has abducted Marian and holds her captive in his castle. You play Robin and your job is to rescue the dear maiden.

Robin Hood used to steal from the rich and give to the poor. These days he earns a crust appearing in dodgy platform games on your ST.

The action takes place over a series of mediaeval-looking levels with plenty of opportunity for baddie-bashing and pilfering en route. Each level has certain obstacles associated with it – the dungeon level has spiders, boiling lava and trolls, and there are various collectibles including chests, jewels and goblets which all help to boost your score. You also have to collect various keys on each level to help you gain access to the different doors and lifts which speed up your progress.

You're only given three lives and a health rating of three hearts to complete the game, but this soon withers away to nothing as you get dunked in lava, bitten by spiders and speared by trolls. You can occasionally collect extra hearts, but you soon find you've run out of lives and have to start all over again – this is when you realise there are no continues. This becomes a real drag as you wander through the same level for the 20th time just to get to where you were before. Play *Robin Hood* for an hour or so and you realise baldness isn't hereditary, it's self-inflicted.

You get Robin about the different levels with a few simple moves on the joystick and pressing <Fire> enables you to fire arrows at your enemies. The graphics are nothing special, but they serve their purpose and the sprites are quite well-animated, although the sound effects and music are crap.

Verdict

Robin Hood, originally released as part of the *Super All Stars* compilation reviewed in *STF* 43, offers platform addicts nothing new – however, it should soon endear itself to *Dizzy* fans. The gameplay is competent without being very inspiring, while the lack of continues can cause acute frustration and loss of hair.

ROB MEAD

There's no escape this time, Robin. You either get zapped by the squirt in the shirt or fall into a pool of boiling lava. Life's a bitch, isn't it?

Kevin Costner and Danny DeVito get a few barrels in for the post-production party.

Robin Hood

£7.99 – Codemasters

☎ 0926 814132

Highs

Average arcade game with some cutesy sprites.

Lows

Die and you have to go back to the beginning.

ST FORMAT RATING 54%

WILD STREETS

The Boss has been kidnapped. But, instead of raiding the executive drinks cabinet like any sane person would, you set off to get the thugs who snatched him. As you wander the wild streets of New York a terrible feeling of paranoia wells up inside your stomach. Yup, you guessed it, everyone you meet wants to kick the crap out of you.

Wild Streets is a beat-'em-up with a difference. There are far too many baddies to deal with on your own, so you're given two valuable weapons – a gun and a large black panther. Surprisingly, the panther is the more useful weapon of the two – it follows you around each level attacking baddies at random, killing them with one swipe of its claws. The gun, however, can only be used when the enemies are a certain distance away – at close range all you're left with is your fists and the lucky horseshoes in the toes of your trainers. At the end of each level of baddie-bashing debauchery you have to take on a big meanie who's tough, mean and hard to beat. The panther helpfully deserts you at this point.

The first thing you notice about this game is how dated it looks – all the sprites, except the panther, are badly animated, and your character minces along the streets with a swagger more akin to Julian Clary than Arnold Schwarzenegger. Annoyingly, a lot of the fist fights take place on the edge of the game screen, so you often can't see what's going on. The joystick controls are also very vague and you're never sure what move your character's going to make next. The whole thing is very slow and lacks any sense of excitement or tension.

Verdict

Wild Streets is a sad, rather dated beat-'em-up with few redeeming features. The gameplay is monotonous, the joystick controls frustrating and the graphics laughable. Watching the cat leap on its victims is entertaining at first, but you're soon on the phone to the vet asking for a lethal injection.

ROB MEAD

"Boy, I'm hungry." "Eat this knuckle-faced sandwich then, you pimply Gazza lookalike."

Wild Streets

£9.99 – Titus

☎ 071 700 2119

Highs

You get to thump lots of people. Again. And again. And again. Yawn!

Lows

Dated beat-'em-up with woolly joystick controls.

ST FORMAT RATING 38%

As beat-'em-ups go, *Wild Streets* is about as wild as a retired headbanger's bingo session.

Well, no-one said that you had to put a muzzle on your cat, did they?

Uh oh! The end-of-level meanies come to sweep up the streets with your face. Where's Tiddles?

WHAT'S BLACK AND

The answer to your prayers, or just a letter short of the real thing? Clive Parker plays with Halco's latest Calamus release

CALAMUS S
MACHINE: ALL STs 1MBYTE AND OVER, 4MBYTE RAM AND HARD DRIVE RECOMMENDED
PRICE: £334.88 (OR £285 USING THE SPECIAL OFFER COUPON IN ISSUE 45)
FROM: HALCO
CONTACT: ☎ 0734 441525

It all started with *Calamus 1.09n* – the program which revolutionised the whole concept of black and white DTP on your ST. And then Halco decided to put a little colour into their program, so they launched a new version, *Calamus SL*, which enables you to output in colour using the CMYK four colour separation system. The only real problem with the *SL* version is its price, and if you're working from home or run a small business, you probably don't need all the functions that make it expensive.

Halco have obviously been thinking about this and have just released a new version of *Calamus SL* without the four colour separation modules – it's called *Calamus S*. So, if you only want black and white output, this one's for you.

Using *Calamus S*

Getting to grips with the program is almost too easy. The screen is laid out with a column of icons which relate to the selected module running down the left side of the work screen, and a row of icons across the top. There are two drop-down menus with many of the functions replaced by icons; you can end up getting confused here because some of the icon functions are not immediately apparent.

Each one of the functions is under the pointer at the top right of the screen along with information on where to find other details.

Importing text and graphics can be a bit of a hassle at first because each type of file has to have its own specific driver loaded, this can be done automatically in future work sessions if you save the program setup with the drivers installed. Fonts can be configured to load automatically in the same way – if you have enough memory, set up the system so your most often used fonts and import drivers are always to hand. The good thing about using external import and export drivers is that you can add new ones if you start using new file formats.

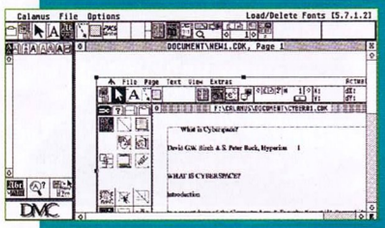
Before you start producing your first document, it's also a good idea to set all the paths for the various file types, and save the information to disk. So the next time you load *Calamus S*, the program can find everything automatically.

Potential problems

One of *Calamus'* drawbacks is the lack of PostScript support; both *Calamus S* and *SL* still have no PostScript output option – a module is under development though. PostScript support means that you can take a document down to your nearest printing bureau on a PC-formatted disk to get professional quality output on bromide or film – at the moment, you have to find a bureau which offers ST support, and as you know, they are few and far between.

The only other niggle is that a few of the messages have a habit of appearing in the original German

MORE TO IT THAN JUST LOSING THE "L"



■ Fonts are now loaded and deleted from an icon in the bar at the left of the screen, in *Calamus 1.09n* you did this from the Extras menu.

What are the main differences between Calamus S *and version* 1.09n?

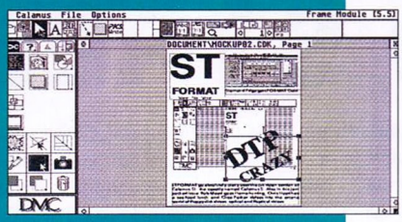
The major functions of *Calamus 1.09n* have been converted into modules which you can load separately. This is good news if you have a machine with memory restrictions because it enables you to unload one module before loading in another one. If you want to concentrate on text functions and fonts, you can unload the frame and macro modules to give you more room for all your fonts.

Many of the GEM menus and commands have been replaced by modules or icons within modules. For example, in version *1.09n*, you used to load fonts from the Extras menu, in *Calamus S*, you do this by clicking on an icon in the Text Style module.

You edit text with the *PKS Write* module, which is actually a text editor that can be loaded in when you want it. It also avoids the constant screen updating after each letter. Text can be grabbed from any frame and edited in *PKS Write* or exported to any text frame.

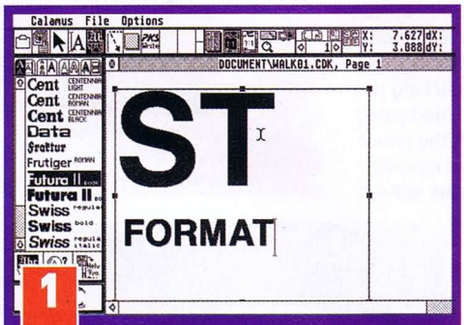
Other features include Cache and Virtual Memory. Both of these speed up memory intensive functions like font control. You can also print part of a page (tiling), you can create and save master pages and text style lists, rotate and mirror frames and crop raster graphics. On top of all this you can also run external programs and you can use dynamic linking to change the characteristics of several frames at the same time.

Calamus S looks very much like its older companion, and it works in almost exactly the same way – if you are familiar with *Calamus 1.09n* you can probably load up the new version and start work straight away without getting muddled up.



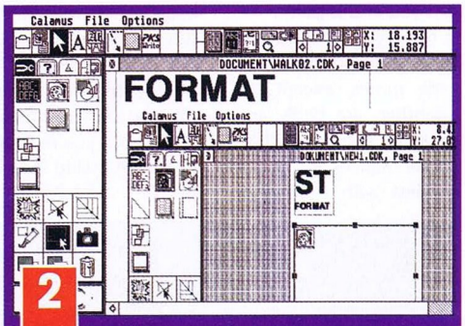
■ If you're familiar with *Calamus 1.09n* you're bound to understand *Calamus S;* the frame modul, for instance is virtually identical to the one in the original version.

Ever wanted to create your very own front cover to *STF?* See if



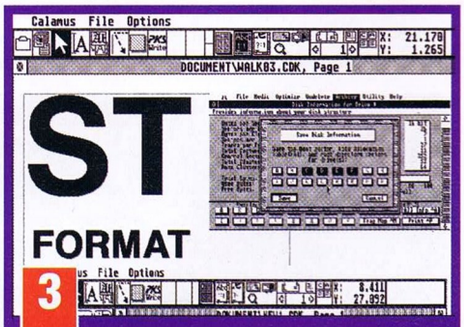
1

To keep things simple we decided to create a quick mock-up of an *ST FORMAT* cover. The first thing to do is find a similar font to the one used for the *ST FORMAT* logo - Futura 2 Book seems an apt choice. Now for the main picture.



2

We then added a large raster graphic frame and imported a *Degas* PI3 grab of - yes, you've guessed - *Calamus S* creating the *ST FORMAT* cover. Talk about looping. Once you have imported the picture you have to position and scale it properly.



3

Another raster graphic frame, smaller this time, to feature another application covered in the issue. This was placed next to the logo with room underneath to add some text describing the graphic, in this case the screen grab was of *Diamond Edge*.

WHITE ALL OVER?

rather than in English – this is not too much of a problem because it is quite obvious what the message means.

Installation

Calamus S comes on three disks. The main program is on one disk while the other two have all the external modules and fonts compressed into two 600+ archived .LZH files. A decompression program is provided on each disk to unpack the files – to save time transfer the files to hard drive or a large RAMdisk.

The data unpacks into two folders and it's a good idea to create folders for the different file types. Printer drivers, fonts, documents, macros, pictures, raster files and vector graphics are all easier to find if they are in appropriately named folders. On hard drive systems you should create a folder entitled "VM," *Calamus* uses this folder as virtual memory – temporary data storage space for memory intense operations.

You can find out how to set up both hard drive and floppy systems in the manual – you should be using a hard drive setup if you're seriously getting into DTP. A brief tutorial is followed by a section defining the fundamentals of DTP and there's a very detailed section explaining each of the main icon controls, main elements of the program, each of the supplied modules and the menu options. Although the manual is comprehensive, it fails to explain how to decompact the data files – this is left to a READ_ME document on the disk. This should really have been included in the manual – not everybody is familiar with compression utilities.

The end piece

Not a bad program at all. *Calamus S* offers a sophisticated desktop publishing environment combined with easy to learn features in an expandable "future proof" shell.

Many of the features are unmatched in other DTP applications for your ST. For instance, *Calamus S* includes a program which generates your own defined printer drivers – an innovation that other software houses should take note of. This is, without doubt, the best black and white desktop publishing program you can get for your ST. ***stf***

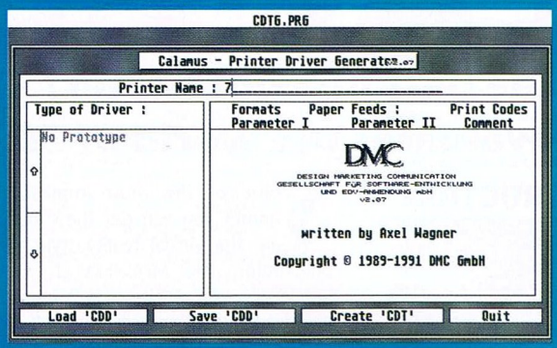
WATCH IT! THERE'S NO DRIVER

How does Calamus get around the fact that it lacks a number of printer drivers?

In the past, it has taken a long time for drivers to be devised for printers such as the HP Deskjet 500 and the Canon BJ-10 – and even then, they usually came from the Public Domain.

Calamus S (and *SL* before it) gets around this problem in two ways. First, there is a tasty wad of drivers concealed in the data folders supplied with the program.

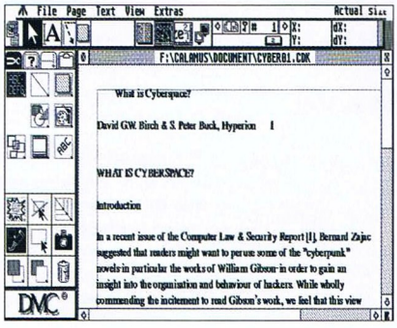
There is also an extra program supplied with *Calamus* so you can create your own custom-built printer driver to use with the program. The *Printer Driver Generator* is GEM based and enables you to build a driver from scratch or modify an existing driver to suit your printer – and it's very easy to use. Whoever thought of providing this little program with the *Calamus* package deserves a large pat on the back followed by a trip to the nearest beer cellar.



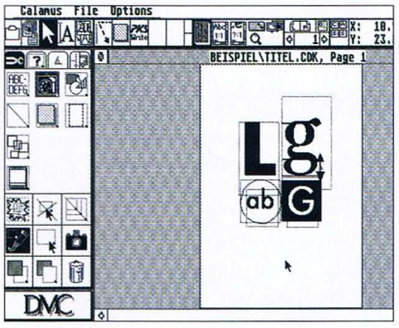
■ **The intro screen of the *Calamus* printer driver generator, you can either load in a driver to modify it or build one from scratch.**

Is that it?

So, what else is there apart from *Calamus S*: Well, *PageStream 2.2* (£169 Silica Systems ☎ 081 309 1111) – is a colour DTP program that can produce PostScript files. It doesn't have a great number of features, is slow and is still rather buggy. *Timeworks 2* (£129.95 GST ☎ 0480 496666) easy to use but looks dated. *Didot Professional* (£499 CGS ☎ 081 686 8121) is a top end professional package with some excellent features and PostScript capability. This is a lot harder to get to grips with than *Calamus*. *Easytext Professional* (£39.95 zzSoft ☎ 0254 672965) has some good features for the price but is not anywhere near the same level as *Calamus*.

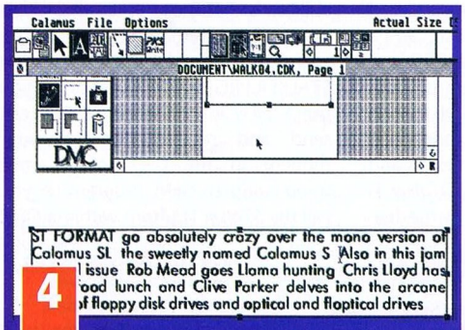


■ **The old and the new side by side. Both the old *1.09n* and the new *Calamus S* look superficially the same...**

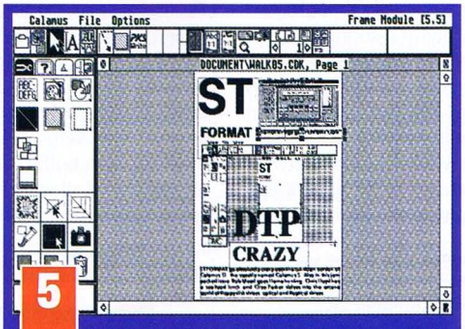


■ **...however there is a whole range of new features tucked away in the new version just waiting to be used.**

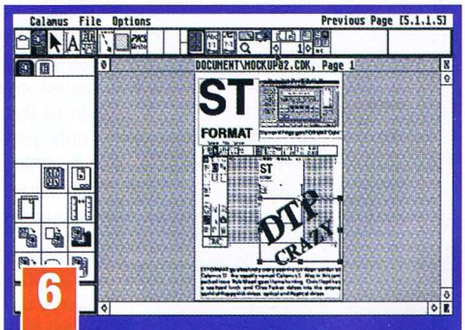
you can do better than this



4 **Text frames have been added beneath the small graphic at the base of the page to add some information about the issue's contents. Here we have used the Actual Size icon to get an idea of how the page is going to look.**



5 **We now need an eye-catching line to capture the reader's interest - that's you. Clive opted for the highly original and monstrously interesting (yawn!) "DTP Crazy" in large attractive lettering. Hmm. Perfect? Well, not quite.**



6 **The final touch to complete the page. The "DTP Crazy" text has been rotated by 30 degrees to make it stand out more. Finally, the whole document is printed out at 360 dpi (dots per inch) on a handy Canon BJ-200. Total time - around 40 minutes.**

VIRTUALLY REAL AGAIN

Has the best just got better? Chris Lloyd enters and evaluates the world of *3D Construction Kit 2*

■ **The viewing screen can be of any size. Obviously, the larger the view the slower things move. Here we are in the virtual reality of a particularly warped individual.**

3D CONSTRUCTION KIT 2

MACHINE : ALL STs WITH 1MBYTE AND COLOUR MONITORS
PRICE : £49.99
FROM : DOMARK
CONTACT : ☎ 081 7802222

Some of the most impressive games you can get these days are the virtual reality style 3D adventures, like *Mercenary 3*. You know, where your alter-ego is free to wander through and round the back of a complete world rendered in three dimensions. Programming such wonders isn't easy, and until recently, was out of reach of all but the most competent programmers. Then, in the summer of '91, out came *3D Construction Kit*, a dedicated utility to create 3D worlds. Since then, Domark have been beavering away and have produced *3D Construction Kit 2* for you to play with.

The basic format of the program is unchanged. The editor is used to create a world divided up into areas, each filled with objects built from a series of primitives. These objects can have attributes assigned to them – they can move about, appear or disappear, change colour and do nasty things to you.

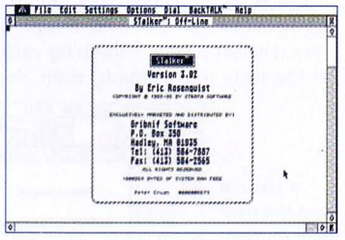
Once you've populated your world, it's time to let people loose in it. You can control the viewpoint and

■ **The basic building blocks - cubes, pyramids and the like - are all squashed, stretched and moved about from within the main editor. You do this until they resemble the object you first thought of. This picture started its life as a few hexagons.**

■ ***3DCK's* main editor. Creating a virtual reality world takes lots of imagination and patience. Putting a couple of blocks together is a synch, but a whole world is a totally different kettle of fish. Does that lawnmower look familiar? Hmm, thought so.**

TALK TO ME

Comms, hey? Isn't it about time we caught up with the Americans? Peter Crush says we have



■ **When you run *STalker 3* it has its own GEM window, even if you use the Desk Accessory version. Your name is displayed in the title box, why not pretend you've programmed it all yourself, and impress the more stupid of your friends?**

STALKER 3

MACHINE: ALL STs
PRICE: £39.99
FROM: COMPO SOFTWARE
CONTACT: ☎ 0480 891819

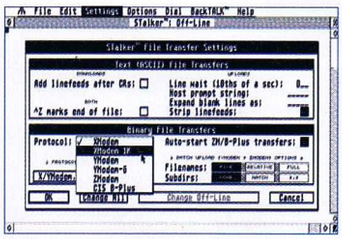
What is it with comms? One day nobody wants to know and the next, everybody's buying modems. Then again, with the price of high spec modems falling and the whole subject of communications becoming more widely understood, it's hardly surprising. In fact, the popularity of the *STF* BBS is such that we are having to install extra lines to cope with all your calls.

Apart from your trusty ST, all you need to get into comms is a modem, a phone and some suitable software. The Public Domain has quite a few comms programs and new users tend to use these instead of commercial products. For example, *Vanterm* is all you need if you want to dial up *STF's* BBS. There's nothing wrong with PD comms software, in fact, it's ideal for beginners because it's easy. Few such PD programs have proper printed manuals though, and the software doesn't contain all the advanced features. So, are there any good commercial comms programs to fill this gap? Yes, but sadly you can only get them in America!

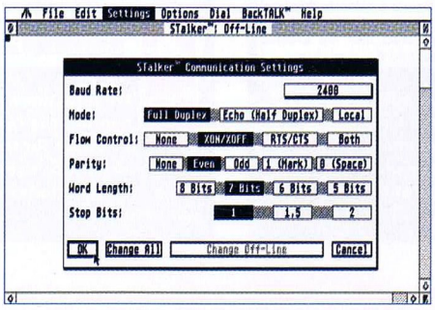
Or can you? Compo Software have just arranged to be the UK distributors for one of the best American comms products, which goes by the clever name of *STalker 3*.

STalker 3 has been written by the Gribnif Software people, famous for their *NeoDesk* replacement Desktop program for your ST – so it has to be good, doesn't it?

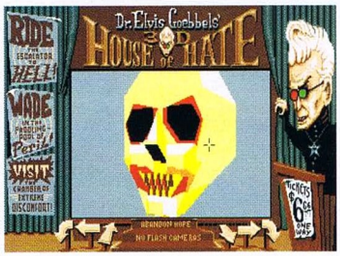
STalker makes full use of GEM, by running in a normal GEM window with the usual drop-down menus. The monitor screen becomes a virtual screen for the program, which can be up to 2,000 lines long, and this is buffered so you can scroll up and down to review what you did while on-line. The vertical and horizontal scroll bars can both be turned on and off via the Option menu. *STalker* is amazingly comprehensive in the features it provides and is capable of being configured to suit your exact needs. Perhaps one of its most clever abilities is that it can operate as either a normal program or as a Desk Accessory – you do this by simply renaming STALKER.PRG to STALKER.ACC. If you use *STalker* in its DA mode, you can send and receive files via your modem in the background while using another GEM program. If you call the *STalker* DA from within a GEM



■ ***STalker 3* enables you to set up the method of file transfer you want to use, here XModem 1K is selected, this is widely used on the *STF* BBS. If you have a modem with built-in error correction, you can use a newer, faster method like YModem-G.**



■ **Each type of system you log onto has a different communications setting, Bulletin Board Services use alternative ones to CompuServe for instance. Changing and saving them is dead easy via this dialog box, and the manual explains all.**



■ **Once you've finished designing your *3DCK* world it can be compiled as a standalone game with border graphics, sampled sound effects and customised player controls.**

movement abilities of the players – they can walk or fly, shoot back at things or wander around aimlessly bumping into things.

After long hours, your work can be then compiled into a standalone program and distributed to universal praise from your mum.

3DCK2 doesn't write good games for you but it does bring the 3D world within reach. The real power of *3DCK2* lies with FCL – Freescape Programming Language. FCL is much like BASIC and gives a good degree of control over your blocky universe. If you want to create half-way decent games, however, you cannot escape from programming altogether.

IS IT BETTER THAN 3DCK?

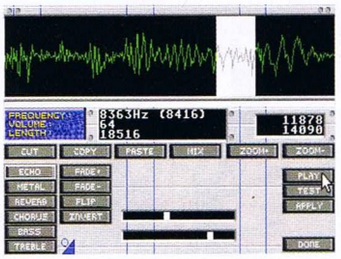
So, what are the differences between 3DCK2 and its older brother, 3DCK?

The main editor has the same sort of feel as in the original *3DCK*. There's been a redesign, but all the familiar icons and menus are still there.

There are new shapes, such as the flexicube – a cube with corners that can move independently – and the sphere, which looks like a circle from every angle. The Freescape Control Language has been rewritten with double the number of commands giving much more control.

There's also a video-type function that enables you to take control of the player's movement. A welcome addition is a second disk with a library of 91 ready-made objects from mansions to the kitchen sink.

One thing that hasn't been improved is the speed, it's slower. The editor has also lost a lot of zip and the icons and menus can be unresponsive. It's not a huge step forward, so is it worth upgrading? Well, it really depends on how nutty you are about creating your own virtual world and how desperate you are for more functions. You pays your money you takes your choice. If you are a registered member of the user group, then you can upgrade for £20.



■ **The original *3DCK* had a very clumsy way of using samples. *3DCK 2* has a dedicated editor enabling you to collect sets of sound effects and fiddle about with them.**

At the end of the day

Using *3DCK2* can initially be a frustrating experience. There is lots to learn and some of it can be confusing. You need heaps of dedication and patience to get at the potential of this package. It can not make a *Starglider 2*, but with enough input from yourself, you can get an excellent 3D adventure out of it – and you never need go anywhere near the horrifying world of three dimensional maths. Yuk! For that alone it's an impressive piece of work.

The only real grumble is the speed. The editor is slow and moving around the virtual world doesn't merit a speeding ticket. An amazing package capable of pretty amazing things, virtually. ***stf***

How about the others?

The only other rival to *3DCK2* is *STOS 3D* (£34.99 – Mandarin ☎ 0625 859333), an extension to *STOS Basic* to manipulate 3D objects from within *STOS* programs. It can't handle complex objects with the same speed as *3DCK2*.

3D Construction Kit 2, complicated as it can be, is still the easiest way to enter the third dimension. The only other alternative is C or, horror of horrors, assembler.

TEN MOST STALKED ABOUT FEATURES

Here's a quick look at the ten main talking points you can find in STalker 3

1 It runs as either a standalone program or a Desk Accessory – in both modes it has its own GEM window with the usual GEM menus.

2 *STalker* works very comfortably in the background – it can send and receive data over the wires while you use any other GEM based program.

3 It supports the Atari clipboard for cutting and pasting text – this can then be sent via the modem to the remote computer you are connected to.

4 *STalker* can be set up to emulate either VT52, VT100 or PC-ANSI data terminals, ensuring it works with any system you're likely to find.

5 Carries out file transfers using ASCII, XModem, XModem 1K, YModem, YModem-G or ZModem protocols, all self-contained within the software.

6 Has a programmable Autodialer for 30 phone numbers, each can have its own settings for baud rate, protocol used, passwords and the like.

7 GDOS is supported, so you can have a range of terminal fonts and sizes instead of using the usual ST system font.

8 *STalker* supports and integrates with *NeoDesk 3*, Gribnif Software's replacement Desktop for your ST.

9 Also integrates with *STeno*, Gribnif's DA text editor and with the *BackTALK* program supplied, and can be controlled via your own scripts.

10 Among many other spiffing features, it works with all STs, STEs, TTs/030s or compatibles, and has 20 user-definable function keys.

program, *STalker's* menus are still available within its own window which opens over any application you are currently using. Once you start a file transfer – even if you close *STalker's* window – communication keeps running, and when the file transfer is complete, your ST bleeps to tell you exactly that.

Using *STalker* is easy and straightforward. The manual and the README file on the disk guide you through any problems you might encounter. It is obvious that the authors of the program know all there is to know about comms, and you just don't get this level of support and information with PD software.

There are lots of other little programs and utilities thrown in on the disk, and program patches and advice are provided to deal with any "flow control" bugs that exist in the many versions of TOS.

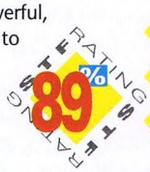
The program comes packaged in a smart box, with the software on a double-sided disk and instructions in a spiral-bound A5 manual that runs to over 200 pages – the good thing is it stays open and lays flat when you turn the pages.

The disk is not copy protected, but before you can use the software, it has to be registered. You can do this by running a short program that asks you for your name and address. The manual is a joy to read, it has an excellent primer section on the whole subject of comms on the ST, and completely de-mystifies what can be an arcane subject.

Only the first third of the manual is actually about the use of *STalker 3*, the rest of the book is concerned with *BackTALK*, a powerful scripting language program also supplied with the package. This enables you to write scripts which can be loaded into *STalker* and automatically control its operation for you – you can dial, log on, enter passwords and issue commands to the system you connect to without pressing a key.

Verdict

Whatever your system, *STalker* works just fine. If you're technically minded, then the program is crammed with parameters for you to alter and adjust to your heart's content. *STalker 3* is a classic program, powerful, refined, and attractive to use. If you are going to get serious about comms, this is money well spent. ***stf***



Any other commies?

Vanterm (Merlin PD Software, 11 Grange Close, Minchinhampton, Stroud, Glos GL6 9DF – Disk MPD0049) is an excellent Public Domain comms package for beginners as it is very easy to use – certainly not as complex as *STalker 3*.

For the hardened comms user there's *Freeze Dried Terminal* (Merlin PD Software – Disk MPD0973) which has a daunting number of functions. To receive the full version you need to regisiter with the author for a mere $25.

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WHAT'S YOUR VECTOR, VICTOR?

Creating vector graphics has always been a bit tricky, but is an autotracer the answer?

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FROM: COMPO SOFTWARE
CONTACT: ☎ 0480 891819

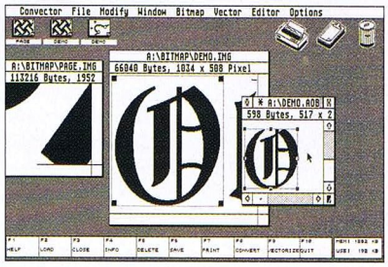
When it comes to ST graphics, there are two distinct flavours; bitmapped and vector. Bitmaps are images based on individual dots called pixels – if you enlarge or rotate the picture, the pixels become very obvious, causing that horrible jagged effect. Vector images, on the other hand, are composed of lines, curves and points which mathematically define the image – this enables you to manipulate it without losing any detail.

The trouble with vector images is that they can be difficult to create. One solution is to use a hand scanner to grab the image you want, then convert it to a vector. For this you need a program like *Arabesque Professional* (*STF* Rating: 80%, *STF* 45 – £129.00, Compo Software) to trace a new image over the top of the scanned one. An even more practical solution would be to use a program which automatically traces the image for you – enter *Convector Professional*.

Is it practical, then?

Convector comes on a single disk and needs to be installed before you can use it. It actually uses a close relative to the *Arabesque* installer making the whole thing as easy to install as falling off a greased rubber log. The disk comes with example pictures, the program, and a special version which takes advantage of the larger screen resolutions of the TT.

There is something lacking though, and that's a copy of Atari's GDOS system because *Convector* needs it to print images. If you need quick test printouts while you work, you have to install a copy of GDOS from one of the programs which use it, you can also get a copy from a licensee like the ST Club (☎ 0602 410241). *Convector* runs either as an application from the Desktop or as a Desk Accessory from within other programs. The program uses its own Desktop, complete with icons for the trashcan and printer.



■ ***Convector's*** **GEM Desktop enables you to flip quickly between as many images as your ST's memory can take.**

When you load an image it drops straight into a standard GEM window. From here you can crop the image to get rid of unwanted parts, just drag out a box to define the area you wish to work on, enlarge it or reduce it. If you have a scanned image which contains pixels, you can apply a powerful filter to remove them without resorting to cleaning it up in a drawing package. Smoothing is also provided to attempt to remove some of the jagged edges from an enlarged image. It works well, although you may still need to tidy it up in your usual art program.

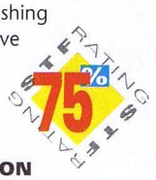
Vectorizing the image can be as easy or as complex as you want it to be thanks to *Convector's* Auto setting which adjusts the parameters to give the best results. If you feel like getting your fingers dirty though, you can tinker with the whole process before you convert the image. Fine control is provided for everything from the window size down to how precisely you want the trace to be.

The actual vectorization can be slow if you have a large or complicated image to trace, but reassuringly, a status display keeps you informed about what's happening. Considering the calculations needed, the speed is quite acceptable. Once the tracing has been done, your only real option is to save it – this is because *Convector* has no facility to edit the image. If you need to add lines or curves, you still need a program that can handle vector graphics.

As an Accessory, *Convector* enables you to grab an area of the current screen and trace it directly, so you can use it from within any GEM based graphics program. Where it really comes into its own is as an Accessory with *Arabesque*. You can vectorize direct from the *Arabesque* bitmap to the vector screen for immediate editing. The process is smooth and easy, and expands *Arabesque's* usefulness even further.

Verdict

As an automatic tracer, *Convector* is very good, but the lack of editing facilities means that you need to buy a separate program to fine tune your conversions and to draw vector images. Niggles aside, this is a good program. With support for the GEM and CVG standards, it works with all the desktop publishing big boys. If you have *Arabesque*, use *Convector* as an Accessory for it, and never look back.

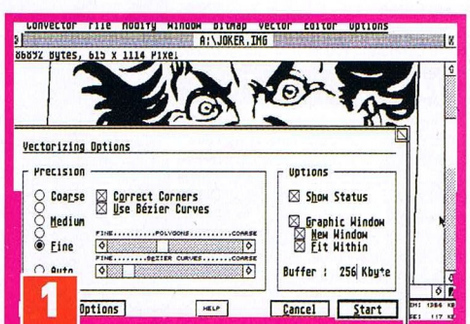


FRANK CHARLTON

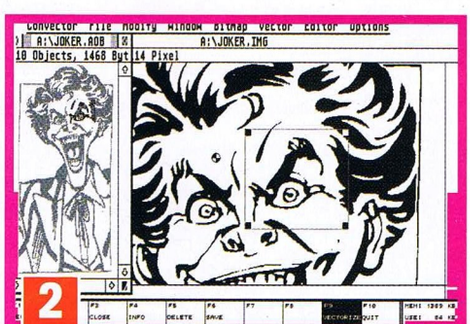
What else?

Silhouette **(£60.00, Ladbroke Computing ☎ 0772 203166) is similar in function to *Convector*, but without the *Calamus* CVG support. The only other package which compares is supplied with *Calamus SL* and is called *Speedline*. For more information call Halco on ☎ 0734 441525**

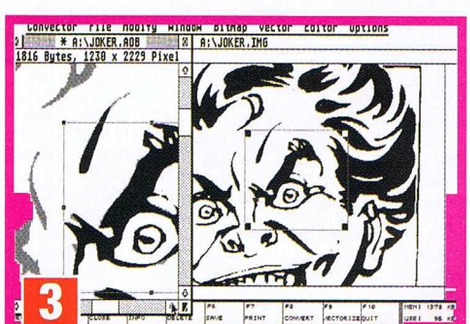
Three steps to vectorization heaven



1 **Once you've loaded your IMG file, you're ready to trace - note that the dotted box defines the small area you want to convert. You can then tinker with the settings until you're ready to go.**



2 ***Convector*** **has started to trace the image. The original scan is on the right, and a smaller version to the left shows up as a background to the newly created vector objects. Time for a cup of tea while you wait!**



3 **Nice cuppa, that. The job is finished, and now you can magnify the vectorized portion and take a closer look at your image - you also have the original on the right for comparison. Handy.**

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Access

CANON FODDER

If you're looking for a good quality printer, but can't afford the laser - think bubblejet

CANON BJ-200 BUBBLEJET PRINTER

MACHINE: ALL STs
PRICE: £468.83
FROM: CANON UK
CONTACT: ☎ 081 773 3173

Not much bigger than the more familiar BJ-10 range of bubblejets, Canon's latest addition is a much more versatile and robust machine.

There are very few controls on the actual machine and it is much harder for things to go wrong. If you're new to printers or anything marginally technical, you can get this one up and running in no time. There are just four buttons on the upper face of the BJ-200, controlling power, on-line, formfeed and linefeed and one to toggle between high speed and high quality printing. Five LEDs complete the display.

The less visible controls, like the bank of DIP switches, are concealed under a tiny flip-up cover on the top of the printer. You only need to adjust the switch that changes between Epson LQ and Canon BJ emulation modes, and the one that alters the paper length. Make sure you make a note of which mode you have selected because you have to load the correct driver from your software. All new software packages have Epson LQ and Canon BJ drivers supplied as standard – if yours doesn't, it's probably an older program and needs updating.

When Canon designed their printer, it's obvious that they didn't target it at the out and out tech-head nor did they design it for total novices. The manual for the BJ-200 proves this and is excellent. Forget all those badly translated manuals from Japanese to English – the correct technical term is Janglish – because Canon have well planned, well laid out and, most importantly, well written their manual. The instructions make everything seem so easy. Inserting the ink cartridge, for example is a synch, since everything is clearly explained and well illustrated.

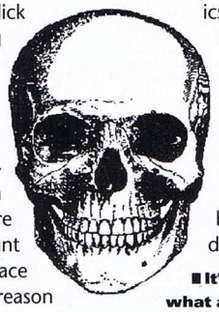
■ **Probably the best small inkjet printer in the world, built in the UK by Danes! Well, maybe not. One thing is sure though, the Canon's BJ-200 is exceptionally good at its job and also looks great on your desk.**

Main features

You can use the built-in cut sheet feeder immediately by bunging in a sheaf of up to 100 sheets of A4 paper. You can also use the feeder for printing envelopes – just flick a switch, with no messing about changing the orientation of the machine.

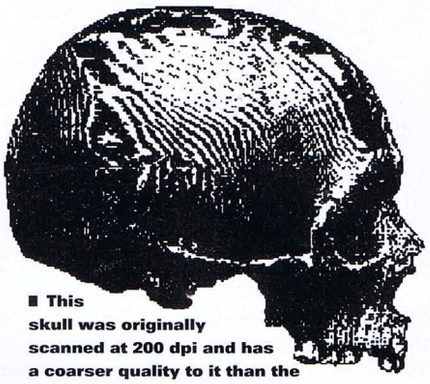
In Canon BJ-10 mode, the printer is capable of using only two built-in printer fonts, while in Epson LQ mode, there are eight available if you count high speed draft as a typeface in itself – this is a good reason for choosing Epson mode rather than BJ-10. All the Epson fonts are available in five sizes from 10 cpi to 20 cpi and the mode supports proportional printing. Both BJ-10 and Epson LQ modes support emphasized, double height and double width printing. BJ-10 mode does not support printing in italics while Epson mode does.

If you only want to print text, the manual suggests using the Epson LQ mode because of its greater range of output options, while the BJ-10 mode is better when you want to print a mixture of text and graphics. In practice, the Epson LQ mode gives excellent results from several Atari packages; printouts of graphics created while using *Calamus S* are of exceptionally good quality – none of that annoying banding occurs when large dark areas are printed. Output putting text from word processing packages like *Protext* and *That's Write 2* also produces brilliant results.



■ **It's absolutely gobsmaking what a little diet, excercise and lots of fresh air can do for your general complexion, isnt it?**

Normal print density on the BJ-200 is restricted to 180 x 360 dpi unless the software you use can specifically generate 360 x 360 output – DTP software enables you to change the print density. All text output is crisp and clear even in the high speed draft mode, and the printing speed of documents created in *Calamus* is adequate.



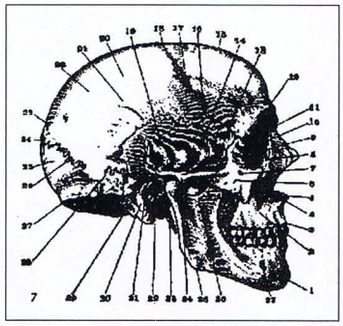
■ **This skull was originally scanned at 200 dpi and has a coarser quality to it than the one at the foot of the page.**

Verdict

Once again, Canon have come up with the goods – a competitively priced printer that performs as well as any of its opponents.

If you are running a small business or are simply looking for a good quality printer, you should consider looking at the BJ-200 before opting for a laser. In fact, there's nothing about this printer that can be faulted. It's that good.

CLIVE PARKER



■ **Pinhead here demonstrates the excellent results that can be obtained using the Canon BJ-200.**

CAN YOU TAKE YOUR PAPER?

There's nothing more frustrating than a printer that can't handle its paper...

Paper handling with the BJ-200 is simple and painless. Inside the front access cover is a small lever to switch between normal paper and heavy gauge paper or envelopes. This adjusts the printing gap – the cap between the print head and the paper – and prevents paper jams. You can also adjust a lever to the right of the cut sheet feeder when you want to print envelopes, and the printer can be set to a special "envelope mode."

Paper or envelope feeding is performed automatically by the printer, but manual feeding is highly recommended when you are using heavy gauge paper.

What can match this?

The most obvious comparison to be made here is with the new portable Deskjet printer (£528 from Hewlett Packard ☎ 0344 369369 – watch out for the review in next month's issue). Price-wise, the Canon just has the edge at £469 and produces output at 360 dpi compared to the 300 dpi on the Deskjet.

The BJ-10ex and Star SJ-48 (both £199 from We Serve, ☎ 0705 647000) are directly comparable to the BJ-200 and can offer output at the same high quality – many of the features which only appear as extras on these machines are standard on Canon's BJ-200 bubblejet printer.

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FREEWHEEL

PRICE: £29.99
FROM: SPECTRAVIDEO
CONTACT: ☎ 081 902 2211

You nuzzle into first place, a hair's breadth between you an Ayrton Senna. Then... your mouse goes haywire and it's all over. A world championship ruined by a bit of fluff on your ball. And joysticks aren't much better unless your idea of a racing sim is a couple of circuits in Joe 90's hover car.

Spectravideo have come up with a concept which could revolutionise racing sims on your ST – the steering wheel. Yup, the humble steering wheel – an essential bolt-on for even the most rudimentary Trabbie – is now available to provide added realism to your adventures around the race track. Freewheel is a free-standing steering wheel which plugs directly into your ST's joystick port. Robustly constructed in black plastic, with two blue <Fire> buttons, Freewheel has been officially endorsed by World Formula One champ, Nigel Mansell.

When it's plugged in, Freewheel acts just like a joystick – you push it forward to accelerate, pull back to brake and turn it left or right to change direction. The <Fire> buttons can be used either to change gear or as an accelerator.

Although it's been designed to be used in conjunction with Gremlin's *Nigel Mansell's World Championship* game, Freewheel works on most racing sims requiring a joystick or mouse control mechanism. Because it plugs directly into your ST, you don't experience any of the control problems found with RC Simulations' Mouse Yoke reviewed in *STF* 44. This means that when you turn the wheel left, you actually veer left, there's no hair-tearing lapse in gameplay while your ST thinks about it.

Although Freewheel offers very realistic gameplay during a race, it does have its drawbacks. Because there's no stand to attach the wheel to, you have to hold the thing up in the air the whole time.

Playing for long periods of time can lead to muscle strain in the lower arm and hands. Surely the manufacturers could have come up with a tilt and swivel stand to be added on to the wheel? The absence of a stand also means you end up twisting the wheel from side to side, rather than actually atempting to steer with it.

■ **The steering wheel. Why has nobody else thought of it yet?**

Verdict

Although it seems a bit gimmicky at first, Freewheel works very well. It's solidly manufactured and is endorsed by the man himself, Nigel Mansell. This is a must if you are a racing sim fan or a James Hunt wannabe.

ROB MEAD

HOW DOES IT WORK IF THERE'S NO THINGY ATTACHED?

A steering wheel without a stand? How does the Freewheel actually work?

When we first saw the Freewheel we assumed that a system involving mercury switches was being used to check the movements of the wheel. The actual system used is simpler and a lot cleverer.

Inside the centre of the wheel is a small box about 2.5cm square. In this box there are two cylinders containing water and an air bubble. They are positioned at right angles to each other – representing the X and Y axes. At the end of each cylinder is a mask with a small hole in it. An LED transmitter shines a light at the end of the cylinder, if the air bubble is visible in the hole the light beam is reflected back to a receiver which then sends a signal to your ST. If the bubble is not visible then the light beam is not reflected back to the receiver and no signal is sent. The combination of signals from both receivers determines the on-screen reaction of the game. The electronics within the Freewheel are powered by the +5V line from the joystick port. The analog version of the controller works in a similar way, the main difference being that the amount of light reflected back to the receiver is different depending on how much of the bubble is visible in the hole in the mask.

If 10% of the bubble is visible, then the signal intensity sent to your ST is 10% of the maximum intensity, if 50% of the bubble is visible, then a 50% signal is sent to your ST. In this way a much more accurate representation of the orientation of the controller is sent to your ST enabling you to have greater control over the game itself. The analog version of the Freewheel is perfect for the Falcon030's analog joystick ports.

TRUE CLASSICS

WORDS AND MUSIC MIDI FILES

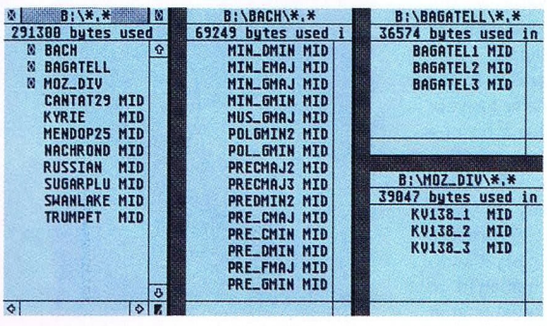
PRICE: £10.95 OR 4 FOR £38.80
FROM: WORDS AND MUSIC
CONTACT: ☎ 091 529 4788

Ever wanted to make your ST sound like a philharmonic orchestra performing one of the great classical pieces? Well, here's your chance – Words and Music boast a catalogue of ten, mostly classical, MIDI file disks. Each disk is brim full of tunes, many of which you're more likely to recognise than you think.

With many companies competing in this ever growing contemporary music MIDI file market, it is refreshing to see some professionally produced classical MIDI files.

Each disk is supplied with an informative track list, this gives extensive details of each piece and the settings you need to play it successfully – this includes the time signature, a list of tempo changes and many other useful tips pertinent to each piece. If you have a synth module compatible with the GM standard (see panel, top right) then the correct sounds are selected automatically.

Don't worry if you don't have access to this kind of gear though, since you are given more than enough information to set up the synths you have to play the file correctly. Tempo information is included with each file which most sequencers can read – *Cubase* owners have to do a little editing of the Mastertrack to get it right. You are advised to save the edited files in the format your own sequencer uses, as this preserves all of the editing that you have done. We found that we could load in any of the files and have them playing beautifully within minutes. There is no reason why you shouldn't find them just as easy to use, regardless of your system's configuration.

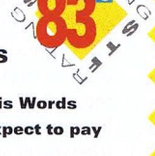


■ **As you can see, you get over 30 MIDI files on this Words and Music disk. Outstanding value. Elsewhere, expect to pay about £5 per MIDI file.**

Verdict

If you have an interest in classical music and would like to have a good selection of pieces in MIDI file format, then you could benefit greatly from this professionally finished wide-ranging collection. If you're not, then they also have disks with Christmas music and Ragtime piano pieces.

Note that if you're serious about building a MIDI file library, you may wish to order more than one disk – there is a system of discount for large orders. All in all, good value for money.



ANDY CURTIS

GM standard

GM – This describes the new General MIDI standard. If your synth supports GM, then almost all commercially produced MIDI files play correctly without having to spend time setting your gear up. This is achieved by making the voice numbers on all GM synths the same. Voice No 1 is always a piano sound for instance, so if a piano sound is needed, Voice No 1 is selected.

What else?

Here are a couple of companies who sell MIDI files: Newtronic (☎ 081 691 1087) – send £2.00 in stamps for a full catalogue and demo disk. Hands On MIDI Software (☎ 0705 221162) – Jazz, Rock/Pop MIDI collections available plus a full range of MIDI support hardware. Pro-Music (☎ 0284 765765) – chart hits, guitar classics, '60s, films and TV.

These companies charge around £5 for each song file you buy, not for a disk stuffed full of tunes.

ALTERNATIVE VIEWS

Isn't about time you put your pennies together to buy yourself a monitor? Clive Parker tests the latest offerings from Gasteiner and Viewtek

This neat, petite and easy to seat monitor is the ViewTek from Silica Systems. Don't bother with boring colour, play games in 16 scintillating greyscales. Those mutant camels are never going to be the same.

VIEWTEK 12 INCH GREYSCALE MONITOR

MACHINE: ALL STs, LOW AND MEDIUM RESOLUTION
PRICE: £69
FROM: SILICA SYSTEMS
CONTACT: ☎ 081 309 1111

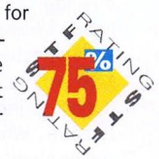
Had enough of squinting at your colour TV and straining your eyes? Using your TV for playing games might be fine, but when you're running word processing and DTP programs in medium resolution, there is no doubt that a colour monitor would be a much better option. OK, so you don't think you can afford one. Well, Silica Systems have an inexpensive solution to your problem. How about a low cost 12 inch mono monitor capable of running ST low and medium resolutions in up to 16 greyscales? All this for no more than the price of a reasonable quality black and white portable TV.

The monitor is compactly designed with the computer connection cable protruding from under the front enabling you to connect it to your ST with ease. The cable uses an adaptor to interface with the ST, a different adaptor is provided depending whether you have an STFM or an STE. All controls are also mounted on the front of the monitor apart from the vertical hold, making any adjustments required simple to perform. Apart from the power switch, the controls consist of volume, brightness and contrast. The picture quality of the monitor is very steady and adjusting the brightness and contrast gives you a rock-steady flicker-free image that is easy on your eyes – even though it seems unusual to see low and medium resolution programs running in monochrome. There is no provision for stereo sound and the sound quality of the built-in speaker is about the same as that of a similar sized portable television – not bad, but not particularly brilliant.

A high resolution emulator is thoughtfully provided with the monitor just in case you want to try out high res software. In fact, it's *Sebra,* the very same program which we gave away on Cover Disk 40 – it's a bit like *Monulator* (STF Rating: 78% – £14.95 from Goodman International ☎ 0782 335650) but a tad less expensive. The mono emulator is fine for checking out mono software to see if you like it, but if you're thinking of seriously using high resolution software, then there is no substitute for a high res mono monitor.

Verdict

The ViewTek is easy to set up and use – plug in and switch on – and we worked for many hours in medium resoluton applications without any problems. It may seem like a retrograde step buying a black and white monitor to use colour software, but if you are going to use it for more serious applications, then it must be considered as a low cost alternative to a colour television. ***stf***



More monitors

If you don't like the idea of a greyscale monitor, you could always get a colour monitor. There's the Atari SC1435 (*STF* Rating 90% – £179.99 from Ladbroke Computing ☎ 0776 203166) or the Philips CM8833 MK2 (*STF* Rating: 90% – £219.99). Philips also make a TV that's a monitor – the Philips Cube TV (*STF* Rating: 76% – £329.99 from Philips ☎ 081 6894444).

VGA MONO MONITOR

MACHINE: ALL STs
PRICE: £149
FROM: GASTEINER
CONTACT: ☎ 081 365 1151

These days it's impossible to get your hands on one of Atari's high resolution monitors. Everywhere you go, you get the, "we're expecting some in soon" line.Well, suppliers have been waiting so long for them that some have taken matters into their own hands and started converting VGA mono monitors for you to use with your ST. The only alteration that's required to make the monitor work with your ST is a new lead. After all, the Atari high resolution monochrome monitors are actually converted VGA monitors.

First off the starting block is Gasteiner – they have taken a rather smart looking Trust MM 100 14 inch VGA mono monitor with a tilt and swivel stand, changed the lead and added an internal speaker. They also stuck a Gasteiner label on the front as you can see in the above photograph.

All you have to do is plug the thing in and boot up your ST. Because an FST tube is used, the display is almost completely flat. There tends to be a little image distortion at the top of the screen, however, and the Desktop display has an annoying upwardly curved edge. The only picture controls on the front of the monitor are brightness and contrast. The rear of the machine boasts a couple of controls for adjusting the vertical image size and horizontal phase as well as two holes for other controls that have to be adjusted with a screwdriver. These two controls are for the focus and the sub-brightness – they are pre-set at the factory and should not need altering.

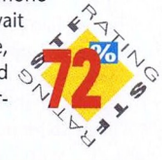
The vertical image control is used to stretch the image – it doesn't move the picture position at all. The horizontal phase control is simply used to centre the image on-screen by moving it left or right. The monitor is supposed to have a 14 inch display area, but in practice, there is a large black bar at least one inch wide all around the display when it is at the correct aspect ratio. You can stretch the screen vertically, but the display is distorted and your circles appear as vertical ellipses.

Sound has been added to the monitor specifically to cater for your ST. The volume control is a bit of a Heath Robinson affair, jutting ungainly from the right side of the casing. The sound quality isn't very good, but considering the amount of space in the monitor case, it's surprising that Gasteiner managed to cram an amplifier and speaker in at all. If you have an STE, you can improve the sound quality by connecting the phono sound outputs to an amplifier and speakers, but because most high res applications are graphic or text based rather than sound based, this is not essential.

Rather a tidy looking VDU from Gasteiner - this 14 inch mono monitor leaps into the market gap created by the dearth of Atari monitors, while Atari Workshop, First Computer Centre and Analogic are running close with their own offerings.

Verdict

The screen image isn't quite as crisp as any of the Atari high res monitors, but it's a very good substitute. If you want to get yourself a mono monitor and cannot wait for an official Atari one, then this is a good option, if a trifle overpriced. ***stf***



What else is there?

Well, apart from waiting for the official Atari high res monitors, you could get yourself a high res emulator like *Sebra* (yours free on Cover Disk 40 – if you missed it, turn to page 44 to order your copy). This handy program simulates high res when you're using a colour monitor or a TV in medium res.

FREE! FROM SILICA

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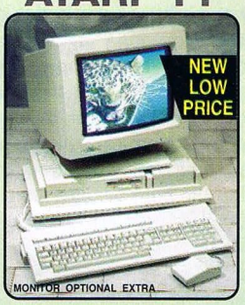
ATARI TT



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ATARI FALCON 030
16MHz 32-Bit 68030 CPU, 1Mb RAM, 3½", 1.44Mb FDD

HARDWARE:

SOFTWARE:

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HARDWARE:

1040ST-E COMPUTER 8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive	£299.99

SOFTWARE:

PRO 24 III	£150.00

PLUS! FREE FROM SILICA:

Silica Productivity Pack	£104.97
TenStar Games Pack	£219.78
Total Value:	£774.74
Less Pack Saving:	£475.74
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FAMILY CURRICULUM II

HARDWARE:

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SOFTWARE MODULES:

PLAY AND LEARN - A Game with Words and Sentences	£76.59
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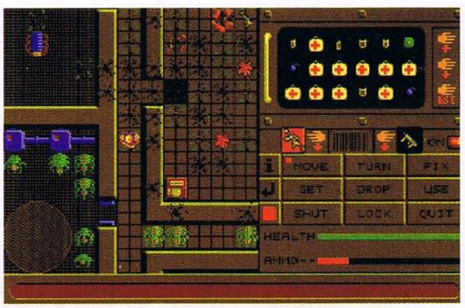
GAMES

BUGHUNT 2 DEMO
CALEDONIA PDL
DISK GM152

Do crawlies give you the creepies? Well, now you can get your revenge with *Bug Hunt*. It's your job to prevent a bunch of aliens from colonising the planet by embarking on a series of suicide missions. The demo features two assignments involving the retrieval of a missing disk and rescuing a bunch of human captives. Programmed using *STOS Basic*, *Bug Hunt 2* is an addictive and immensely playable action/arcade adventure with blood-curdling samples and great graphics. Your character is controlled by a combination of both mouse and joystick. The demo needs at least 1MByte of RAM to run.

***STF* RATING: 85%**



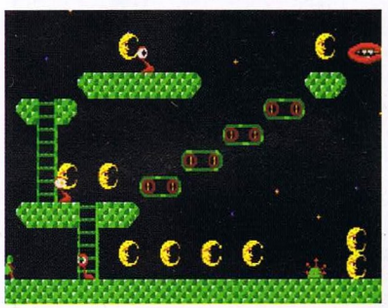
■ **"Excuse me, Mr Alien Sales Assistant, could you please tell me where you keep the packet soups?"**

NIRVANA DEMO
CALEDONIA PDL
DISK GM156

Nirvana, hottest band on the planet or a state of being? Erm, actually, it's a platform game starring a cutesy green blob who has to charge around a series of levels, collecting objects and avoiding various types of mean beasties.

The idea is hardly an original one, but the game is very well animated with some unusual and colourful graphics – this includes some brilliant eyeball monsters and lips! Gameplay soon turns from tricky to frustrating, with precise timing required to complete each level. If you're a platform fan, then this game is going to have you plugging away at your ST for hours.

***STF* RATING: 78%**



■ **Snakes alive! All these baddies, and still no sign of Courtney Love. Welcome to *Nirvana*.**

THE GLASS BUTTOCK OF THARG
CALEDONIA PDL
DISK GM155

What do Jeremy Beadle, Inspector Morse and Kim Basinger all have in common? Apart from a rubber glove fetish, that is. They all star in this latest strategy/adventure game from Grandadsoft – the people who brought you *Grandad and the Quest for the Holey Vest*. You have to guide your heroes around a mythical land, recruiting men for your army and fighting the bum bandits. Graphically, the game is very reminiscent of *Ishar* with copycat backgrounds. Unfortunately, *Glass Buttock* lacks the originality that made *Grandad* a winner and you can complete the whole thing in an hour. Needs 1MByte of RAM.

***STF* RATING: 76%**

■ **Life in the Vice squad isn't all it's cracked up to be you know. Try policing the bum bandits.**

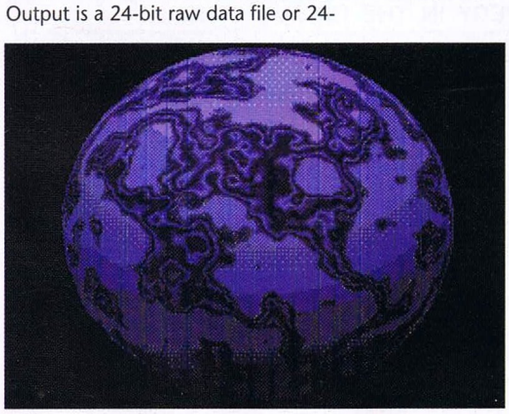
ART AND MUSIC

DKB TRACE
FLOPPYSHOP
DISK 3411

A powerful raytracing program with transparencies, fog, phong shading, a myriad of objects and other goodies. Objects can have a whole ream of parameters given to them – marble with ripples and rough wood. There is also a function that enables you to map pictures onto objects.

The results can be stunning. Output is a 24-bit raw data file or 24-bit Targa, so you need to convert them to show them on an ordinary ST. A little utility enabling you to view Targas comes with *DKB*. A much better option is to get hold of version three of *Photochrome* which does clever tricks with colour to show the pictures to maximum effect. *DKB* would be seriously breath-taking with a decent editor, as it stands though, you need to put in the serious effort before you getting any results.

***STF* RATING: 88%**



■ **One of more than 40 example files that accompany *DKB Raytrace*. It's a ball of blue marble, now that's handy, you can do alot with a ball of blue marble! Displayed on a system fitted with a graphics board or on a Falcon, the detail of the 24-bit pictures is stunning.**

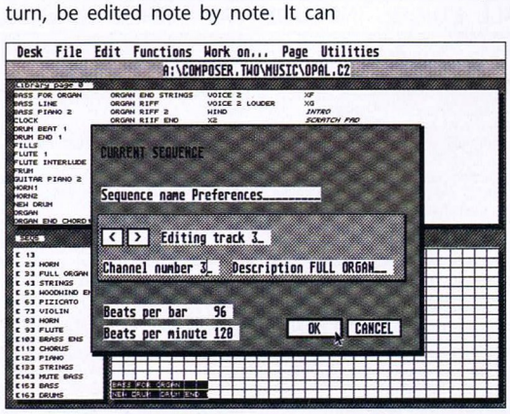
COMPOSER TWO
FLOPPYSHOP
DISK MID 3550

A fully fledged 16 track polyphonic MIDI sequencer. There's a full complement of features – 96 beats per minute resolution, transpose and replace, note and MIDI editing, merge and mix data and a host of other features.

Songs can be built up from bars and segments, which can, in turn, be edited note by note. It can use an external or internal clock. *Composer Two* runs in medium or high resolution on a 520 ST and makes use of GEM.

If you think you are one of these people who are fairly competent with sequencers, you should have no problems whatsoever. If on the other hand, you're not, then don't worry because there's a hefty manual to guide you through it all. Rather swishy.

***STF* RATING: 81%**

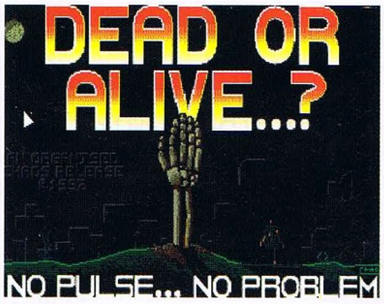


■ ***Composer Two* doing what it does best, sequencing. It tried a brief spell as a calculator but it didn't work out. Many thanks to Ed Ricketts for the loan of that joke, would he please take it back now.**

DEAD OR ALIVE

LAPD
DISK L21

Dead or Alive is an atmospheric text adventure set in the town of Malton where some very strange things are going on – for a start, your local's been boarded up and you're suffering a bad attack of amnesia. After a while you end up dead, and that's when the fun really begins. *Dead or Alive* features over 100 different commands, including some silly ones like Panic, Dance and Cabbage. The author's surreal sense of humour pervades every aspect of the game from the sarcastic comments you get from the parser to some downright silly situations. If you thought text adventures were dull, get *Dead or Alive* and you may be forced to change your mind.



***STF* RATING: 83%**

■ **Is life getting you down? Then take a walk on the wild side and pop down to the local graveyard.**

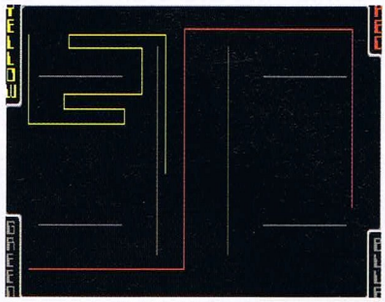
MEGALINE

CALEDONIA PDL
DISK STE49

Do you remember the motorbike sequence in *Tron?* Well, *Megaline* is the ST equivalent. Up to four players can take part as you zip around the screen, creating a trail your opponents can crash into. The winner is the person who manages to survive the mayhem the longest.

Megaline is best in multi-player mode where gameplay is fast and furious. There are some great sound effects and speech samples, while the graphics are simple, but very professional-looking.

Megaline is a great blast and has been especially written for STEs with 1MByte of RAM.



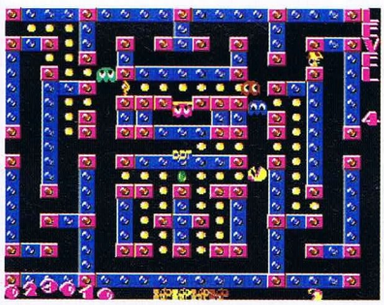
***STF* RATING: 83%**

■ **This may look like a chaotic jumble of lines sprawling across the scene, but it's the most fun you can have without getting your Etch-A-Sketch out.**

MRS MUNCHIE

GOODMAN PDL
GD1667

Mrs Munchie is a *Pac Man* clone with happy bees, lightning bolts and munchiemators. You get to tear around a series of levels, eating pills (tut, tut) and avoiding ghosties. There are also plenty of bonus items for your to pick up like DDT and POW powder. While *Mrs Munchie* certainly looks very good, it's let down by an unresponsive control mechanism which means you die frequently. This gets very frustrating and mars an otherwise excellent game. The sounds are good though, with the occasional sample thrown in for effect. *Mrs Munchie* requires at least 1MByte of RAM to run.



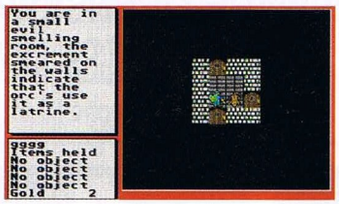
***STF* RATING: 62%**

■ **"Ah, *Mrs Munchie*, if you could be swept off your feet by Robert Redford or Rab C Nesbitt, who would it be?" "Who's Redford?"**

ORCS' KEEP DEMO

PD.ST
DISK GL446

You have to save Thistledown, the last city of man. But first, you have to enter the *Orcs' Keep* and rescue the first of four trusty companions. As you wander around the keep – viewed from a bird's eye perspective – you have to battle with baddies, and solve puzzles. The screen is split up into three areas; the gameplay window, player statistics and an information box. The unanimated sprites are very small and the backgrounds lack detail. There are also no sound effects, meaning the game lacks atmosphere and is boring.



***STF* RATING: 51%**

■ **If you think this smells bad, you should try going round to Fungus the Bogeyman's house.**

SEVENTH HEAVEN

MT SOFTWARE
DISK B73

You know bad things come in threes, well, in *Seventh Heaven* you're terminally ill, a nervous wreck and you're mad. Now don't get maudlin. All you need to do is fall asleep, transcend the astral planes to find a cure and return yourself to normal. Easy, eh? This game from Budgie UK is a graphic/text adventure which takes place in a lunatic asylum. You have to search the rooms to find objects which enable you to progress through your dreaming state.

What seems like a good idea in theory is a rotten game in practice as you soon get bored with typing in commands. *Seventh Heaven* leaves you feeling disappointed and frustrated because it could have been so much better.

***STF* RATING: 41%**

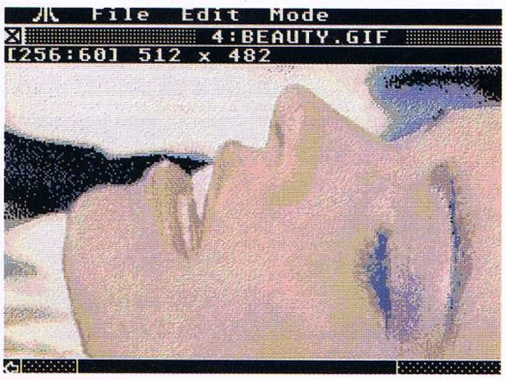
VIEW GIF

PAGE 6
DISK ST 765

Graphic Interchange Format (GIF) pictures were developed for use on CompuServe as a method of storing graphics independent of the type of machine they were created on. Unfortunately, most GIF pictures are bigger than your ST's screen and use up to 256 colours.

View GIF leaps to the rescue and enables you to convert the oceans of available GIF pictures into more useful formats. These include *Spectrum 512*, AIM – Atari Image Manager – CP8 and IFF as well as the more common *Neochrome* and *Degas Elite* file formats.

You can crop or shrink the picture to suit your needs. *View GIF* runs in low, medium and high resolution and is very quick. It's all GEM based and easy to use, giving *DMJ GIF* a run for its money.



***STF* RATING: 78%**

■ ***View GIF* enables you to tap the rich vein of pictures stored in GIF format and convert them into ST picture formats. For some strange reason most seem to have a similar theme, odd that.**

PD HIGHS AND LOWS

Highs

Getting a good grenade hit in *Bughunt* and wasting a whole squadron of the little creeps.

Doing a really sexy-looking *DKB* raytrace and impressing people by saying you were doing a spot of 24-bit rendering last night.

Sending someone smashing into the wall after a really close and lengthy game of *Megaline* and shouting "Ha!" in a triumphant manner.

Using *Sales Controller* after struggling for ages with other programs on other systems that don't even get close to it.

Lows

Running a *DKB* raytrace for ten hours before realising you made a mistake passing the parameters.

Trying to get into *Orc's Keep* without cursing too much.

Watching *Acts of the Unspeakable* for the second time.

Smashing into the wall after a gripping game of *Megaline* because you pressed the wrong button and the other player thinks it was all down to his skill.

Getting zapped in the same place by the same creature in *Nirvana*.

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G.269 QUIZMASTER Multi-choice answer general knowledge quiz
G.217 THE MAZE: 3D Crystal Maze adventure/puzzle game
G.255 GRIDFEVER: 'Qix' style arcade action
G.258 GALACTIC FRUITBOWL: 1Mb, combines the trivia quiz and fruit machine.
G.249 INSECTICIDE: Unusual ladybird shoot'em up with sampled sound. S/W
G.247 MEGAPEDE; 1Mb: excellent reworking of the arcade classic. S/W
G.250 CYBERNETICS: Good, challenging 'Defender' type arcade game. S/W
G.246 HYSULA: A graphic 3D fantasy adventure set in the world of Hysula.
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G. 80 TETRIS & PILE UP: Two very good versions of the 'Tetris' arcade game.
G.234 COUNTOUT; Word puzzle game similar to Channel 4's 'Countdown'
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G.224 MRS. MUNCHIE: Pacman clone from the United States. 1Mb D/S
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D.322 MENTAL HANGOVER: Conversion of Amiga demo. (STE 1Mb) (Licenseware £2.95)
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S. 95 HIGH FIDELITY DREAMS: 8 super pieces of music from Auro. D/S
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U. 34 SAGROTAN: Super virus killer to protect your disk collection D/S
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MISCELLANEOUS

P. 37 HEAT 'N' SERVE SOZOBON: A friendlier sort of Sozobon. D/S
P. 24 MENU-MAKER: A French program that allows you to make your own menus with music, sprite and scrolling message. Excellent. D/S
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UTILITIES

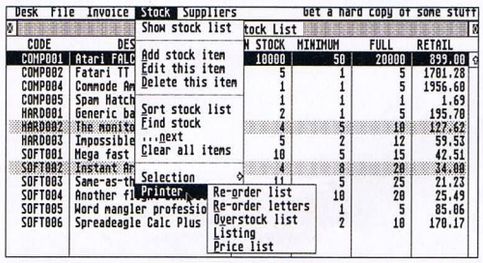
SALES CONTROLLER

CALEDONIA PDL

DISK AU83

Sales Controller is a Shareware invoicing and stock control system for your ST and requires a high resolution monitor to run – a mono emulator is supplied with this demo version. The save and print options are disabled in the demo version, but this is probably the best stock control program available and is ideal if you are running a small business. The program enables you to take full control over invoicing, stock control and supplies, with facilities for automatic re-ordering when stocks reach a certain level, automatic letter generation and a comprehensive suite of editing functions. Invoices generated can be printed on Sage compatible two part NCR invoice listing paper using a dot matrix printer, Sage being the standard for all PC clone invoice software. Absolutely brilliant.

***STF* RATING: 82%**



■ ***Sales Controller* looks good and works well, the full version along with a laser printed manual can be yours for just £30. Note that there appears to be 10,000 Falcons in stock with this company!**

BITZCOPY

FLOPPYSHOP

DISK UTL 3540

Bitzcopy is a general purpose disk copier and formatter which among other things enables you to format double density 720K disks, high density (HD) 1.44MByte disks on a Mega STE, TT or Falcon, copy disks (but not protected games), perform "soft" formats to wipe previously formatted disks and generally take control over your formatting parameters. You can, therefore, produce your own customised formats which other copiers may be unable to reproduce – hence creating your own copy protection.

The icing on the cake is the fact that you can create custom boot sectors to display a message when booting and you can also give the person using the disk a surprise by changing the monitor display frequency. A well written useful utility to have in your disk box.

***STF* RATING: 77%**

■ ***Bitzcopy* enables you to generate customised boot sectors, so you can stick a copyright message on your disks to be displayed on booting or set the monitor frequency and disk step rate. Wonderful.**

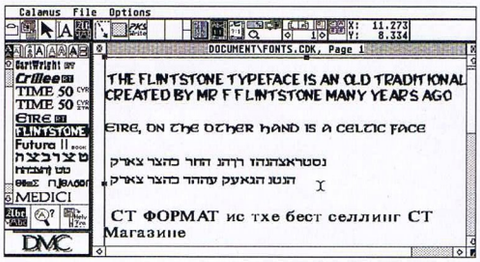
CALAMUS FONTS

ST CLUB

DISKS ST 784, ST 785, ST 783

Tying in cleverly with this month's *Calamus S* review (see page 74) are the latest three PD *Calamus* font disks from the ST Club – disks 17, 18 and 19. Each disk contains a variety of fonts, many of them variations of standard typefaces. Some of the others like Hebrew, Cyrillic, Math Symbols and Flintstone are a little more exotic. The main advantage of having extra fonts is to brighten up and add a bit of variety to your desktop publishing documents. A must if you're into DTP, these are compatible with all versions of the program from *Calamus 1.09* up to *Calamus SL*. At £1.45 per disk they are an inexpensive way to improve your setup.

***STF* RATING: 75%**



■ **Some of the fonts that you can get on the *Calamus* disks, with only three TV programs and one magazine mentioned in the text.**

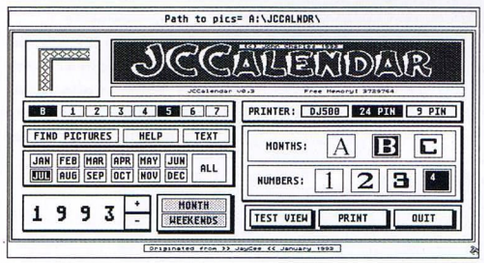
CHRONUS/JC CAL

GOODMANS INTERNATIONAL

DISK GD1887

A couple of high res time related programs on this disk – *Chronus* is a complex reminder program from Germany and *JC Calendar* provides you with a clever calendar printing program. *Chronus* is like a diary that enables you to assign events to each day of the year as reminders which can be printed out or viewed on-screen. Although all the documents and menus are in German, it is quite obvious what each function does. *JC Calendar* is a rather neat program which enables you to generate monthly calendars. The calendars can be output on 24-pin, 9-pin and DJ500 printers without problems. Worth getting just for this program.

***STF* RATING: 74%**



■ **The design screen of *JC Calendar*. You can select all the various bits and bobs you want to include in your calendar design from this screen. You can also select the printer type to output to.**

UTILITIES

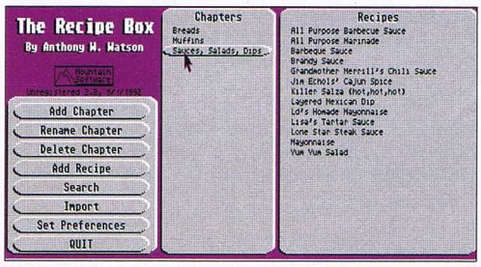
FLOPPYSHOP

DISK UTL 3534

One of Floppyshop's mixed bag of utilities disks, there is plenty of interesting stuff here for most tastes. Probably the most useful utility here is a Desk Accessory called *Reader* which enables you to view text files at anytime from the Desk menu, very handy for looking at READ_ME files while running GEM software. The Accessory is supplied in two versions to cater for those with a bit less memory available, one version enables text files up to 12K to be accessed while the larger version reads files up to 48K in length.

Other goodies on the disk include a menu shell for the *GFA 3* compiler, a grocery lister to organise your shopping, a medium resolution program launcher and a recipe program. All quite varied and very interesting stuff.

***STF* RATING: 68%**



■ **The *Recipe Box* is a program which enables you to store all your favourite recipes in a handy database. It's Shareware so don't forget to register.**

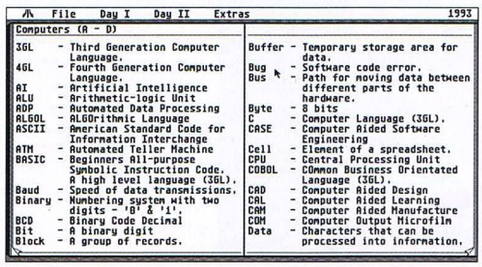
ST DIARY

CALEDONIA PDL

DISK AU 209

Another diary program, but this one is imaginatively called *ST Diary* so as not to confuse you too much. The program runs in high res only and appears on-screen as an open book with a day assigned to each of the two visible pages. Notes and information can be entered on each page of the diary so that you are reminded (usually too late) that it is somebody's birthday or it's Christmas next week, and so on. Nothing much out of the ordinary here. The one thing most computer based diaries lack are those useful conversion pages at the back with weights and measures, world time zones and the London Underground map. All that is here (except the map) along with an A to Z of computing terms under the extras menu. A neat touch that improves an average utility.

***STF* RATING: 60%**



■ **The programmer of *ST Diary* has thoughtfully included an A to Z of computing terms at the back of his program. A bit awkward changing from day to day but can be useful if you need a diary.**

DEMOS

NERDHOUSE

STATE 808 PDL
DISK MOD 33

A classy introduction leads into a seemingly endless bout of flashing graphics accompanied by that modern dance music... you know, what's it called? Oh yeah, rave. The graphics are a simple collection that flicker quickly before your eyes. The sound is excellent and goes on for ages before coming round to the start again. It's a huge lump of a tracker module with plenty of wacky samples. It doesn't reach the heady heights of the *Grotesque* demo but it's a cut above average. Stick it on and leap about the room waving your hands in front of your face in slow motion, gosh.

***STF* RATING: 80%**

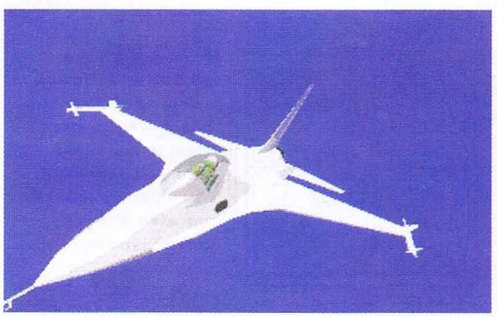
■ **Yes, it doesn't look like much, but *Nerdhouse* starts flashing screens like this in a variety of colours very quickly while playing nutty rave-type music. Stare intently too long at the screen and you have to go and lie down for a bit afterwards.**

IFF ANIMATIONS

FLOPPYSHOP ST
DISK DEM 3462

An IFF animation player program that can be set up to run from an AUTO folder so that sequences run automatically. No features other than that though, and only handy for making auto-booting demos. There are six IFF animations to accompany it. By far the best is a 452K sequence showing a couple of American fighters. There are five other sequences including a female version of the famous ray-traced juggler and an insight on how a Wankel engine works. All very well and good but not much long-term appeal. The planes look good though. What are you giggling about?

***STF* RATING: 58%**



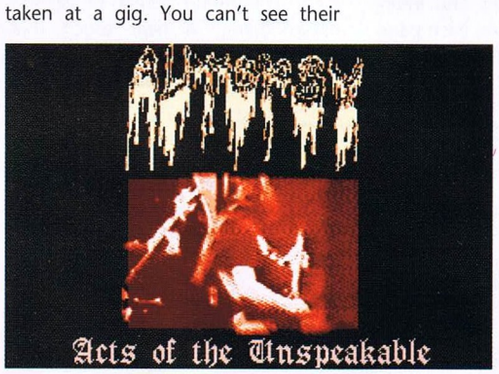
■ **One frame from a 163 frame animation of a moderately impressive IFF animation. A couple of fighters swoosh about for a bit... it starts getting a little dull after about ten fly-pasts.**

ACTS OF THE UNSPEAKABLE

ARROW PD
DISK LW 01

About five minutes worth of death metal from a bunch of hairy characters. The sample quality is not sparkling. There's a quarter screen animation of small loops of a video taken at a gig. You can't see their faces for their hair – a deliberate ploy to retain anonymity or are they just shy? There's no great programming expertise on show, just a simple presentation of sounds and animation. If you like this kind of music then you'll probably grow out of it. A simple demo for simple people. Oops, a little bit of sarcasm there.

***STF* RATING: 57%**



■ **Grind, crunch, chugga-chugga. *Acts of the Unspeakable* features a band called Autopsy who are obviously just the sort of chaps who would enjoy scouting. Not! Grind, crunch, chugga-chugga.**

THE *ST FORMAT* PD DIRECTORY

■ Where to go for Public Domain software – demos, games and utilities for around £3 a disk! If you write to any of these libraries for a catalogue, enclose an SAE. ■ Budgie games are available from all PD libraries indicated by a (B). Simply mention the disk number (above the review) when you order the disk.

SOUTH OF ENGLAND

16/32 PDL, 35 Northcote Road, Strood, Kent, ME2 2DH ☎ 0634 710788

ACE PD, 90 Milton Road, Hanwell, London W7 ☎ 081 840 3204

ARROW PD, 6 Kents Orchard, Perry Street, South Chard, Somerset TA20 2QB

ATARI ADVANTAGE, 56 Bath Road, Cheltenham, GL53 7HJ ☎ 0242 224340

AWESOMEDEMOS, 3 Mason Road, Seaford, East Sussex BN25 3EE

B-SOFT, 2 Oliver Drive, Calcot, Reading, Berks RG3 5XN ☎ 0734 419981

EVPD, 15 Cleeve Road, Gotherington, Cheltenham, Glos GL52 4EW

FREAKS PDL, 29 Leap Valley Crescent, Downend, Bristol BS16 6TQ (B)

IMAGEART, 19 Brenda Road, Tooting Bec, London SW17 7DD ☎ 081 767 4761

MELVILLE MARRIOT MUSIC MEDIA, 46 Market Square, Whitney, Oxon OX8 6AL ☎ 00993 779500

MERLIN PD, 11 Grange Close, Minchinhampton, Stroud, Glos GL6 9DF

MERTON PD, 10 Grasmere Avenue, Merton Park, London SW19 3DX

MT SOFTWARE, Greensward House, The Broadway, Totland, Isle of Wight PO39 0BX ☎ 0983 756056 (B)

NEW AGE PDL, 8 Oakwood Court, Aterial Road, Leigh-on-sea, Essex SS9 4DG ☎ 0702 526435

PARADISE COMPUTERS, 11 Winfield Avenue, Patcham, Brighton, East Sussex BN1 8QH

PD ESSENTIALS, 22 Fern Avenue, Mitcham, Surrey CR4 1LS

PDSSC, 5 Walnut Close, Barkingside, Essex IG6 1HE ☎ 03548 448

PROBUS, Birchy Hill, Sway, Lymington, Hampshire SO41 6BJ

PUBLIC DOMINATOR PD ATARI, PO Box 801,Bishops Stortford, Herts CM23 3TZ ☎ 0279 757692

PUBLIC SECTOR PDL, 50 Ripon Road, Stevenage, Herts SG1 4NA ☎ 0438 364722/361324

RIVERDENE PDL, 30a School Road, Tilehurst, Reading, Berks RG3 5AN ☎ 0734 452416 (B)

SD PUBLIC DOMAIN, 11 Allington Mead, Bridport, Dorset DT6 5HF

SENLAC, 14 Oaklea Close, Old Roar Road, St Leonards On Sea, East Sussex TN37 7HB ☎ 0424 753070

SEVEN DISK, Digswell Water Lodge, Digswell Lane, Welwyn Garden City, Herts AL7 1SN

SOFTVILLE PD, 35 Market Parade, Havant, Hants PO9 1PY ☎ 0705 498199

SOLENT SOFTWARE, 53 Rufus Gardens, Totton, Hants SO4 3TA ☎ 0703 868882

STEVENS PD, 14 Depot Road, Horsham, West Sussex RH13 5HA

TUMBLEVANE PDL, 6 West Raod, Emsworth, Hants PO10 7JT ☎ 0243 370600

WARPZONE PDL, 53 Ropewalk, River Street, St Judes, Bristol BS2 9EG

WIZARD PD, 178 Waverley Road, Reading, Berks RG3 2PZ ☎ 0734 574685 (B)

NORTH OF ENGLAND

ALPHA COMPUTING, 32 Meadow Drive, Halifax, West Yorks HX3 5JZ

AKORE SHAREWARE, 7 Fishergate Point, Lower Parliament Street, Nottingham NG1 1GD ☎ 0800 252221

BLYTHE ATARI ST PDL, Copes Farm, Withington, Leigh, Stoke on Trent, Staffs ST10 4PU

D W STABLES, Atari PD and Commercial, PO Box 78, South Shore, Blackpool FY1 6AD

GOODMAN PDL, 16 Conrad Close, Meir Hay Estate, Longton, Stoke on Trent, Staffs ST3 1SW ☎ 0782 335650 (B)

LAPD, 80 Lee Lane, Langley, Heanor, Derbys DE7 7HN ☎ 0773 761944 (B)

MAGNETIC FIELDS, PO Box 118, Preston Lancs PR2 2AW ☎ 0772 881190

METROPOLIS PD, 38 Howick Park Drive, Penwortham, Preston PR1 0LU ☎ 0772 748422

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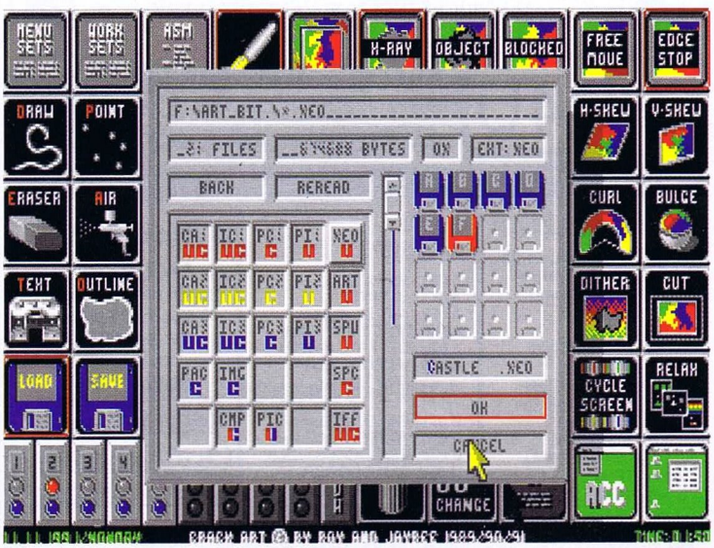
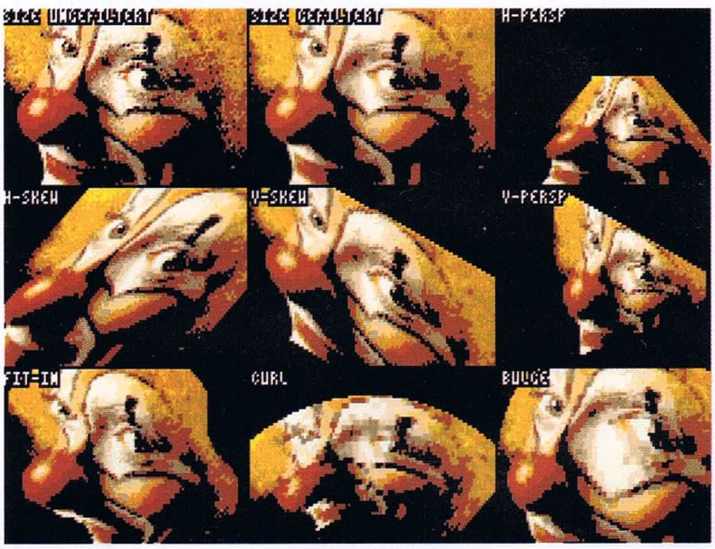
CRACKED UP

For the price of a Shareware disk you get one of the best low resolution art packages around.

There are art packages and there are art packages, *Crack Art* is - er, an art package. Chris Lloyd has been investigating



Crack Art can handle virtually every file format you can throw at it, even converting *Spectrum 512* files or pics in different resolutions. Click on the file list with the right button to select the file format you want to load or save.



A selection of *Crack Art's* multitude of block functions. This is one area where the program really shines - it has a better collection than most commercial offerings do, including an excellent perspective function.

There are lots of paint programs around for the ST – it seems as if every programmer has had a bash at producing an art package at one time or another. The best commercial packages are very tasty but unfortunately can give your wallet quite a pounding.

Galloping to the rescue comes *Crack Art*, a Shareware program from Germany that matches the best of the commercial offerings with a veritable army of artistic capabilities. *Crack Art* was written by Jan Borchers and Detlef Roettger and is Shareware. Shareware is a system of distribution where the programs are free to be copied and passed about. If you make use of the program then you are asked for a small donation. In this case 20DM, about £8.50 – well worth it. If you're into programming then you can get the full source code too.

If you're into pixel manipulation on your ST then do yourself a favour and choose *Crack Art* from your favourite PD library – there's a selection to choose from on page 90. It only runs in low resolution and you need to be packing 1MByte. It's smooth, slick and very powerful. There's a host of block distortion tools and special effects as well as a comprehensive range of basic drawing tools. Everything is beautifully programmed too.

Make yourself a nice pot of tea, settle down in front of your ST and load up *Crack Art* and take a look at our guide round the backstreets of its functions. It should soon have its own very special place in your disk box.

Building blocks

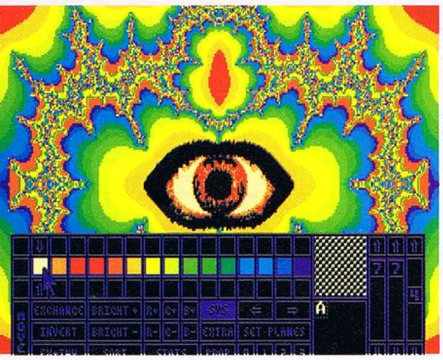
One of *Crack Art's* most powerful features is in its ability to manipulate blocks. First you need to cut a block from the drawing screen. Press <Esc> and a set of cross-hairs appears. Select a corner of the block you want, then press and hold the left button down as you

Crack Art's Zoom function shows what a sharp bit of coding the whole program is created from - it's all fast, sharp and great for detailed work.

ZOOMING IN

Vital for producing anything other than crude pictures is a close-up view of things – the Zoom. It's a function that really shows how fast and efficient a program's code is, and *Crack Art's* is very quick indeed. While you're at the drawing screen press the Function keys. <F1> is the lowest magnification running up to <F10> for the highest. Depending on whether the Preview Zoom option has been selected in the global parameters, you either get a box that moves about with the mouse or a brilliant effect that turns the mouse into a magnifying glass. When you've found the area you want, click the left button to take you to the zoom screen. Here you can pick your colour and edit your creation to pixel perfection.

On the left of this box is a section of the screen shown full-size. You can click here to move to new areas with the left button or with the right button to exit back to the drawing screen.



■ *Crack Art* has excellent palette handling. You can pick a colour simply by clicking on the screen. You can adjust the brightness and red, blue, green values of the whole palette at once, as well as exchange, copy and invert colours.

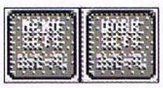
move the mouse around, release it when you've surrounded the area you want. If you are not in draw mode, press <D> – the block should now move with the mouse enabling you to paint with it. It doesn't stop there – if you want a round block then press <Control> and <Esc> together. If you want an irregular block press <Shift> and <Esc> together and draw around the area you want, press the right button when you're done and then click with the left button either inside or outside the area to choose the block. By pressing <Alternate> and <Esc> and clicking on an area, it is automatically cut out using the background colour – usually black for the boundary. Now you've captured the block you can start going to town on it with the block functions. One, two, three, stretch.

Colour control

Crack Art uses separate palettes for each work screen. To get at the colour controls, press the Spacebar at the drawing screen. Up pops a box with another heap of functions. Select a drawing colour by clicking on it, double-click on a colour to change its value or use the sliders at the right to adjust the RGB values. There are 20 predefined palettes that you can get at by using the function keys with or without <Shift>. To get an attractive smooth range of colours, select a colour then hold down <Alternate> and select another colour. A range of graduations appears between them. Click on the fill pattern to select a new one, including stippled patterns. From here you can also fiddle with the text font. Take your choice of palette seriously – it can make the difference between cartoony and realistic-looking pictures. With only 16 colours to play with you need to be imaginative – heavy use of stippling helps greatly. ***stf***

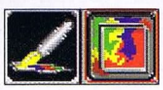
ICON GET TO THE HEART OF *CRACK ART*

All the icons look a little daunting at first, but once you work your way around them you can soon use them to their full extent. Select the functions with the left mouse button; a red border identifies the currently selected icons. Keyboard short-cuts are indicated by the red letter.



GLOBAL PARAMETERS – These icons bring up dialog boxes where you can set up things as you want, from the built-in virus checker and zoom preview functions to whether or not the mouse has a shadow. Once it's done you can save the settings so the whole thing's set up as you want it ready for the next time you load *Crack Art*.

ASSEMBLER – If you are a whizzo programmer you can load and execute your own assembler routines from within *Crack Art*.



DRAWING MODE – These toggle between the two drawing modes. The brush is the standard drawing mode. The multi-coloured icon denotes the block mode, where the current block is used, if this is possible, instead of the normal drawing tool. The <B> key toggles between the two.

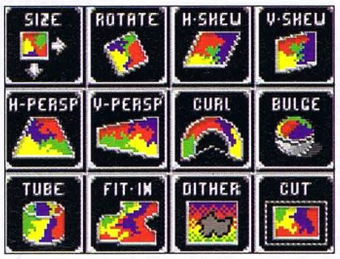
BLOCK MODES – The three drawing modes for blocks. X-ray has the background colour – the first one is transparent. Object uses a mask, the background outside the block istransparent, while those inside are blocked. The Blocked icon uses the whole rectangular block.

BLOCK MOVE MODES – Toggles between the two block move modes. Free Move enables you to put the block anywhere while Edge Stop won't allow any part of the block to cross the screen boundary.

DRAWING FUNCTIONS – Your basic drawing tools – and a rich and varied collection they are too. Select them with the left button, then press the right button or use <Esc> to take you to the drawing screen. The left button now does the drawing business. Many of them have extra parameters, try double-clicking on the icon. If you have cut out a block, and have block mode selected, then the block is used to draw with where possible. Have a good mess around with them.

RELAXATION – *Crack Art* comes with a couple of little games to take your mind off the hectic world of artistic expression. Press <Esc> when you're relaxed enough.

FREQUENCY CHANGE – switched between 50 and 60 Hz, only use this if you have a colour monitor or you are positive your television can handle it.



BLOCK FUNCTIONS – Lots of juicy block distortion and manipulation effects. Once you've cut your block from the screen, you can squash and bend it into all sorts of interesting shapes. If things start looking too distorted, try pressing the <Undo> key to reset things. Generally the left button changes the block and the right button accepts the new block, or, in the case of perspective, the left button and <Alternate> together. The dither function is very powerful with horizontal, vertical, radial, according to mean square root or arithmetic average dithering. Select the start and end colours from the palette and the centre point, then the whole block is recoloured.

DISK OPERATIONS – Load and Save icons do precisely as they say. The Show icon enables you have a rummage around your disks without doing anything to them. The Disk Menu enables you to delete files, format disks, check for a virus or get information. The last two icons are rather special in that they enable you to break into files or disks. First you select a file, then click on load from the box of new functions that appears. You can now scroll about the file or disk looking for graphics.

WORK SCREENS – You can have up to nine work screens – the blue lights indicates if they are available for animation, the red light is your current drawing screen. Change screens by clicking on an icon or using the keyboard numbers. You can erase screens by dragging them to the trash icon or copy them by dragging them to another screen. Show builds a screen with small versions of all nine screens, useful for animation work.

Special effects – Takes you to the drawing screen with a mass of icons controlling over 40 special effects including two types of anti-aliasing, diffusion, erosion and all sorts of other sexy functions. Just click on the icons with the left button, if you don't like what you've got, press <Undo> and continue experimenting.

ANIMATION – Cycles through all the work screens indicated by the blue lights. Double-click on a screen to remove it from the animation sequence. Moving the mouse affects the speed of replay.

DESKTOP FUNCTIONS – Clicking on the Acc icon takes you to a GEM menu where you can get at any Desk Accessories you have loaded, select "Crack Art" to return to the fray. The last icon quits *Crack Art* and then sends you back to the Desktop.

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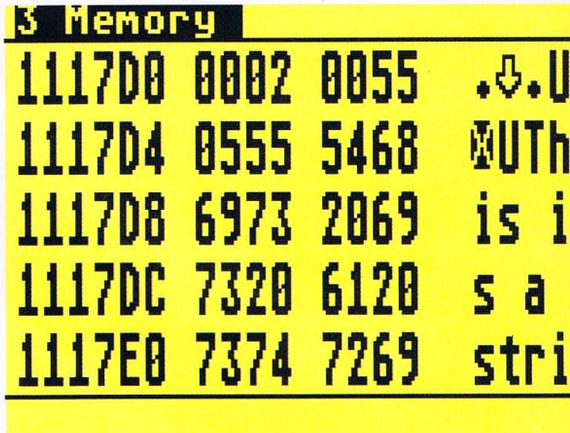
THE BYTECRUNCHER'S GUIDE TO ASSEMBLY

In this month's assembly tutorial, Tony Wagstaff shows you just how incredibly quick assembly can be at storing and retrieving data



Stashed. Where your numbers end up after a `dc`. You can also see how a string of characters is stored.

If you're familiar with languages like BASIC or C, then you must have realised that calling TOS isn't so different in assembly – we showed you this in *STF* 45. What is different though, is storing and retrieving data, since it has to be moved directly into memory space. This is what we're concentrating on this month; starting with a simple database gives you the opportunity to use a few more TOS routines.

Data sections

You may have noticed that the assembly listings that we've used so far contain a data and a BSS section – both are used to hold data. So what's the difference between them?

Well, they both contain numbers, just like memory addresses but only the data section has these numbers stored on the disk, inside your standalone program. When you run it, the numbers are loaded into memory where your program can access them. You use the data section to store information that is the same every single time the program runs.

The BSS, on the other hand, merely reserves a number of memory addresses, with no indication as to what goes in them – this saves a large amount of disk space. Your program can use the BSS to store data that varies each time the program runs, anything that you type in, for example.

The three main commands used in these sections are `dc` – not to be used in the BSS section – `ds`, and `rs`. The `dc` command can be followed by parameters, each of them indicating a particular number you wish to store. The numbers are stored in the order you list them, so:

```
label dc.w $2,$50,$555
```

would be stored as hexadecimal 0002 0050 0555 (see the picture, top right). If you want to store a character or a string of characters, just put them in quotation marks. You can mix numbers and characters, as we've done in line 639 of this month's listing, DATA.S, on the Cover Disk. To access or store data use the `move` instruction with the label as the source parameter.

The `ds` instruction is slightly different in that it reserves storage space without specifying what is to be stored in that space. Each parameter tells the compiler how much space to set by; `ds.w 12` reserves 12 words, or 24 bytes, `ds.l 24` reserves 24 longwords.

By contrast, the `rs` instruction doesn't actually reserve any storage space at all, but is used as a counter. The first `rs` instruction after `rsreset` is given the value of zero. The value of the next `rs` instruction is calculated from the size of the first, the third from the preceding two, and so on. So;

```
first_rs rs.w 4
second_rs rs.b 16
third_rs rs.l 4
```

assigns the value nought to `first_rs`, eight to `second_rs`, since `first_rs` reserves four words or eight bytes, and 24, four words plus 16 bytes, to `third_rs`.

All of these commands can take labels as parameters, which makes it easier to maintain your listing – as the DATA.S listing shows. This is worth looking at in some detail.

Each record in the database consists of a number of fields, and each field contains a maximum number of characters. The maximum size of each field is defined from line 24. These field labels are then used as parameters for the `rs` commands in lines 696 – add 1 to them to use as a marker so the program knows where each field ends. By using labels we ensure each `rs` automatically has the correct value if we change the size of a field. If you decide you want the name field to contain 24 bytes, you only need to change the name `len_name_string equ 20` instruction to `equ 24`.

Once the program is up and running, the records themselves are kept in memory at the address labelled `main_storage`. Once again, a few labels and that rather handy `equ` directive ensure you always have the right amount of storage space.

Give me access

Now to get hold of one of the records. Suppose you wanted to access the third field, `ISBN`, in the fiftieth record – you load 50 into a data register, say `d0`, multiply it by the length in bytes needed to store one record, `len_entry`, and add the value of the `rs ISBN_ref` label to it. These `rs` values are stored at `reference_list`, once again using those handy labels in case anything needs changing. All you need to do now is load the address of `main_storage` – which is where you keep the records – into `a0` and use the command `lea 0(a0,d0.w),a3`, to point `a3` to the correct field. Have a look at the routine `store_entry` which uses this particular technique.

Tune in next month

Quite a few features could be added to this program – you might like to add a word search for instance. One thing that would spruce it up are some GEM menus, dialogs and windows. Funnily enough, this is exactly what we are going to be looking at in the next two issues. ***stf***

NEW INSTRUCTIONS

Here are some commands you might be unfamiliar with

The `ext` instruction increases the size of a number from byte to word, or from word to byte. The number itself doesn't change, neither does its sign, whether it was positive or negative. OK, you were told that numbers in your ST's memory were only positive. Well, they are really, but negatives are so useful that some way was found to use them.

If you `sub.w #1` from a data register containing nought, you are going to find it contains `$FFFF`. This number can be thought of as either 65535 decimal unsigned, or -1 signed. `$FFFE` is 65534 or -2, and, in a nutshell, you count backwards for negatives and forwards for positive, until they meet up in the middle, at -32768 and +32767 for word values. Some instructions need to be told whether they are dealing with signed numbers, `mulu`, multiply unsigned, and `muls`, multiply signed, for instance.

The second new command, and a very useful one too, is the `dbra` instruction. This operates like a regular branch, but each time it is taken it subtracts one from a specified data register. Once the register hits minus one, the branch is not taken. A `dbra` branches backwards, enabling you to set up loops which circle a set number of times. Conditions can be added to `dbra`, just as with branch, but the branch is only taken if the condition isn't met, just the opposite of a conditional branch.

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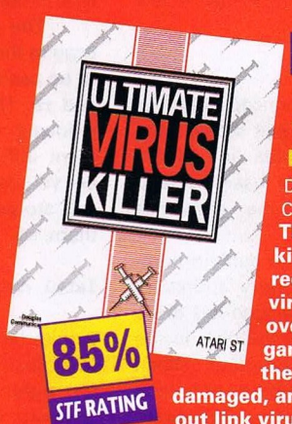

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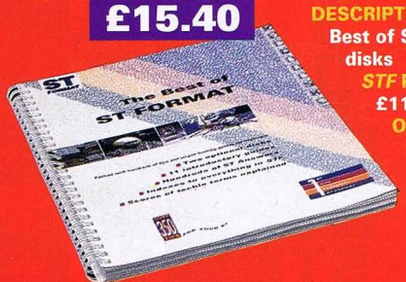

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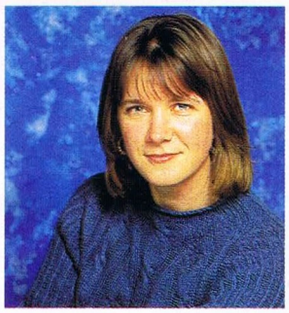

FEEDBACK

Positive thinking, some responses and some pointers from *ST FORMAT's* Editor, Paula Richards

Death by insects

I am writing to you about the wonderful game *Insectroid* which you gave away on Cover Disk 44. I have played this game continually since I received my early subscription issue at the beginning of February. Within a few days I had got up to wave 90 and was greeted with a medium sized boss with a fair to middle sized boss-o-metre level. When, however, I had got down to the bottom of the bar, losing no lives, I was startled to find the bar emptying along with the rest of the screen. This went on until there was a black bar going along the bottom of the screen. The boss would not die, but he kept on killing me. When I had lost all 66 of my lives, including those I had gained for every four or five I lost, the game ended and my final score was 1,992,160. Is this good or is my copy faulty?

Chris Worthington
Redditch

stf: *That's an incredibly good score, Chris – we were all very impressed with it in the office and when we phoned the programmer, Robert Dytmere, in the States to ask him what the problem was, he found it difficult to believe you'd done so well, too!*

Insectroid *is a Shareware game which means, to you, that you have to register your copy if you want to continue playing after wave 90. This registration means that you get* Insectroid v1.1 *and a choice of another of Robert's games – either* Mrs Munchie *or* Megapede. *To acknowledge the programmer's time and effort spent on the game, just send a £10 cheque or postal order made out to Bath Publications, PO Box 1589, Bath BA1 3TJ remembering to state which game you'd like and enclosing your return address.*

Impossible!

In *STF* 44, David Shortt had some very nasty things to say about *Knife ST*. I agree with you that he shouldn't have used it on such a valuable hard drive without first doing a full backup as instructed, however, I disagree with your diagnosis of the problem. If the whole partition was wiped and the floppy started to do the same thing, it sounds more like a virus. This could also be the reason for continuing problems. Contrary to what you say, it is possible for software to cause serious hardware damage. There are two forms of viruses around at the moment which must win their writers the "most incredibly mindless object in the universe" award which is to speed up the scan rates of the video shifter and the disk drive controller chips respectively. The problem is that very shortly the chips give up and lots of blue smoke starts to emanate from your ST. If for some reason the chips survived, it is quite possible that symptoms such as those experienced by Mr Shortt would appear.

Very shortly, the chips give up and blue smoke starts to emanate from your ST

Donnie Mann
Edinburgh

stf: *Our Technical Editor, Clive Parker, was incredibly dubious to hear that software could permanently damage hardware, and certainly in this way since the ST's system is controlled by the hardware clock. The disk drive controller chip is directly driven by the 8MHz clock and, if you wanted to add a high density drive to the system, you must add a 16MHz clock to drive the chip at a higher speed since this is impossible to do with software. You can switch the video shifter chip output between 50, 60 and 70Hz for displays on TVs, colour monitors and high res monitors respectively. Since the chips are designed to vary between these speeds, they are quite capable of perfoming properly without disintegrating into a puff of smoke.*

To confirm this we got in touch with Alistair Bodin, of the Technical Support Department at Atari, and he said he had never heard of software damaging hardware and felt it was "extremely unlikely" to happen.

Connecting up

I noticed the fact that you have online support through Compuserve. While it is a very good commercial system, Genie is the preferred system used by STers here in North America. Genie has the best ST support and the largest number of files and message bases for ST users. Bob Brodie and Bill Rehbock are regular contributors of ST news and views. As a bonus, it's also cheaper than Compuserve.

Mark Montreuil,
Ontario, Canada

stf: *It's interesting to hear another point of view – we have always found Compuserve to be very useful with Atari's on-line magazine,* Atari Explorer, *which provides the latest news and rumours from the people who know what's going on. In the UK, while the actual subscription costs more than Genie (£22.95 initially, followed by $8.95 after the first month for the basic service of access to around 30 databases), you only pay the cost of a local call plus a connecting fee (around £7.70 an hour) to the States. This is cheaper than phoning the States direct. Since the phone bill tends to be the most expensive part of being on-line, this is an important consideration. On top of this, if you want access to further files, there's a connect charge of $8 an hour for 1,200 and 2,400 baud modems and $16 for 9,600 baud modems. Con-*

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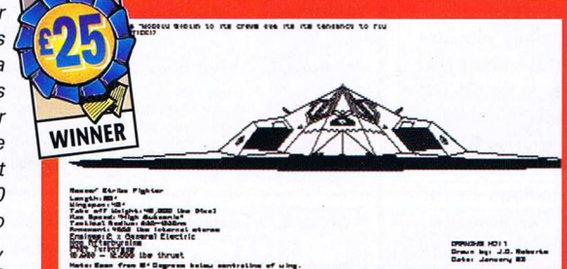
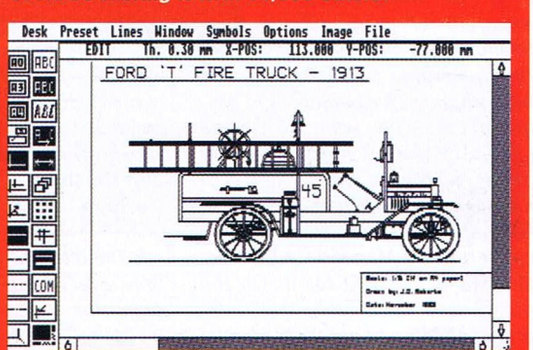


■ **The actual machine this shows is known as the "Wobbly Goblin" because it wobbles when it flies!**

I'm a sales engineer for a company producing automatic boiler systems andI have been using *GFA Draft* for business purposes for some time with a great deal of success. It saves time and enables me to send out clear concise drawings even though I only use a 9-pin dot matrix printer. While I was getting the hang of how to use *GFA Draft* I produced these drawings.

Jim Roberts
Pateley Bridge

***stf:* Thank you for those, Jim, it's always good to see the results of anything you have done on your ST and these are particularly impressive. If anyone else has produced anything that they'd like to share – visual or sonic – send it in to us and we could be sharing it with 60,000 others!**



■ **Quite when you'd need a scale drawing of such an old-fashioned fire engine is beyond us - but it's good to know you have the capability to create such a thing.**

MY TOP TEN LINK-UP GAMES

Chris Kerry of Nottingham makes his top ten known

1. FALCON – great in-depth flight sim.
2. HOVERSPRINT – the best link-up race game (try overtaking vertically).
3. STUNT CAR RACER – try and do spectacular leaps.
4. COLD REVENGE – great gameplay (naff graphics).
5. VROOM – pity about the mouse control.
6. MIDI MAZE 2 – find your mate and shoot him in the back. *(Isn't that a bit unfair?)*
7. F16 COMBAT PILOT – good quick air battle.
8. TURBO CHALLENGE 2 – too easy to be out of time.
9. FLIGHT OF THE INTRUDER – not for the novice.
10. HARD DRIVIN' 2 – jerky but otherwise pretty good.

tact Compuserve on ☎ 0800 289378 for more info.

Genie is interesting, however, costing $4.95 a month for unlimited access to services including electronic mail, on-line encyclopedia, news, entertainment, bulletin boards on leisure and professional subjects, plus scores of other services. On top of this you have to pay $6 for every hour you're using the system. If you fancy trying it (remembering the cost of the transatlantic call), set your comms software to half duplex and call ☎ 0101 800 638 8369. When you're connected type HHH, and hit <Return>. Wait for the U# prompt and type XTX99587,CPUREPT then hit <Return>.

BASIC differences

I cannot agree with your assessment of BASIC programming languages in *STF* 45. I have tried them all and *STOS* (even with its admitted weaknesses) is by far the best designed, user-friendly and best integrated package. *GFA Basic's* manual is poor, amateur stuff whereas *STOS* has a superb manual which, I would say, is the best of the best.

Andin Kalin
Nottingham

stf: *When Chris Lloyd was reviewing BASIC languages for the programming feature he considered their usefulness to a broad spectrum of programmers, from beginners to the more advanced. He agrees that* STOS Basic *is the best language for beginners in programming who want to create games, however, once you get more experience you're likely to find it rather restricting – it ignores GEM, it can be slow and it's badly supported by Mandarin who have stopped developing for it. On the other hand, it is very well integrated and has an excellent manual compared to that of* GFA Basic. HiSoft Basic *and* GFA Basics, *however, are continually updated and are fully supported, they can make use of the full range of STs, including the Megas and TTs, whereas STOS really stops at the STE.* HiSoft *and* GFA Basic *have more power and more potential to create programs other than games.*

The ST's new dawn

In ITV's Teletext pages, I came across a page entitled "Is it the end of the ST?" which explained how Atari were going to dump the ST in favour of the Falcon. I don't think I have read anything to that effect in the pages of *ST FORMAT* and I haven't missed any copies since issue 23. If this is true and I have missed it, please tell us all!

Michael Hall
Essex

stf: *Turn to page 7 for some excellent news that contradicts that inaccurate story.*

Meaningless words

I was delighted to discover that you included a spell checking dictionary for *Protext* on April's Cover Disk. Upon trying it out, however, I found that it is, in fact, completely useless since it fails to recognise about ten per cent of the words in any given document. This results in a huge list of words being generated to be spell checked by hand and makes the whole process tedious in the extreme – did Clive Parker bother to check the dictionary after he had created it or does he just have a very limited vocabulary?

Jon Hartley
Durham

stf: The dictionary we included was only ever meant to be a starting point for you to add your own words to – the full commercial dictionary that actually comes with Protext v4.3 *would take almost the whole of the Cover Disk if we had been to include that – and you wouldn't have wanted us to sacrifice all that precious disk space just for the dictionary, would you?*

Snatch it!

On March's Cover Disk you included my program, the *Supreme Screen Snatcher.* There are a couple of additional points you should know about the program. First, you can't use it with a hard drive. Second, if you use the *Snatcher* after a reset, you can grab graphics from games and programs which don't normally work with the *Snatcher* in the conventional way.

What you have to do is play the game normally up to the point you want to grab, then insert the *Snatcher* disk and press the reset button. Now all you have to do is load the *Snatcher* and trigger it. You can then view the memory – most parts of it will be intact from before the reset. You can then align the screen and save it. You will find you have lost the palette but you can alter that, with some guesswork, from within an art package.

Douglas Henderson,
Troon

stf: Thanks for that, Douglas. Remember, the Snatcher *is a Shareware program – if you register (£5.00 cheque made payable to Douglas Henderson of Frantic Programming, 43 Deveron Road, Troon, Ayrshire, Scotland KA10 7EG) you receive a disk of goodies that contains, among other things, the latest version of the* Snatcher *which can run with raw data programs and doesn't need to mess about with Auto folders. Of course, you also get that pleasant warm feeling inside that comes from having "done the right thing."*

What do you want to argue about? What do you think is going to happen to the ST industry as a result of the STFM price cut? Do you think Atari will manage to sell 150,000 machines by the end of the year? Write to me on these or any other topics that we look at in this issue – you could even win some cash if you make an interesting point, so get your brain cells ticking, stir yourself into action and put pen to paper. Write to Paula Richards, The Editor, *ST FORMAT,* 30 Monmouth Street, Bath, Avon BA1 2BW. *stf*

SPEAK TO US!

We want to know what you think of *ST FORMAT* – it may be Britain's best-selling ST magazine, but it doesn't mean we're perfect. Fill in this coupon and post it to May Reader Survey, *ST FORMAT,* Future Publishing, Freepost, Bath, Avon BA1 2BW – you don't even need to buy a stamp.

How much do you like this issue?

☐ It's great! ☐ It's pretty good ☐ It's alright
☐ It's lousy ☐ It's absolutely terrible

Does this month's feature on saving time and making money make you want to start using your ST for more serious work?

☐ Yes! I've already started ☐ I'm thinking about it
☐ No, I'm not interested in it at all

Is there anything missing in this issue as far as you're concerned?

If so, what? _____

What do you most like about this month's issue? _____

What do you least like about this month's issue? _____

Do you have any suggestions for future features or improvements to *ST FORMAT?* _____

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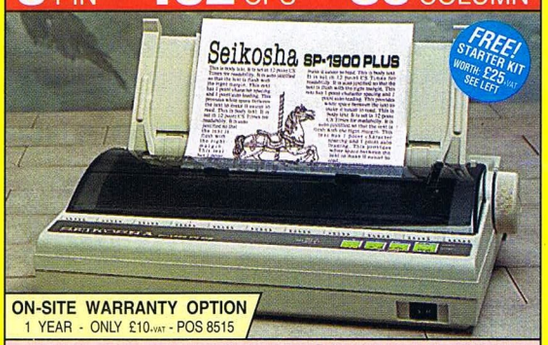

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NOW THAT'S

There's more to art than rubber submarines in the Tate and you proved it. Take a wander round and pick your favourite masterpiece

Great art is original, imaginative and thought-provoking. It's also about sitting in draughty studios, coughing up bile and painting scantily-clad women. In *STF* 44 we showed you how you could use your ST to tap your imagination and produce some stunning pictures. We also offered you the chance to win a hand-held scanner and a copy of *Deluxe Paint*, so you could transform your artwork into the sort of pics Van Gogh gave his left ear for.

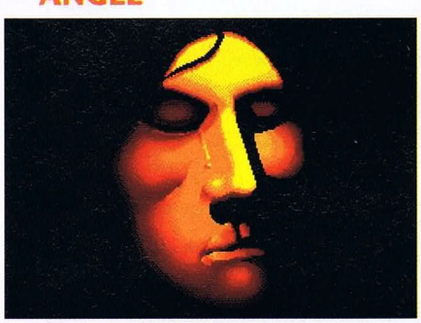
We had heaps of entries for the competition and, amid the pictures of cars, aliens and languid nudes, we found some real corkers – artwork worthy of the National Gallery itself. After a great deal of agonising and deliberation, the *ST FORMAT* team eventually decided on ten finalists – plus one for good measure – whose entries have made it onto these pages.

If any of the artwork here inspires you to produce something, or even if you think you can do better, send it on a disk with intermediate stages and instructions into Gallery, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW and you could get your picture printed or win oodles of cash.

ICONOGRAPHY

Brighton's **Christina Fedyk** impressed all the staff at *ST FORMAT* with this Expressionist collage and wins the hand-held scanner and a copy of *Deluxe Paint*. We particularly liked the bold use of colour and the unusual shading, making this one of the more original and imaginative entries we received. Unfortunately, Christina didn't include any details on the inspiration or execution of her picture, so there's no telling what it's about. Any suggestions?

ANGEL

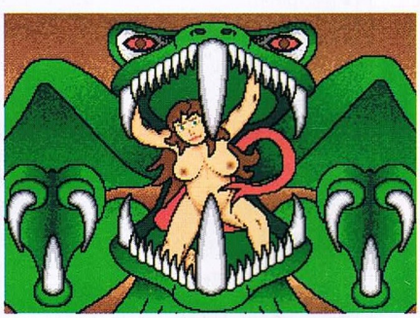


A-level art student **Ian Cramp** of Yarmouth produced this atmospheric pic with *Deluxe Paint*. It was inspired by an instrumental from a band called Paradise Lost. "It's in one colour range since I feel this is the only way to produce really subtle pictures on an ST." It took aboiut ten hours to produce – mostly dithering the image at 8x magnification.

TRAPPED

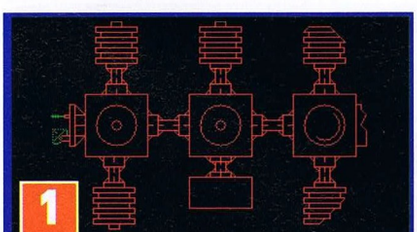
Phew, what a scorcher! **K J Lamacraft** of Stevenage used *Deluxe Paint* to create this pic.

"I created the bottom jaw, cut it as a brush, flipped it and pasted it above the original for the mouth. Drawing the nude in rough first, I sketched the outline, then used Zoom to tidy it up. I shaded the winged creature using the Fill effects and finally added the frame."

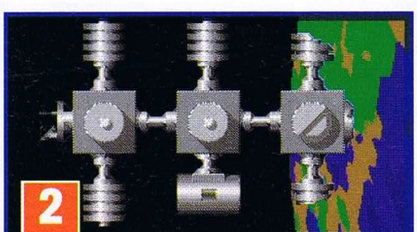


Escape from Planet Earth

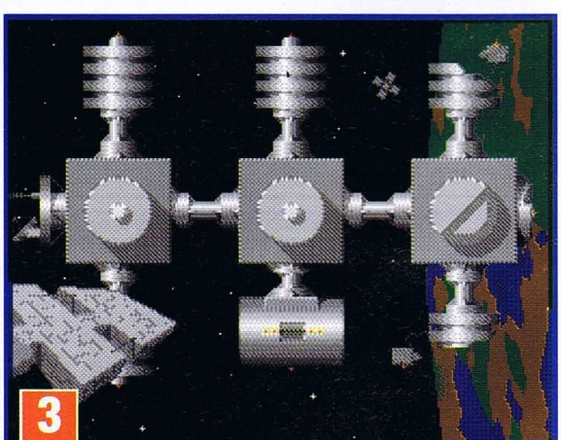
Dead Parrot? What kind of a name's that? Hailing from Bridport, Yorkshire, the Dead Parrot produced this picture using* Degas Elite *and lots of cups of tea. The spaceship theme is reminiscent of early '70s Pop Art with its hi-tech robots and Prog Rock album covers. The Parrot explains how it was done



1 First I drew a sketch, basically to see what I would be doing and how the picture would look. I used the Frame and Circle functions to do the red bit, the green bit I did with the Zoom.



2 After I had finished doing the rough shading and also added the shadows, I generated a fractal landscape with *Fracland*. I then copied it to the hole that I'd made for the planet.



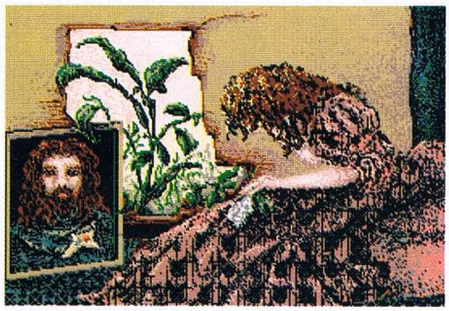
3 To finish the picture off, I drew the spaceship using the Change and Zoom functions, before copying it onto the main picture. Finally I added minor details such as the lighty things *(lighty things? What's that supposed to mean?)* and signed it.

WHAT I CALL ART

PINKBALL

Hippy chick **Rosa Reality** of Herne Hill, London sent in a selection of rave waves – reminiscent of the "butterfly effect" for us to gawp at, but this was the most interesting by a long shot. Rosa created the picture using *Cyberpaint* and *Picture Concept*, before heading off for a weekend in a draughty warehouse. Strange girl.

WEEPING WOMAN



Maria Smith of Chorley has gone for a classic artistic composition, based on the Expressionist paintings of Edward Munch.

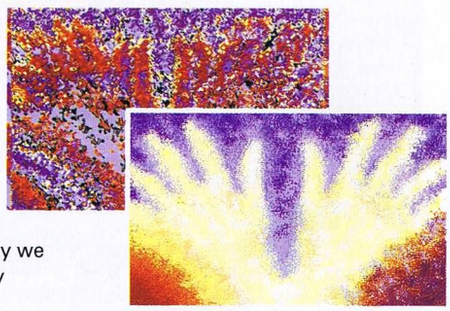
She has used a variety of different texture and colour options that blend well together to add atmosphere to her picture, which was created using *Canvas* on her 520 STFM.

GRAPHICAL REPRESENTATION OF A PRECONCEPTION OF NATURE

Mansfield's **Chris Dexter** has produced some great Surrealistic artwork. The idea came from his passion for drawing figures, especially nudes.

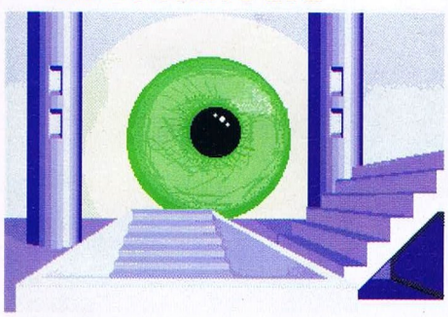
"Originally I used a lot more shades, but eventually decided against it because I think the grainy effect adds to the atmosphere."

UNLEASH AND RELEASE



Paul Blake of Redhill based these pictures on an acrylic original he painted a couple of years ago. The ST versions were created using the Airbrush option in *Canvas*, before importing them into *Cyberpaint* so the finishing touches could be added. Although they came separately we thought they also worked very well as a pair.

THE LOOKING EYE



Andy Channelle of Bristol used *Cyberpaint* to create this surrealistic image. The basic outline took a couple of hours, but tweaking the palettes and getting the colours right took a lot longer. We thought that the idea of positioning such diverse subjects together suggested a paranoia about being watched over.

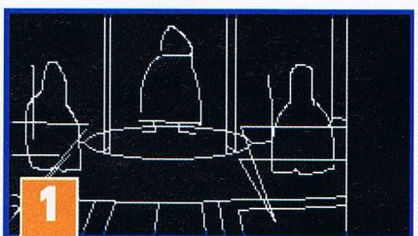
SKULL

Hard rock bands provide **Stefan Ritter's** inspiration for this picture he created with *Neochrome*.

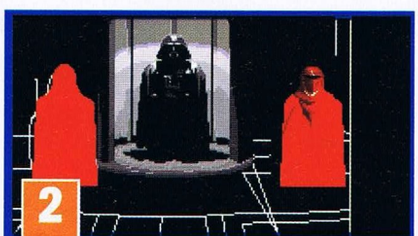
"The skull is based on a record sleeve. I chose the palette, then I drew a grid for the correct proportion, working from the top down. At the end I improved the picture using anti-aliasing and other such techniques."

Lift me up, up and away...

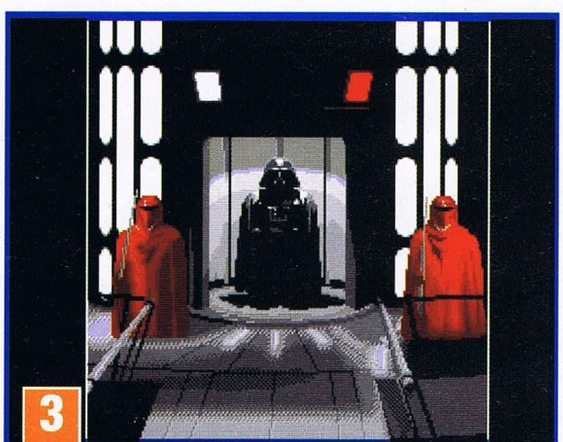
Jason Hamilton of Corio Victoria, Australia is a big fan of the* Star Wars *movies and used this as his inspiration for his artwork. He copied the image from a photograph using* Deluxe Paint *with a palette of reds, greys, black, white and light blue. The last colour was used to give certain parts of the picture a metallic gleam. Take it away!



1 To get an idea of what the picture was going to look like I drew a rough sketch of the scene. Darth Vader and the guards look rather pathetic at this stage, but they reminded me exactly where everything was going to go.



2 Detail and highlights were added to Darth's torso. The shade of the right guard was coloured and copied to the left. One guard was moved right and I began working on his head. I began to shade in the folds in his robe.



3 Finally, I dithered the floor with checkered patterns to even the spread of colour. Then I touched up the rest of the picture to fix some shading problems. All I needed now was to add my signature.

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LIFE, THE UNIVERSE AND EVERYTHING

■ Elton and Bernie rehearsing *Saturday Night's Alright for Fighting.*

'Ere, do you wanna fight?

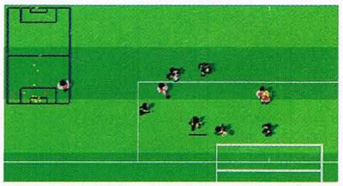
What an issue for competitions *STF* 44 was! As well as all the others, we also had a copy of *Street Fighter 2* to give away. We simply asked you to tell us who wrote *Saturday Night's Alright For Fighting* – the answer was Elton John and Bernie Taupin which most of you knew. We put all your entries in the *ST FORMAT* hat (usually reserved for the *STF* beer fund) and first out was the card from Jonathan Williams of Bangor in Wales – he should already be engrossed in this incredible beat-'em-up, so congratulations to him.

Shoot The Referee

We gave you the chance to have the referee in *Goal,* Dino Dini's new footy game, named after you back in issue 44. All you had to do was answer some simple questions and you'd be famous for ever. Almost. There were loads of entries but Steve Reddell of Salisbury in Wiltshire was the first correct entrant out of the bag, so well done to him.

We asked:

1. What was the name of Virgin's last footy game on the ST? *World Cup Soccer Italia '90.*
2. Where has Gazza gone? *Lazio.*
3. How many pixels make up the player sprites in *Goal? 16 x 24.*



■ *Kick Off 2* was Dino's last offering for Anco before moving to Virgin.

BOLLISTICKS...

Back in *STF* 44 we tempted you into trying your hand at a bit of limerick writing, with the bribe of a Bollistick Joypad. Well, when it came to judging this very popular compo we spent a good few hours recovering from stitches brought on by too much giggling. These were the best of the bunch – each of you lucky winners will have a joypad on its way to you.

The most hopeful

A young man engaged in
statistics,
Took to wearing his girlfriend's
lipsticks
But when wearing her dress,
He looked such a mess,
On account of the size of his
bollisticks!
S Hammond, Bristol

The most practical

If your joystick's characteristics
Leave you bottom in high score
statistics,
And life is a bore
'Cos your finger is sore,
You'll need one of Cheetah's
bollisticks.
Brian Douglas, Morecambe

The most contrived

There was an MP called
Bollisticks,
Who antagonised quite a few
mystics,
They plagued him with gout,
So he slapped them about,
And banned them from 17
districts.
David Lewis, St Helen's

The most suggestive

A Sega freak, well into holistics,
Sat (cross-legged) nibbling
some chipsticks.
But she soon blew her cool
When her boyfriend (the fool!)
Flashed his ST's Bollisticks!
PA Johnson

The least correct use of English

There was a young man from
Land's Endo
Who wished he had a Nintendo
But with a pair of Bollisticks
Instead of his joysticks,
He found he could easily
pretendo.
Edward Holloway, Hitchin

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THE END OF THE WORLD IS NIGH!

Well, you might have thought it was since you've come to the end of this very wonderful issue, but never fear there will be another one next month – even better than this – the cogs are slowly turning, the ideas are coming together and copy is being written even as you read this.

As a follow-up to this month's news of the STFM's price fall, we'll be taking a further look at what the industry think, hassling Atari to find out if they're willing to confirm the strong rumours of STE price drops and generally taking the topic a step further.

We're also going to be taking an in-depth look at role-playing games – who can you pretend to be? What are the best RPGs and how can you get the most out of them? We'll be answering all these questions – and more – next month. If you have an early version of TOS and really wish you could take advantage of all the sexy things TOS 2.06 does – enabling you to run more attractive and useful Desktops, the ability to open more GEM windows and the like – we'll be showing you exactly how you can manage it.

There are also some incredible sexy software packages around that we're going to be taking a detailed look at and some great games are also on the way. We've finally been promised *Lemmings 2* for next issue so we'll be able to give you the definitive ST assessment of the game, along with the much delayed *Chaos Engine* and *Sleepwalker*. The latest Falcon software's also going to be put under the microscope.

All in all it looks like it's going to be an amazing 100 pages or so – you cannot afford to miss it.

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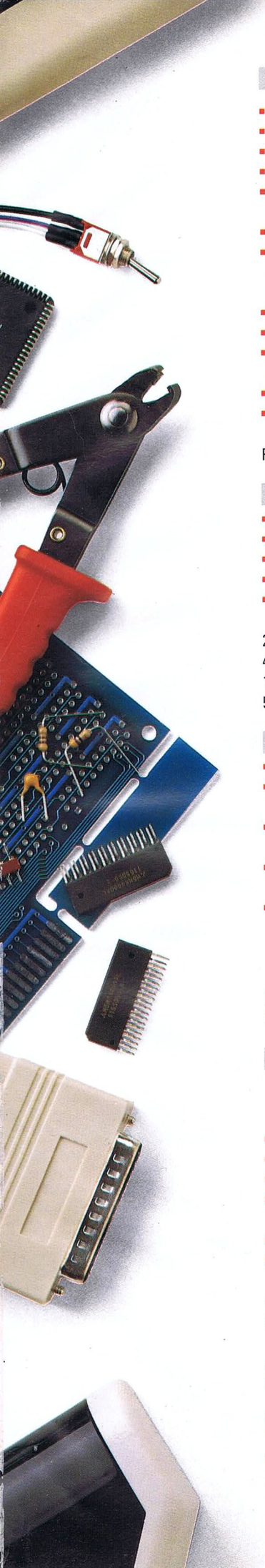

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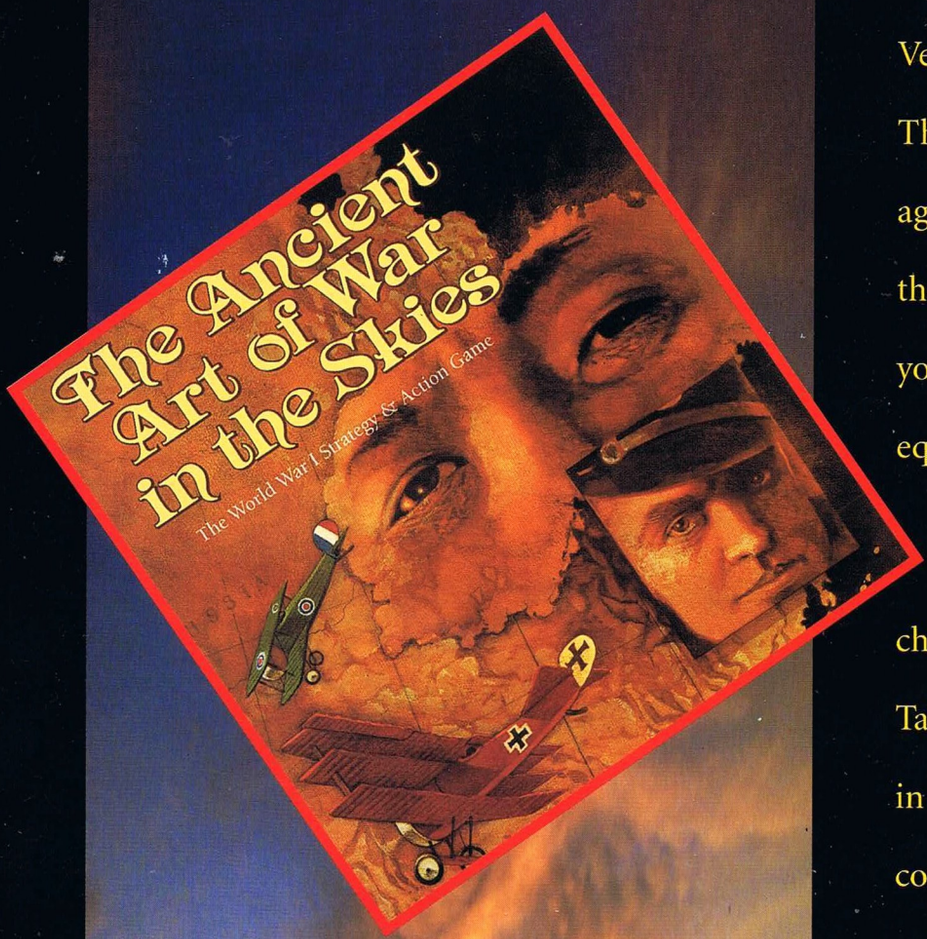

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